

M.Sc. Dissertation

AN ASPECT OF INSPECTION IN INDUSTRY

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AN ASPECT OF INSPECTION IN INDUSTRY

BY

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Preface

This study was carried out at the Social Sciences Research Centre of the University of Edinburgh. It was part of a project on 'Human Aspects of Inspection in Industry' which was sponsored by the Joint D.S.I.R./M.R.C. Committee on Human Relations in Industry and partly financed under Counterpart Funds derived from United States Economic Aid.

I am indebted to Professor James Drever who exercised general supervision over the project and acted as my dissertation supervisor. My main debt is to Mr. R. M. McKenzie, M.C., M.A., who directed the project and whose Research Assistant I was. I am extremely grateful to him for continual help, encouragement and criticism.

I should also like to thank Miss Sheena McEvoy and Miss Sheila Macdonald who were responsible for the secretarial and computing work respectively.

Finally I wish to record my appreciation of the help given by many members at all levels of Messrs. 'Aye' Ltd., the firm in which this study was made. They must, of course, remain anonymous; but I should like particularly to mention the General Works Manager, who volunteered on behalf of his firm to co-operate on the project; the Chief Inspectors and their deputies at the three factories, who were our main contacts and who made the necessary arrangements; and the floor inspectors, who were the main subject of the study.

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LIST OF ABBREVIATIONS USED

to refer to individuals in the firm.

In general, the first letter gives the particular factory:

L = London; S = Scotland; W = Wales,

WM	= Works Manager (WWM = Welsh Works Manager, etc.)
CI	= Chief Inspector (LCI = London Chief Inspector, etc.)
PM	= Production Manager (SPM = Scottish Production Manager, etc.)
DCI	= Deputy Chief Inspector.
AS	= Assistant Superintendent Inspector.
SF	= Inspection Senior Foreman
F1, F2, F3 etc.	= Inspection Foremen
S/L1, S/L1 etc.	= Inspection Section Leaders.
L1 - 10	= London Assembly Floor Inspectors.
L11 - 25	= London Machine Shop Floor Inspectors.
S1 - 10	= Scottish Assembly Floor Inspectors.
S11 - 19	= Scottish Machine Shop Floor Inspectors
W1 - 3	= Welsh Assembly Floor Inspectors.
W4 - 18	= Welsh Machine Shop Floor Inspectors.

The positions of other members of the firm referred to, are
given in full.

Introduction

This dissertation is a study of a particular function of modern management conducted in a particular firm. The function to be discussed is that of inspection. This is an inherent part of all supervision; the decision that must be taken as to whether the job done, or the product made, or the dissertation written, is to the standard required. It may be that this decision is left entirely to the producer himself, as is the case with the artist, or is only very rarely made by others, as with the professions. But in the context of modern industry, with the disappearance of the old type of craftsman, regular inspection decisions are made almost entirely by men who did not do the work.

In the firm in which this study was made, as in most others, the number of such decisions required is so large, that it is beyond the scope of the normal supervisor to make them, and a special grade of worker has been created to do this task. Their job is to patrol the shop floor and inform the production worker and the first line supervisor whether the products made are good or bad according to the requirements laid down. These men are known as Floor Inspectors, and they are the main subjects of this study.

The inspection function has grown so complex, that the inspectors themselves are organised with their own supervisors into a department on the same lines as a production department. The existence of such a body is almost bound to be an inherent cause of friction, since no one relishes others passing judgement on his work, much less criticising it. The aim of the D.S.I.R./M.R.C. project of which this dissertation is a part, is to explore

generally the relations between Inspection and Production departments. It is our aim here to explore the functions, attitudes and efficiency of a particular grade of the Inspection department, Floor Inspectors.

We shall begin with a discussion, generally and in the context of the particular firm, of the inspection function. From the discussion certain hypotheses about Floor Inspectors will be adumbrated, and an attempt will be made to test them out in a more intensive study of this particular grade.

One further and wider aspect of this study may be noted. The general discussion of the inspection function from which hypotheses will be drawn, will be in terms of management or sociological concepts, that is to say it will be concerned with organisation and social systems. The study of floor inspectors, the attempt to give evidence on these hypotheses, will be a psychological one; that is to say it will be concerned with the attitudes and behaviour of individuals.

While it is difficult, and probably unprofitable to draw a hard and fast boundary between psychology and sociology in general terms, it is a fact that in industrial studies the two disciplines are widely divergent. The sociologist considers he is dealing with social facts and systems which have an existence and status of their own independent of individual behaviour. He would regard the psychologists usual methods of collecting data, (systematic interviews, questionnaires, tests, etc.) as being so restrictive that, at best, they are able to provide hardly more than a parody of reality. On the other hand, the psychologist would feel, that the sociologist is trying to make sense in an unsystematic and intuitive way, of a haphazard collection of

impressions, the significance of which he has no way of evaluating. It is one aspect of this dissertation to see how far data gained in the sociological and organisational fields can be formulated into hypotheses for testing at the psychological level; and to consider what is lost and what is gained in this process.

The Organisational and Human Relations
Problems of Inspection.

1. Functional Management.

At the beginning of the century, F.W. Taylor (1903) introduced the concept of 'Functional Management'. The system of industrial management in general use at the time was that of having the Foreman held completely responsible for the successful running of the entire shop. "He must lay out the work for the whole shop, see that each piece of work goes in the proper order to the right machine, and that the man at the machine knows just what is to be done and how he is to do it. He must see that the work is not slighted and that it is done fast, and all the while he must look ahead a month or so, either to provide more men to do the work or more work for the men to do. He must constantly discipline the men and readjust their wages, and in addition to this must fix piece work prices and supervise the time-keeping".

Taylor enumerated a list of ten qualities that the Foreman would need: "Brains, education, special or technical knowledge, manual dexterity or strength, tact, energy, grit, honesty, judgement or common sense, and good health." He pointed out the difficulties of finding someone possessing all these qualities, and remarked that if such a man could be found he shall be made Works Manager rather than Foreman!

The system was thus thoroughly inefficient in putting such a large amount of responsibility on one man, and it was because of this organisational inefficiency, Taylor considered, that "we so seldom hear of a miscellaneous

machine works starting in on a large scale and meeting with much, if any success for the first few years." It took several years of learning by doing and natural selection to equip a firm with suitable foremen.

Taylor called this system the 'Military Plan' since it depended on a direct line of control, each man receiving all his orders from one person, his next superior in the line. For example, even if Foremen attempted to shed some of their load by having assistants, these would be put in complete charge of a particular machine or process or section, and their problems would then duplicate the foremen's, if on a smaller scale.

To oppose the military type of organisation Taylor proposed Functional Management. This method was compared to the working of 'an up-to-date school' where different subjects are in the charge of different specialists. Similarly, 'Functional Management' consisted in dividing the work of management so that each supervisor should have as few functions as possible to perform and if practicable only one. Under this system, recruitment of personnel would be easier and the efficiency obtained in each specialism would be higher.

As an example, Taylor analysed the job of 'gang boss', a term which seems to be equivalent to section-leader as used in this study. He would substitute for the old-style gang boss the following eight functional bosses.

- A. Planning and general functions: these are not on the shop floor and may see the workman rarely, or only communicate to him in writing.
 1. Order of work and route clerk
 2. Instruction card clerk
 3. Time and cost clerk
 4. Shop disciplinarian.

- B. Active shop functions: these are on the shop floor in continual contact with the workmen.
5. Gang boss: responsible for setting up work on the machines
 6. Speed boss: responsible for seeing that the job is done in the quickest and most efficient way.
 7. Repair boss: responsible for maintenance of machines.
 8. Inspectors: "responsible for the quality of the work, and both the workmen and speed bosses must see that the work is all finished to suit him. This man can, of course, do his work best if he is a master of the art of finishing work both well and quickly".

Taylor felt that the idea that a workman could only logically be responsible to one boss, and would be happier so reporting, was simply a myth that had been exploded. He did admit that there would be likely to be quite an amount of friction among the various bosses as to the exact boundaries between their separate responsibilities - particularly at the installation of the system. He considered that the major part of the work of the Superintendent would be in settling disputes on the matter, and he felt that after time these differences would be settled by informal arrangements.

Functional Management as Taylor envisaged it is now only of historical interest, and indeed there is a sense in which it could be said to be still-born. Taylor (1912) admitted that he did not know of any firms which used his system in its entirety, and it is most unlikely that any ever did. Yet it has been profoundly influential in encouraging the development of functional

specialisation which in America and this country is an accepted part of management.

The particular specialism with which this dissertation is concerned is inspection, and it is the development of this function that will be discussed in the succeeding sections, and the impact of Taylor's ideas described.

The particular influence of the inspection function on Taylor's thinking may be remarked here. He worked as a Factory Foreman and intuitively carried out many of his ideas before he consciously formulated them. He has described how he introduced five elements of functional management at the Foreman level to take the place of the 'old-style' gang boss, in a steel company where he worked. These five were:

1. The instruction card clerk.
2. The time clerk.
3. The gang boss.
4. The shop disciplinarian.
5. The inspector.

Each of these five functional foremen dealt directly with the workmen instead of giving their orders through the gang boss. But the dealings of the clerks were mostly in writing and Taylor himself as Shop Foreman performed the functions of shop disciplinarian, so that it was not until he introduced the inspector with orders to go straight to the men instead of the gang boss, that he appreciated the desirability of functional foremanship as a distinct principle in management and began to formulate his general ideas.

It is interesting that this should be so, since looking now at the

breakdown of the job of 'gang boss' given on p. , it will be seen that the inspector is the one that most fits the concepts of Functional Management; the distinctions between the other functions seem to be far more artificial. Certainly inspection is the only specialism in modern industry at this level, that fulfils the Taylor's Criterion i.e. has a direct control over the worker. In this it is different from other specialist functions which are not now, if they ever were, Functional Management.

2. Functional Specialisation.

Taylor's ideas have had a very profound effect upon American and British management. He himself predicted that the maximum amount of benefit from the system would be apparent when jobs were much simplified and the craftsman type of worker, having a wide range of skills, was displaced. Because of increasing mechanisation and specialisation of product, this has, to a very large extent, come about in modern industry.

There have been other factors too, which have encouraged the growth of specialisms. The increasing size of the business unit and the greater complexity of the techniques involved are two of the most important. As a result of these pressures the number of such specialisations is very large. Burns Morton (undated) lists 16 different functional specialists that the foreman of a modern engineering shop has to have contact with.

Such specialisation in management has obvious advantages. It makes better use of special abilities, it curtails the range of skills required by ordinary management and so on. It also has its disadvantages. It may encourage demarcation to become too rigid and so lead to lack of balance in the development of techniques. It requires of the line manager that he work

together with a large number of people, and makes this working together, at the same time more difficult - since the perceived aims may not be the same - and more important, for the same reason. And so, 'Human Relations' skills become involved. Finally, specialisation may blur the location of responsibility by allowing the line supervisor to shift the blame for a failure to the specialist.

But the relation between such specialisms and the line supervisor are not what Taylor had envisaged. Those firms which tried his method and allowed specialists to give orders direct to operators at the work bench, found many difficulties to contend with. Line supervisors felt themselves to be bypassed, and operators found it an untenable situation to receive orders from more than one person, since these were liable to be conflicting.

The usual method of avoiding such conflict is to arrange the organisation to be such that the functional specialist acts in an advisory capacity to the line supervisor. Information is provided for him and recommendations to him are translated by him into orders. The specialist is not allowed to give orders direct to the line, and he must accept this basic limitation of his powers of control. On the other hand, it is accepted that his advice will normally be followed.

3. The Inspection Specialism.

One of the most important specialisms is Inspection, and it was one of the earliest to be split off from normal supervision in many firms. We have already noted how it was the splitting off of this function which crystallised

Taylor's thinking, and that there should be a separate inspection department is now accepted by all modern firms. The need for independent inspection is based on the same considerations of efficiency as were given above in relation to all specialisms, but here there is one further factor. It is felt to be almost morally wrong not to have the work performed by one man inspected by another. "There is a spiritual as well as a technical and mechanical content in the inspector's job." (Juran, 1953.)

Van Rest (1954) states a common view when he says:

"Delegation of the function (of inspection) is often more efficient especially where inspection involves specialised equipment. It is often desirable since the urge to complete a job on time may lead to relaxation of the quality requirement by the production man, but not if reminded by another person of any falling off".

Similarly, Juran (1953), the leading American consultant on Inspection and Quality Control, has written:

"Production can be given responsibility for deciding whether the product is acceptable or not. But this can lead to shocking results. For instance, the production foreman may very well be tempted to meet his schedule by slighting product quality. Furthermore, if all he has to do is to accept the product, there is no real incentive to correct the conditions causing poor quality".

Field, in Brech (1953), remarks:

"The truth is that inspection is necessary because human beings are fallible, and unless each person is a craftsman concerned only with producing the perfect article, bad work is likely to be passed off as good - particularly if there is

anything to be gained by it".

Thus one of the basic premises of the craftsman has been completely reversed in modern industry. And this reversal is accepted by the production man too, who often says that he would not like to have the inspection as well as the production responsibility, resting with him. This general acceptance of the need for separate inspection has not, however, served to eliminate the human relations problem surrounding this function, which will be discussed below.

4. The Functions of the Inspection Department.

In modern industry the trend towards standardisation and product specialisation makes vital a rigid control of the quality, dimensions, tolerances, etc. of the product, in order to achieve the necessary interchangeability. To ensure this inspection is necessary. It is also felt that this inspection must be done independently by a non-producer.

The functions of an Inspection department seem, in general, to be well agreed. (Hildage et. al., 1938; Michelin, 1950; Thompson, 1950; Kennedy, 1951; Brech, 1953; Van Rest, 1954; etc.) They may be regarded as three-fold.

A. Inspection as an assurance of quality. The first function of inspection is that of comparing the articles produced with the standard laid down. This involves interpreting company policy on quality, and deciding, in conjunction with the Engineering Department, what amount of departure from specifications may be allowed. The primary function of the inspection department here is to act as the representative of the customer and as

"the conscience of the company."

It is in the exercise of this function, that gives inspection its direct control on the process and puts it in a different category from the other functional specialisms with their basically advisory role. The difficulties attached to control of the process by an outside body not of line management will be discussed in the following section. Here we may mention a factor which may serve to aggravate this situation. The major cause of inspection rejections may be something not directly measurable. The most common one is surface finish. And indeed judgement of the acceptability of finish is regarded by many authorities as inspection's basic task in assurance. For it is assumed that the identification of dimensional inaccuracies is comparatively simple and divergence from the standard here, must be approved by the Engineering Department. But in matters of finish the inspection department is usually regarded as the final arbiter.

While independent assurance inspection is felt to be necessary, it is realised that it also brings its dangers. Immediate concrete goals are more effective than long-term general ones, and getting the job past the inspector, may take the place of making a good product as the basic aim of the operator. It is thus stressed (Brech, 1953; Juran, 1953; Van Rest, 1954) that the existence of an inspection department to keep a check on quality in no way detracts from the fact that it is the responsibility of production to make quality. Quality cannot be inspected into a product, it has to be built into it. As Oakley (1946) points out, one danger of inspection is that its presence "may be regarded by some workers as an excuse for slipshod work".

B. Inspection as a Production Auxiliary. The second function of inspection is to provide information on the quality of manufacture during the actual production process. This immediate and continuous 'feed-back' of quality information to the production operator, is part of an on-going cycle of produce - test - adjust, and enables the operator to maintain or improve the quality of his work. The aim here is not only to detect faulty work, but to prevent it occurring.

It is in this function that the inspection department comes nearest to being an advisory service to production on the same basis as the other specialisms. But even here this is not always the case. There are some authorities (e.g. Juran, 1951) who maintain that this function of inspection is purely a service and advisory one, and that it is entirely up to production to decide whether or not to stop a machine which is producing bad work. The inspector's function is only to report the fact to production. (And, of course, as part of his assurance function, not to accept the bad work produced). Others, however, (e.g. Hildage et al., 1938; Brech, 1953) consider that the inspector should be given the power to stop production on a job producing faulty work. If this practice obtains, then here too, we have inspection playing the role of a functional management in Taylor's sense, rather than of a modern functional specialism.

As part of the inspection department's work as an auxiliary function, we may include the role that is often taken of 'trouble-shooter' (Juran, 1951). If there is a job which is proving difficult to get under control, the inspection department must not merely continue to reject the products and

report that they are defective, but it is expected to make some attempt, along with production, to solve the problems.

C. Inspection as a Control Function. The third function of inspection is as part of the control system of management, playing the same part in regard to quality as scheduling does for quantity, and budgeting for costs. It is from inspection department reports that top management obtains its information on the efficiency of the firm as regards quality. And often the function of reporting on scrap lies here too, and it is the inspection department that must allocate responsibility for scrap produced. We may also include here the implicit training function of the inspection department (McKenzie and Pugh, 1955). They are often expected to work for long-term improvements in the quality of the products, by pushing up the standards for acceptance.

The impact of this control function will vary with the use that top management make of inspection information. It has been the policy of some to set the production and inspection departments against one another in the belief that the resulting clash of pressures for quantity and quality will bring about an efficient equilibrium (Van Rest, 1953). Or inspection reports may be used as a stick to beat production rather than as a positive means of improving quality (McKenzie and Pugh, 1954). The effects of this sort of practice will be discussed below.

5. The Organisation of Inspection.

The inspection organisation of a firm has to parallel its production, one, since inspection impinges at all levels. This fact again emphasises the

difference between inspection and other functional specialisms.

One of the most important organisational problems is the decision as to whom the inspection department should be responsible. There is a wide range of possibilities here. In the manufacture of an aircraft engine, for example, the need for exact precision in the work and the impossibility of allowing any departure from the specification, means that the inspection department is virtually an independent organisation. It is truly the representative of the customer, and its ultimate responsibility would be to a Government Inspectorate and not to the company. At the other extreme, in the manufacture of a simple commodity with wide tolerances, it may be sufficient for the inspector to report to the production foreman, since all but the most obviously bad work would be acceptable.

Between these two, lies the ordinary commercial manufacturing firm, in which the task of finding a balance between quality, quantity and cost, must be made at fairly high level, but within the firm itself. For this situation Juran (1945) has suggested the following principle.

"The first common supervisor of the operator and the inspector should be at the lowest level of authority that is staffed with executives who reflect the company's policy on the balance between the cost of quality and the value of quality."

This principle does not seem to be very satisfactory since it is given in personal and not in organisational terms. It would be possible to maintain, for example that a Production Foreman can fulfil these requirements, or even

a Chief Inspector. In practice, the independent inspection department has usually begun by reporting to the Production Manager, but has now developed to reporting to the Works Manager and sometimes to the General Manager. No hard and fast rule seems possible since the importance of inspection will obviously vary with the product manufactured.

6. The Human Relations Problems of Inspection.

The attempt has been made in the previous section to discuss in as neutral terms as possible, the functions of an inspection department. But in discussing the Human Relations aspects it is not so much the actual, as the perceived functions of inspection that are the controlling factors; the perceptions of the inspection function on the part of the inspection department itself, on the part of top management, and probably most important of all, on the part of production.

A. Production's perceptions of Inspection.

From the point of view of production, one of the most important perceived facts about inspection is that it is non-producing, and yet it exercises a direct control on the process, and on the producers at all levels. The inspectors are essentially in an authoritative role, and their status therefore, tends to rise relative to production. It is interesting that even in Taylor's breakdown of the gang-boss given on page the increased status of the inspector relative to the other bosses is apparent. His is the only job description that includes a reference to other bosses; they have to see that the work is done to his satisfaction. This situation can lead to considerable friction between the two departments (Gardner and Moore, 1950; McKenzie, 1953), and almost inevitably does lead to what Grant (1952) has

referred to as "the traditional arms-length relationship between inspection and production".

As Gardner and Moore have put it:

"The Inspector's job constantly puts him in the position of telling the shop what is wrong with its work. He points out mistakes and defects in the products and reports such mistakes to his superiors; and, in a piecework system, he directly affects the pay envelope. Also, in many plants, his reports on quality are one of the control reports which top management watches closely and which are, therefore, a constant threat to the shop".

The assurance function of inspection, with its implied criticism is obviously likely to contribute to friction between the inspection and production departments. This is all the more so, when, as is the case to a large extent in industry, the decisions for which the inspector is responsible contain a large element of subjective evaluation. Apart from an obviously subjective judgement such as on standards of finish, there is the discretionary judgement on the amount of deviation from drawing to be allowed, since in ordinary commercial industry few products are made, or need to be made, exactly to drawing specifications. And indeed there is an amount of latitude involved in the interpretations of the drawings themselves. In these circumstances inspection decisions might vary from day to day, and it is not surprising that inspection may come to be perceived as a hindrance to production rather than a help.

The feed-back of information to production also has its difficulties, although it is more like other specialisms. But whereas the advisory capacity of, say, the Work Study Engineer is emphasised by the fact that he can only

study a job after he has been asked to do by Production, the nature of the inspector's task is that he bring to production's notice facts of which they are not previously aware. He thus makes himself liable to the feeling on the part of the production man that 'he's telling me how to do my job'.

B. Management perceptions of Inspection.

As has been mentioned, Management may feel that it has an interest in maintaining friction between inspection and production, and in using inspection reports as a control. When this happens the aim of getting things past inspection is, of course, heightened, and one way used of keeping rejections down may be to see that defective work does not reach inspection by providing an informal pre-inspection of the work by production (Gardner and Moore, 1950; McKenzie and Pugh, 1954). This means that the management will not be getting a true picture of what is happening in the shop.

C. Inspection perceptions of Inspection.

The inherent friction is often added to by the inspector's perception of themselves as superior to operators - a perception which is not always shared by production. They tend to feel that they have a measure of responsibility in that it is only their presence that prompts the operator to turn out anything like a satisfactory job. The situation is not improved by the fact that, in this country at any rate, inspectors do not in general earn as much as the operators whose work they inspect.

It is not surprising that in this inherently stressful situation, the need for what Kennedy (1951) calls 'the psychological angle' comes to the fore. The need for inspectors to be tactful, to be able to get along with people, to

have integrity, is continually emphasised (Brech, Juran, Kennedy, etc.).

"Inspection personnel should be chosen for their ability to earn confidence and respect" recommended the Inspection Productivity Report (British Productivity Council, 1953). It is this very emphasis on Human Relations skills which demonstrates the existence of sources of friction.

The two extreme reactions on the part of inspectors to this situation are well illustrated by the behaviour in the Hawthorne Bank Wiring Observation Room (Roethlisberger and Dickson, 1939) of the two inspectors I1 and I3. Friction soon developed between I3 and the operators. He became their butt, and he retaliated by making comparatively unfavourable decisions about defects that depended on his personal judgements. The friction developed to such a point that the management intervened and he was transferred to another department. Of course, personal factors enter in to the situation, but it seems clear that if I3 had been an operator he would have been far more likely to integrate himself with one of the groups.

I1 was far more a member of the group, and he 'paid' for his membership by giving up some of the duties which the management regarded as part of the inspector's job. For example, he used to repair defects without charging the operators with them. I1 and I3 are quite extreme examples of inspection-production relationships at different ends of a continuum. It is hoped to explore this relationship more fully in the study of the floor inspectors below.

Under these sorts of conditions, exhortations to co-operate common in the Management literature (e.g. Brech, 1953) do not seem to be very helpful. What is needed is a consideration of the conditions under which co-operation

will occur, and the terms on which it will take place. One of the most important conditions would seem to be that the inspector must be such as to be acceptable to the producer as 'qualified' to inspect his work. (McKenzie and Pugh, 1954). And this acceptance may be the main qualification needed. This acceptance is not a matter of the inspector's social manner. The inspector's role is essentially a fault-finding one, and the reaction to faults found may be a questioning of the authority of the critic. Some of the factors which make for acceptance may be age, having had production experience, knowledge of the job, and so on. It is interesting that Taylor considered that 'acceptance' depended on the inspector's being a master at the art of doing the job (see page above). These and other factors will be explored below in the study of the Floor Inspectors.

In this chapter we have attempted a brief summary of the inspection-production relationship making use of the relevant literature. In the following chapters we shall describe in general terms the firm in which the study was made and discuss the organisation and the functions of its inspection department, as a background to the study of the Floor Inspectors.

The Methods of the Investigation

1. The Problem of Obtaining Data.

One of the most important problems of psychological research in industry, is that of obtaining valid information. It is a problem which does not seem to arise for most of the writers on inspection quoted in the previous chapter. They are willing to make statements supported by evidence only by the implicit assertion: "I know, I've done it". To the beginning student, who has not done it, this is not an available method. And indeed from the scientific point of view this individualistic, basically anecdotal, procedure would not be considered as capable of providing the sort of unbiased, valid data which is required.

The psychologist, as a scientist, has to aim for systematic non-biasing methods of investigation. He may not, of course, be completely successful, but the data and the results will still be of value if he can point out their limitations and the degree of bias involved. (It is more valuable to have a not-so-accurate measure, the degree of whose accuracy is known, than to have a measure which may be extremely accurate, but whose degree of accuracy is unknown). One can then compensate for these known limitations and attempt to assess the relevance the validity of the data presented.

This sort of compensation is common in science, but in industrial studies the data is often presented so that it can be made by the investigator alone. The proper evaluation of the classic Hawthorne studies, for example, was for this reason only possible some time after their appearance.

An attempt will be made in this dissertation to provide data on which

these compensations can be made. This will be done in various ways. The social situation of the investigation and the role of the investigator will be described. Since the investigator is not an inspector but has to rely on the statements of others, the sources of these statements will be given. The area covered will be delimited and the limitations of the methods used discussed.

2. The Role of the Investigator.

It is now accepted in all science, and particularly in the Social Sciences, that the mere fact of investigating a field, causes some change, so that social scientists do not deal with 'ordinary' situations. "A policeman in uniform, it is said, never meets a normal man. Very much the same could probably be said of a psychologist ... " (McKenzie, 1956).

In industrial studies there are two basic ways of attempting to offset this inherent bias. The first, which was the one used at the Hawthorne Works, is to allow the investigator to remain so long that he comes to be perceived as of no more significance than the wallpaper on the walls.

The second method is of the opposite extreme, and exploits what Trist (1936) has referred to as 'stranger value'. It is a fact that a stranger who is not part of the factory social system, who is only going to enter into a fairly superficial relationship over a short space of time, who is not in any position of power or authority, can obtain information about an informant's attitudes and beliefs which would not be made available to someone in a more permanent relationship. It is on this phenomenon that the present study relies. It must be accepted as a basic limitation of this dissertation that the inter-

viewing of floor inspectors was done after seeing each one only once, a few days before on the shop floor. The distribution of the other interviews was more varied, but in general each supervisor (with the exception of the Chief Inspectors) was interviewed only once, although contact was made with many on several occasions.

The data obtained about the three factories of the firm described below, were collected during a fortnight in one case (Wales) and two periods of a fortnight in another (London). In the third case (Scotland) general information was collected by means of one day trips over a longer period of time, but the interviewing of the floor inspectors was concentrated into a period of a week. It should be added that some of the time mentioned above was spent in collecting information of relevance to the general project, but not to this dissertation.

The aim was thus to minimise the impact of the investigation, and this was helped by the role which the investigator took. This role was not one which was consciously assumed on his part, and in fact, it existed because of the attitudes of the informants to him, and its nature and implications only became apparent over time. His role could best be described as that of the 'enquiring student' - in the literal, not the Victorian, sense of those terms. The investigators invariably began by explaining that he was from Edinburgh University, doing a survey of inspection in a number of different firms. This served immediately to type him as a student finishing his studies, and thus enabled the informants to assume the role of experts in regard to him. On occasions when further discussion of himself took place, for example, over tea

in a break while being shown round the shop floor, the investigator found that it was usually assumed that he would go into industry after finishing his studies, on the personnel side, or in management. On a number of occasions he was offered advice on how to roundoff his studies; the most frequent being to spend a period as a worker on the shop floor before setting up as an expert or a manager.

Two other factors seemed to contribute to this 'expert-student' situation. The investigator was middle-class in speech and dress, whereas the informants in the inspection departments up to the rank of Chief Inspector were, with one exception, the LDCI, working class. Robb (1954) has discussed the implications of a middle class investigator among working class people in his study of Bethnal Green. Here, we may only mention that it served to stress the expertness of the informants, since in a factory the working class are on their own ground and a middle class person must be taken by the hand if he is to enter.

One further factor served to buttress this relationship; the relative ages of the investigator and the informants. The investigator was younger than any person interviewed and considerably younger than most. For example, the average age of Floor Inspectors was 40 years. The investigator was aged 25. A fact which may be adduced to support this characterisation of the interviewer's role and its implications, is that with one exception, none of the informants asked the investigator for his opinions on the topics discussed. The exception was the WCI who, for reasons which will become apparent in the next chapter, placed the investigator as a 'super-expert' in an 'expert-super-expert' relationship.

Unless one is prepared to participate in action research with the 'following through' that this requires (Jaques, 1951) which was not possible in the circumstances, it is vital in this sort of investigation to ensure that the investigator's role is clearly differentiated from that of the expert's. In this case the attempt was made to make this differentiation clear by pointing out that, this was a D.S.I.R./M.R.C. sponsored investigation and was thus precluded by its terms of reference from engaging in consultancy work. This explanation was accepted, at least at the verbal level.

Maccoby and Maccoby (1954) have noted that an interviewer's role of not-too-naive learner can be very fruitful, and it does seem to have been so in this case. If the subjective judgements of the interviewer may be considered relevant, it can be said that all the informants talked freely with a minimum of prompting. In the main interviewing programme of floor inspectors whose interview reports are given in Appendix I, all the informants took a helpful attitude and were willing to discuss any points raised. In the more general interviews with production and inspection supervision, only one could be considered as 'sticky' (WPM) and on only one occasion did an informant (LPSM), while providing a piece of information required, react hostilely to being asked for it. Among the floor inspectors, all except one (S18) co-operated to the extent of taking the intelligence test.

All this does not, of course, imply that the information provided was necessarily 'true'. The validity of the data obtained is discussed below.

3. The Methods of Obtaining Data.

As will be apparent from the previous section, the main method of

obtaining data was by interviews, both unstructured and semi-structured, or focused. In addition some direct observation was undertaken, although not in any systematic manner. In the main study of floor inspectors more formal situations were also used. A job satisfaction questionnaire was administered, together with an intelligence test, and an emotional adjustment inventory. Personnel department records were used to obtain biographical data, which were cross-checked at some points by a biographical question in the interview. Finally, ratings of the efficiency of the floor inspectors were obtained from inspection and production supervision by the aid of the 'Paired Comparison Method'. In the following sections there will be a general discussion on the applicability of these techniques. Details of administration, scoring, interpretation and so on will be discussed later.

4. The Interviews.

Two types of interviews were used: the unstructured interview and the semi-standardised or focused interview as advocated by Merton and Kendall (1946). There have been many discussions on the relative merits of the different types of interviews (e.g. Madge, 1953, Maccoby and Maccoby, 1954). The general conclusion seems to be that it depends on what one wants the interview for. In this dissertation too, the two types were used for different purposes.

A. The Unstructured Interview.

The defects of this type of interview are well known, and they may be summed up by saying that it is impossible to determine the 'equivalence' of one interview with another. How far can one be sure that one is talking about the same things? The insistence on equivalence can be over-stressed since even the same word can mean different things to different people, although given a

common industrial background this danger should be reduced. Unstructured interviews were obtained in this investigation from inspection and production supervision in order to provide background information for the study of floor inspectors. The need for equivalence in these situations did not seem to be relevant as different information both 'actual' and 'attitudinal', was required from different people. What seems to be required here is not equivalence for direct comparative purposes, but rather the evaluation of statements made having regard to the situation of the people making them. These interviews with supervision are regarded as unstructured although, as anyone embarking on an intensive interview programme is made aware, they soon take on some common forms and even questions. They are regarded as unstructured, however, because no attempt will be made to do any systematic counting or rating of responses. Rather than interpretation here is on an anthropological level, and an attempt will be made to fit together the picture into a coherent whole, having regard to the statements made and the situations of the people who made them.

B. The Focused Interview.

The main argument in favour of a standardised interview is that it incorporates a basic principle of measurement, it makes information comparable for case to case. Its main disadvantage is that it is too rigid; it may not give the informant the opportunity to express himself as he wishes, on the topics raised, it may not allow him to cover topics which he considers relevant but are not covered by the schedule, and so on.

The focused interview is an attempt to dispense with much of the standardised interview's rigidity while retaining some of its rigour.

This type of interview was used in the study of floor inspectors. The procedure used was to ask the same series of 13 questions in the same order, of all the subjects. But in elucidating the answers to these questions the interviewer asked any supplementary questions that seemed relevant. In this way, sufficient equivalence was retained to enable the data to be used for content analysis, attitudinal ratings, etc. while at the same time sufficient latitude was allowed to enable the subject to bring forward any topics or views which he felt were relevant. In addition it was felt that better 'support' was obtained than is possible with a rigid interview schedule.

C. The Recording of the Interviews

On this subject too, there has been a large amount of discussion in the literature. In this study, the resources available precluded any method which required more equipment than the interviewer's pencil and notebook, and this left two possible methods. The first of these is to rely purely on writing up the interview from memory after it has occurred, and the second is that of taking notes during its progress. The advantage of the first method is that the situation's being just a chat, may increase rapport by not interrupting the informant's flow as notetaking might do. The disadvantage of recording from memory are the limitations on the interviewer's ability to retain all the information, and the distortions which are involved in reconstruction (see Bartlett, 1932).

In this dissertation it was decided to take as near verbatim notes as possible during the interviews, since it was felt that the gain in accuracy would be far more valuable than any putative loss of rapport. And indeed it

was considered that note-taking helped rapport, in that it made quite clear that the investigator was undertaking a study and was not just engaged in general conversation. Thus note-taking helped to justify the considerable amount of time that the informants devoted to the investigation. At the beginning of every interview the investigator had his note-book ready and after the preliminaries, simply began writing. In no case did this evoke any comment, beyond sympathetic ones on the difficulty of getting everything down.

5. Direct Observation.

In theory direct observation should be one of the most potent methods in the social sciences. In practice this has seldom been the case. There are many reasons for this. Observation, to be of value, must take place over long periods of time. The observer must be in a position to recognise and evaluate significant incidents, he must know that his presence is not exerting a distorting influence, the degree of which is unknown. Because of this it is likely that a systematic collection of the reports of participants in an incident may provide a more valid picture of the situation than an observed incident on which the observer's influence is unknown. This is felt to be particularly the case in this study which deals with Human Relations problems and friction between individuals.

For this reason, the investigation was in the main an interviewing one. In this concentrated interviewing programme it was not possible to make systematic observations along the lines suggested, for example by Nadler (1953). It was hoped that an investigation in co-operation with supervisor's, using Flanagan's (1954) 'Critical Incident' technique could be undertaken. But this did not prove possible. This technique consists of obtaining from supervisors

reports of incidents coming to their notice, which stand out in characterising the subject as an efficient or an inefficient workman - or, in this case, floor inspector. The supervisors here felt that since the floor inspectors work so much on their own initiative, they were not in a position to do this, and this facet of the study had to be abandoned.

The observations which were made were of an unsystematic number of incidents occurring during the course of the interviewing programme. They have been used and interpreted in the same way as the unstructured interviews referred to in the previous section.

6. The Ratings of Efficiency.

It was desired to obtain a measure of the efficiency of the floor inspector in his job. Since no objective measures exist reliance had to be placed on ratings by supervisors. There are two main problems involved in this procedure.

The first problem is concerned with what might be called the 'mechanical' aspects of a rating procedure. Factors such as 'errors in central tendency', 'judgements of leniency' etc. have been discussed by Paterson (1950). An attempt was made to overcome some of these difficulties by using the 'paired comparison' ranking method as outlined by Kendall (1948). This has the advantage of turning the rating into a ranking. The rater was presented with every floor inspector's name coupled in turn with every other one in his shop, and forced to make a choice between each pair. Thus the measure became a relative, not an absolute one, and the central 'bunching' usually found was to some extent overcome. The rankings asked for concerned the dimension of

overall efficiency and one advantage of this method is that it enables a 'coefficient of consistence' to be calculated. If this coefficient was low, i.e. if the rater was using two or more dimensions in his comparisons, then the rankings were rejected.

The second problem of ratings is that of the social situation in which these ratings are made. The impact of interpersonal relations on such ratings has been demonstrated by Kallejian et al (1953) and the phenomenon of the 'halo effect' is well known. This is, of course, a basic defect of the method and the reason why it was used in the study was only because no other method of measuring efficiency is possible. The only way to attempt to overcome this difficulty is to have a large number of raters, but in industry this is rarely possible. In this study at least two independent rankings were obtained on each group.

In addition, supervisors were asked to give absolute ratings and these were compared with the rankings obtained.

7. Other Methods of Obtaining Data.

The advantages of data derived from a fully standardised situation need not be elaborated here. We need only mention that the degree of equivalence of tests and questionnaires enables comparison to be made with results collected from a large variety of investigations on idfferent populations. This sort of comparison will be made with data collected in this study.

Personnel records were used to obtain biographical data. A discussion of the dangers involved in the use of a firm's own records has been given by D.S.I.R. (1954). In this study the information required was of a simple kind

(length of service in the firm, time spent in inspection, etc.) These were likely to be accurate as changes often involved wage adjustments. They were supplemented by biographical questions in the interview.

8. The Validity of the Data.

With any measuring instrument it is essential to determine the extent to which it measures what it purports to. How far do the data collected in this dissertation have any relation to actual behaviour, underlying attitudes, or even the factual events which they report? This subject is a very broad one, and we shall approach it here by discussing the various methods of validation which will be attempted. It should be realised that these methods are not completely separable, and in the validation of a particular measure a combination of them would be used.

A. Coherence Validity.

If, as a result of information obtained from a number of people, it is possible to produce a coherent picture, then it is maintained that this picture had validity. This is the usual basis of the validity of anthropological studies and it is the type of validity that will be mainly relied on in regard to observation and the general interviews. The difficulty is that the coherent description may be given in such general terms that a large variety of facts will fit into it, thus eliminating predictive possibilities. In this study attempts were made to be as specific as possible in the descriptions given, and predictions were made and tested out where relevant. For example, on the basis of interviews with inspection supervision in one factory, it was possible to make a prediction about the production manager's

attitudes, which was later borne out by interview. And this kind of checking was done continuously in order to get a satisfactory description of situations encountered.

It should be pointed out that this type of validity is the basic one in science, in that invalidatory evidence consists of facts which do not cohere, and yet are too important to be neglected. The other types discussed below are modifications of coherence validity and are dependent on it. They were used mainly in connection with the focused interviews, rating scales, tests, etc.

B. Immediate Validity.

If, in our interviewing programme, 70 per cent of people when asked say they like their jobs, then the statement: "70 per cent of the group answered 'I like it' to the question 'How do you like your job?'" has immediate validity, if one assumes that the understanding and recording of the question and answer have been satisfactory. The interpretation to be put on to this statement will be a matter of speculation in the absence of other data, but the statement itself will be considered valid. This type of immediate validity will be used mainly in the content analysis of the focused interviews.

C. Internal Validity.

The type of validity relates to the consistency of statements relating to some underlying attitude. This may be taken as a measure of reliability, but if a number of different questions are asked all related in a psychologically meaningful or logical way, then high correlations among the answers would suggest that these questions are all tapping a common attitude and are

measuring what they purport to measure. For example, a Guttman scale with a high reproducibility indicates not only high reliability but also that the attitudes expressed have psychological consistency in terms of their verbally expressed content. In this study the validity of the 'content analysis ratings' of job satisfaction and attitude to production will be considered in these terms.

D. Direct Validity.

This involves a direct comparison of the coherence of two measures or other sources of information. Interview statements can be checked by records and vice versa; observation can be checked by questionnaires, and so on. In addition, with the more standardised methods, e.g. Intelligence tests, calls can be made upon the literature for evidence of validity. This method of demonstrating validity, with the use of correlational techniques, is one of the most potent and will be used wherever possible.

E. Indirect Validity.

This involves correlation of two sets of data which have a predictable relationship. For example, if one has two variables A and B, and one predicts a relationship between them, then the establishment of a correlation between A_1 (as a measure of A) and B_1 (as a measure of B) is some evidence that A_1 and B_1 are valid measures of A and B. This demonstration of validity is not conclusive since the correlation may be caused by some extraneous factor, but the measures must be concerned with something reliably, to make correlations possible at all. The chances are that if the correlations are in the predicted direction A_1 and B_1 are measuring something like A and B. Of course,

if the predicted relationship does not arise, one cannot tell whether it is because A and B are not related, or because A_1 and B_1 are bad measures. This is a very common form of interview validation though not always recognised as such. (Maccoby and Maccoby, 1954). It will be used here wherever relevant; in particular in regard to attitude measurement.

As has been indicated above, it did not seem helpful to discuss validity in wide general terms, but it seemed preferable to describe methods of obtaining validation. But there is one general point that the investigator in deference to his conscience, must make. In a study of such comparatively small compass as this there is always the feeling that the whole thing is a specially presented 'front', a put-up job that bears no relation to reality at all and is not susceptible to the methods described above. But validation on these terms, rather than on those presented above, becomes a Kaffaresque nightmare, not a scientific discussion of the situation, and has to be resolutely avoided.

Messrs. Aye Ltd.

1. Introduction.

This study is primarily concerned with the floor (or patrol) inspectors of a particular light engineering firm, who will be referred to as Messrs. Aye Ltd. Ayes are an internationally famous company that manufacture household electrical appliances. The firm has three main factories, one each in London, Scotland and Wales. Each factory makes different products, but as will be seen, they are all organised along comparable lines. The population of floor inspectors to be studied numbers 62 men spread over three centres.

2. The Development of the Firm.

The firm started in Britain just after the Great War. They began as a depot where products from the parent company abroad were adjusted to suit the British market and they developed on this basis. During the twenties, they continued to import products and parts, and acted as a service station and selling organisation. At the beginning of the thirties it was decided to start manufacture in this country, and the present London factory was built. They continued, however, to work to the parent company's designs.

In 1939 they changed to war products and became in effect completely independent. The design department 'came into its own' and with a very 'go-ahead' Managing Director there was continual pressure for improvements in technology and organisation. During the war such techniques as scheduling, planning and progressing were introduced and drastic changes were made in the organisation of inspection (see below) and other functions. All of these innovations were retained and form the basis of the present practice.

After the war, the London factory reverted to its normal products and the Scottish factory was set up. Its product is a sub-assembly of the main London one, but one which is complete in itself and is supplied to other firms. (It does not supply the London factory which itself continues to produce sufficient numbers of the sub-assembly for its own use). A few years later the Welsh factory was set up to manufacture a new product for sale direct to the public.

The main London products are still designed basically by the parent company abroad, and they are not allowed to bring out entirely new models in this country. But once the model has come over they can make design or other developments as they wish. On all their other products they have a completely free hand.

3. The Development of the Inspection Department.

The inspection function in Ayes has gone through a common pattern of development.

1. Originally there was no process inspection at all, only a final inspection, run by the engineering department. This was done on a simple pass or throw out basis.

2. Then there developed a view room where all components were viewed 100 per cent by girls and sent back if necessary. There was still no inspection on the shop floor, and the department consisted of the Chief Inspector and a number of girl viewers. The final inspection continued to be the responsibility of the engineering department, but the production department itself did certain electrical testing on all products. This was not apparently very satisfactory and the reject figures were very high at final inspection.

This was partly because of poor training of the viewers, and partly because there was no attempt at feed-back of quality information while the components were in manufacture, except on the part of the operator himself. The Inspection department was only responsible for a pass/fail decision after the components had been produced and taken to them in the view room.

3. In the mid-thirties the then Chief Inspector introduced the floor inspection system. Floor inspectors, who were responsible to him, patrolled the shop floor doing immediate spot checks of components as they were being produced and reported to the operator or machine setter whether the job was within the tolerances specified or not. At this time also the inspection department took over the electrical testing previously done by production itself. Thus the department was responsible for the process viewing, inspecting and testing. But the final inspection still came under the engineering department. They retained the ultimate responsibility for deciding on the 'acceptability' of the product. For example, only they could pass products which, while departing from the specifications laid down, were considered acceptable. This system remained until the war.

4. After 1939 the factory went over to war work and thus had, in addition to their own inspection force, Government inspectors without whose sanction products could not be accepted by the Services. In addition to providing their own inspectors, who had final responsibility for acceptance, the Government Agency (the Aeronautical Inspection Directorate) also laid down that the Chief Inspector of Ayes should take complete responsibility for the quality of the products, and that he in turn should not be responsible to

anyone in the organisation who had a direct interest in the quantity of products produced. Thus the inspection department had added to it the final inspection and took complete responsibility for quality, and the Chief Inspector reported to the General Works Manager - the chief manufacturing executive of the company. The inspection responsibility has remained since on the same basis. When the Scottish and Welsh factories were established, the London set-up was, in the main, duplicated. They were organised from the start with independent inspection departments, accepting complete responsibility for all process and final inspection, viewing, and testing. The figure of one inspector for every eight producers, which had been laid down in the London factory as being suitable for this type of work was taken over by the new factories and characterises the group.

4. The Three Factories of the Aye Group.

The Scottish and Welsh factories of the Messrs. Aye Ltd. started as offshoots of the London factory but they soon achieved a great measure of independence. They now each have their own Boards of Directors and the amount of contact except at the very top level is small. One sub-assembly for Wales is still made in London, otherwise the factories are completely self-contained, as far as manufacture is concerned. The research organisation and the major responsibility for the design of new products is centred in London. But once the decision has been made to begin manufacturing a product, any design modifications necessary are carried out by the design department of the factory concerned.

The General Works Manager in London is responsible for co-ordinating

the manufacturing policy of the group. The extent of his jurisdiction has been continuously modified over time. The General Managers in Scotland and Wales began by being responsible through him to the main board, but they have since become Resident Directors of their separate companies, and are now directly responsible to their own boards.

The general principles of organisation, planning etc. of the three factories are, however, similar. The Group uses the system of budgetary control of costs, with subsidiary budgets for scrap, indirect labour and so on. The impact of the budgets, as discussed by Argyris (1952), is felt to be the main pressure by all production supervision from foremen upwards. The company uses planning and progressing and the achievement of schedule is the second big pressure on production. In the third place comes the pressure for quality. The effects of this ordering of felt pressures, on the Inspection department will be examined in the next chapter.

5. The Present Organisation of the London Factory.

The relevant parts of the general organisation chart of the London factory down to the level of superintendent are given in Fig. 4.1.

A number of comments may be made in amplification of this chart.

1. The sales organisation is completely separate and is linked with the manufacturing side only at the Managing Director level. The accounting system used is that each factory 'sells' its products to the Sales organisation at an agreed price and is expected to make a manufacturing

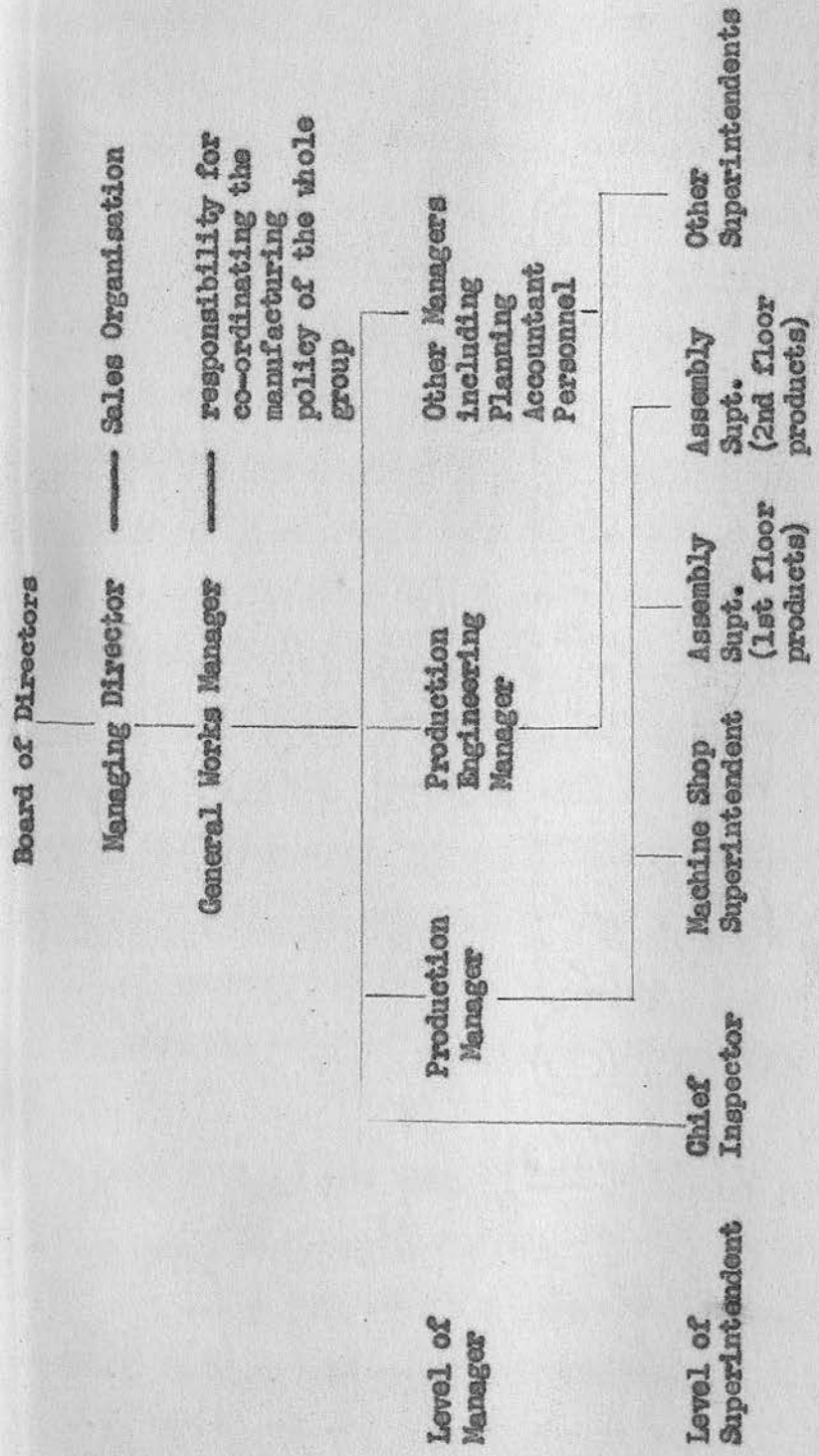


Fig. 4.1.

profit which is distinct from the distributing profit gained by the Sales force. The manufacturing-sales relationship which has repercussions analagous to the inspection-production relationship with which we are here concerned, has been discussed by Balchin (1935). The bearing of the sales organisation on inspection standards will be discussed in the next chapter.

2. The General Works Manager is responsible for co-ordinating the manufacturing policy of the whole group, and in addition the London Managers and the Chief Inspector report to him on the routine working of the London factory. He thus has a second role of London Works Manager. Jaques (1951) has described a similar position in Glacier Metals which caused confusion, this does not seem to happen in Ayes for reasons which are discussed above in Section 4, on the relations between the factories of the group.

3. It will be seen that the Chief Inspector is at the level of superintendent, although reporting direct to the General Works Manager. He is, thus, considerably lower in status than the Production Manager, who has three superintendents reporting to him. This will be contrasted later with the situation in the other factories.

The organisation of the London Inspection Department is given in Fig. 4.2.

It will be seen that the Chief Inspector has two Assistant Superintendents, one of whom is his deputy. They each have one Foreman reporting to them. In addition to being in charge of inspection for their departments they also function as themselves as Foremen for parts of their shop. (They do, in fact, wear Foremen's overalls). L4S and LP3 divide the machine shop

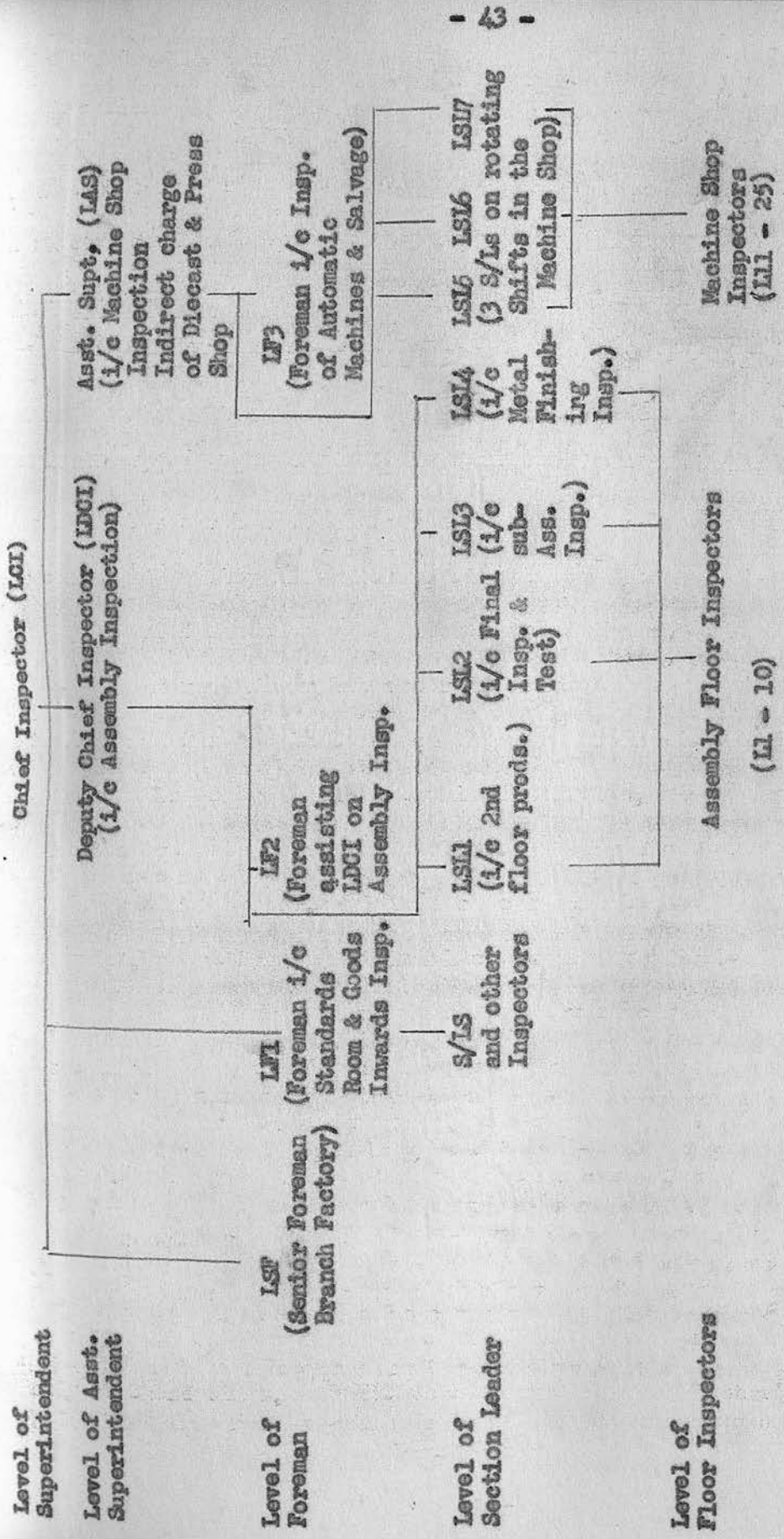


Fig. 4.2.

inspection between them as shown. LDC1 and LF2 do similarly for the Assembly inspection, although in this case there is no formal demarcation of responsibility. Both the Assistant Superintendents and the Foreman deal directly with the inspection section leaders. The section leaders split up the shops between them and each had under his charge a number of floor inspectors (L1 - 10 on Assembly; L11 - 25 in the machine shop) who form the main subjects of this investigation.

There is a foreman, LF1, in charge of Standards Room and Goods Inwards Inspection. He has two section leaders and a number of inspectors under him. The functions of these sections will be discussed in the next chapter together with the rest of the inspection department. Here it may be mentioned that Standards Room Inspectors are a higher grade than Floor Inspectors, and that Goods Inwards Inspectors although on the same grade do a different job. Both of these groups have therefore been excluded from the major group of Floor Inspectors to be studied.

There is one further grade of personnel in the inspection department, that of viewer. This is a lower one than that of Floor Inspector. The grade includes women as well as men, and is employed on hundred per cent viewing of piece parts and test of sub-assemblies. Viewers report directly to the Section Leaders except in the Diecast Foundry where they are under the supervision of the floor inspectors.

The London Production Organisation is given in Fig. 4.3.

The basic division in the production organisation will be seen to be between the Machine Shop and the Assembly Floor (a division, of course, which

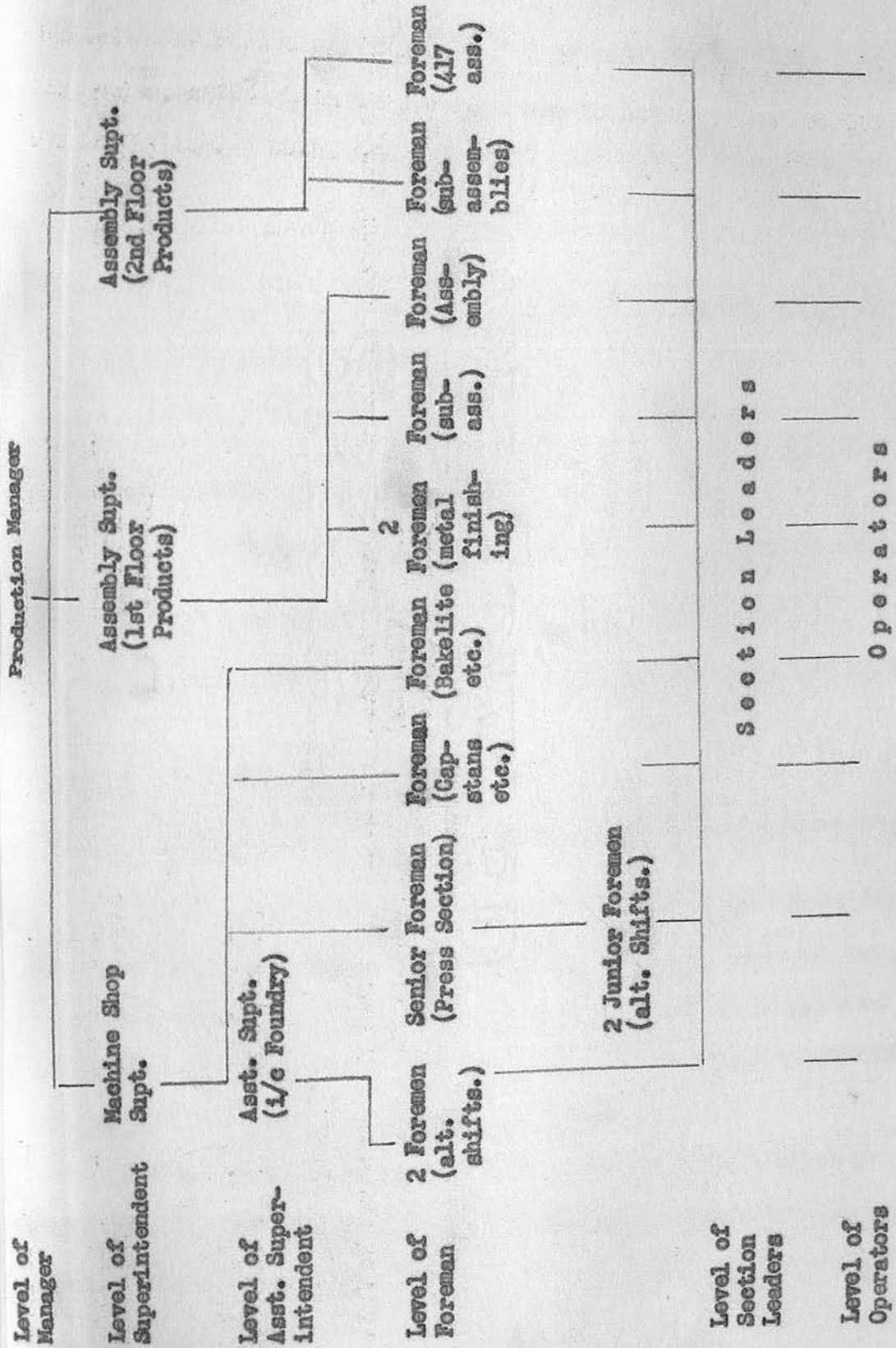


Fig. 4.3.

is paralleled in inspection). The first and second floor assembly shops produce different products and are independent.

It is instructive to place the inspection and production organisations alongside.

1. In charge of:

Production: MANAGER; Inspection: SUPERINTENDENT

2. In charge of Machine Shop

Production: SUPERINTENDENT; Inspection: 1 Asst. Supt.
1 Foreman

3. In charge of Assembly

Production: 2 Supts.; Inspection: 1 Asst. Supt.
1 Foreman

4. In charge of a shop

Production: Asst. Supt. Inspection: Section Leader
or Foreman

5. In charge of a section

Production: Section Leader Inspection: Floor Inspector.

It will be seen that the immediate opposite number in the inspection hierarchy to a production supervisor is always at least one step below in rank. This would tend to increase the status of an inspector relative to a production man of the same grade, since he is always initiating the activity of someone of a higher rank in production.

The procedure laid down for use in a dispute illustrates this. A Floor inspector who finds a job that he considers unacceptable informs the production section leader, since he himself has no power to stop production.

They discuss this together and if the production section leader disagrees he sees the inspection section leader. If there is no agreement here it is the inspector who takes it up the hierarchy by seeing the production foremen. The production foreman if necessary deals with the inspection foreman who in turn sees the Production Superintendent. The Production Superintendent may go to the Chief Inspector, whose office, unlike those of the other superintendents, is not on the shop floor. Thus, at each stage, the production man has to deal, in the first place, with an inspector of lower rank. This is the formal procedure which may be modified by informal workings, but it is still true that the major production contact of a floor inspector is the section leader, the major contact of an inspection leader is the production foreman, and so on. Some of the implications and effects of this status difference will be discussed more fully later.

The total number of operators in the factory at the relevant time was 880; the total number of inspectors and viewers, 107. The ratio of inspection to production workers is thus 12 per cent.

The comparative wage of operators and floor inspectors is relevant and may be given here. Operators are on a basic rate plus bonus and floor inspectors are on a flat rate, but a comparison is possible taking the mean bonus rate over six months, which was, in fact, fairly constant. On this basis the average floor inspector earns 6 per cent more than the average operator.

6. The Present Organisation of the Scottish Factory.

The general organisation chart of the Scottish factory is given in Fig. 4.4. The organisation is similar at the lower levels to the London one. Again the Deputy Chief Inspector, as an Assistant Superintendent, also acts as a Foreman for part of his shop. Except at the Manager level the inspector's

General Manager
(and Resident Director)

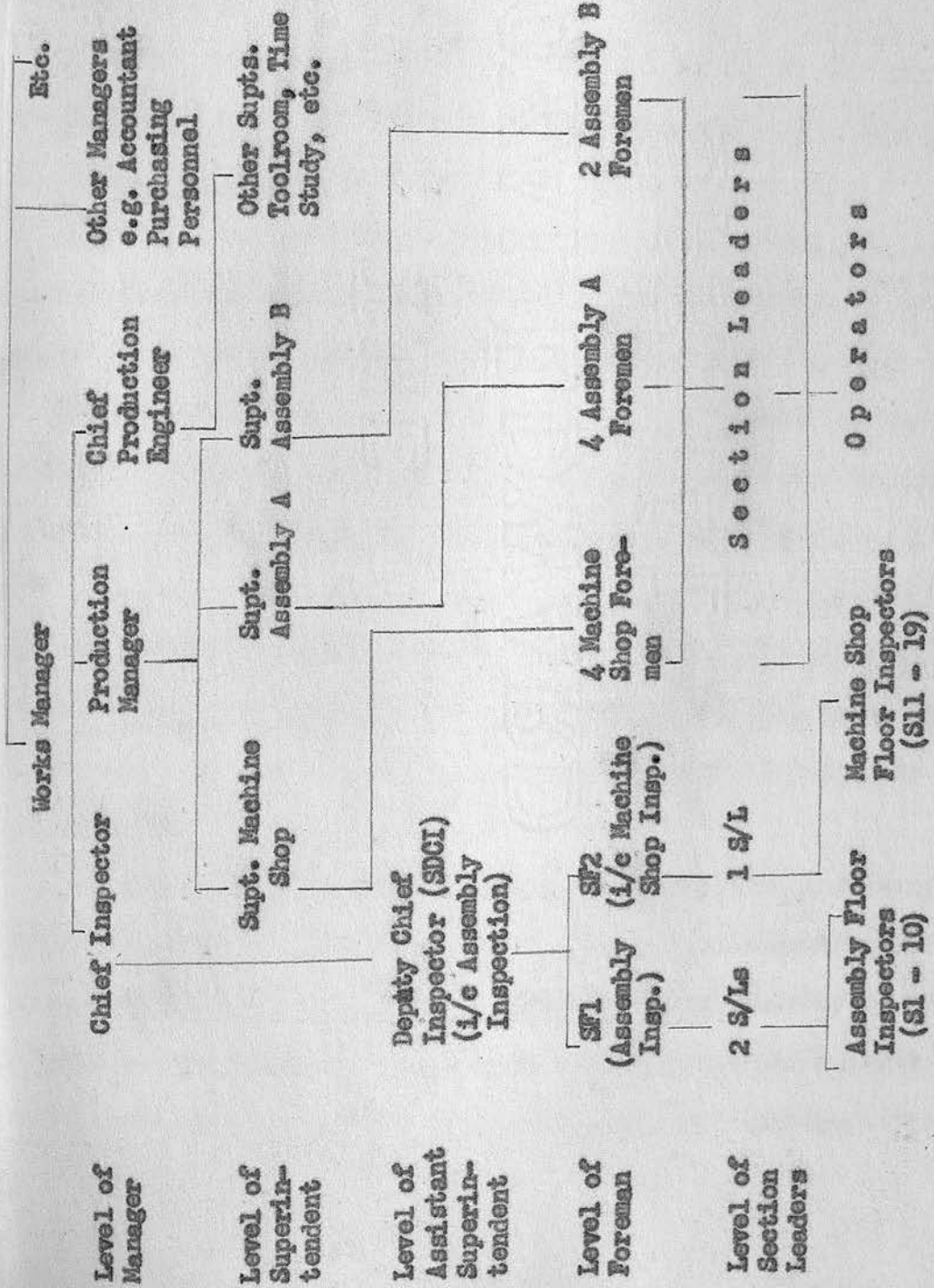


Fig. 4.4.

interaction is still with a production man of higher rank. Two main differences may be noted.

1. The Chief Inspector and the Production Manager are both of the same rank (Manager).
2. The Chief Inspector reports to one who is not the highest functional executive of the factory, i.e. he reports to the Works Manager not the General Manager.

This organisation came into existence at the setting up of the Scottish factory and has remained substantially the same ever since. From the beginning the decision was made to place the Chief Inspector and the Production Manager on the same level. There was at first no Deputy Chief Inspector, only two foremen reporting direct to a Manager (the SGI), but later the post of Assistant Superintendent (SDCI) was created, and one of the Foreman promoted. The SDCI filters all information regarding the shop floor through to the Chief Inspector, who is thus released for more general duties. The SDCI and the two inspection foremen split up the shop floor between them; their divisions corresponding in the main with those of the three production superintendents.

The duties of each level are as those of the London factory. There is as before the grade of viewer to do the 100 per cent inspecting.

The average wage of a floor inspector and an operator in Scotland may be compared on the same basis as before. An average floor inspector gets 6 per cent less than an average operator, except for foundry workers. Here

a diecast inspector gets 12 per cent less than a diecast operator.

The total number of operators in Scotland was 700. The total of inspectors and viewers, 81. The ratio of inspection to production is thus 12 per cent.

7. The Present Organisation of the Welsh Factory.

The general organisation of the Welsh factory is given in Fig. 4.5.

The most important divergence of the Welsh set-up from the previous two, is the fact that the Chief Inspector, a Manager, reports to the highest executive of the factory, the General Manager. He reports directly to a person higher up in the hierarchy than the Production Manager. The development of the organisation up to this point must be described.

The Welsh factory was set up to produce an entirely new product, unlike the Scottish factory which was inaugurated to produce large numbers of a product already being made at London as a sub-assembly. When the Scottish factory was started the basic problems of design and so on had already been solved for London production. So from the beginning this factory was much more independent, its problems being those of production rather than production engineering. The Welsh factory, on the other hand, was far more dependent on London where the main Design and Production Engineering Departments of the Group are housed. The Chief Executive in Wales was given the title of General Manager, and both the Production Manager and the Chief Inspector (at that time a Superintendent) reported to him. He was thus in addition Works Manager. When the factory achieved greater independence, and a separate Board of Directors was set up, the General Manager became the Resident Director and occupied a post equivalent to the General Manager in Scotland. At the

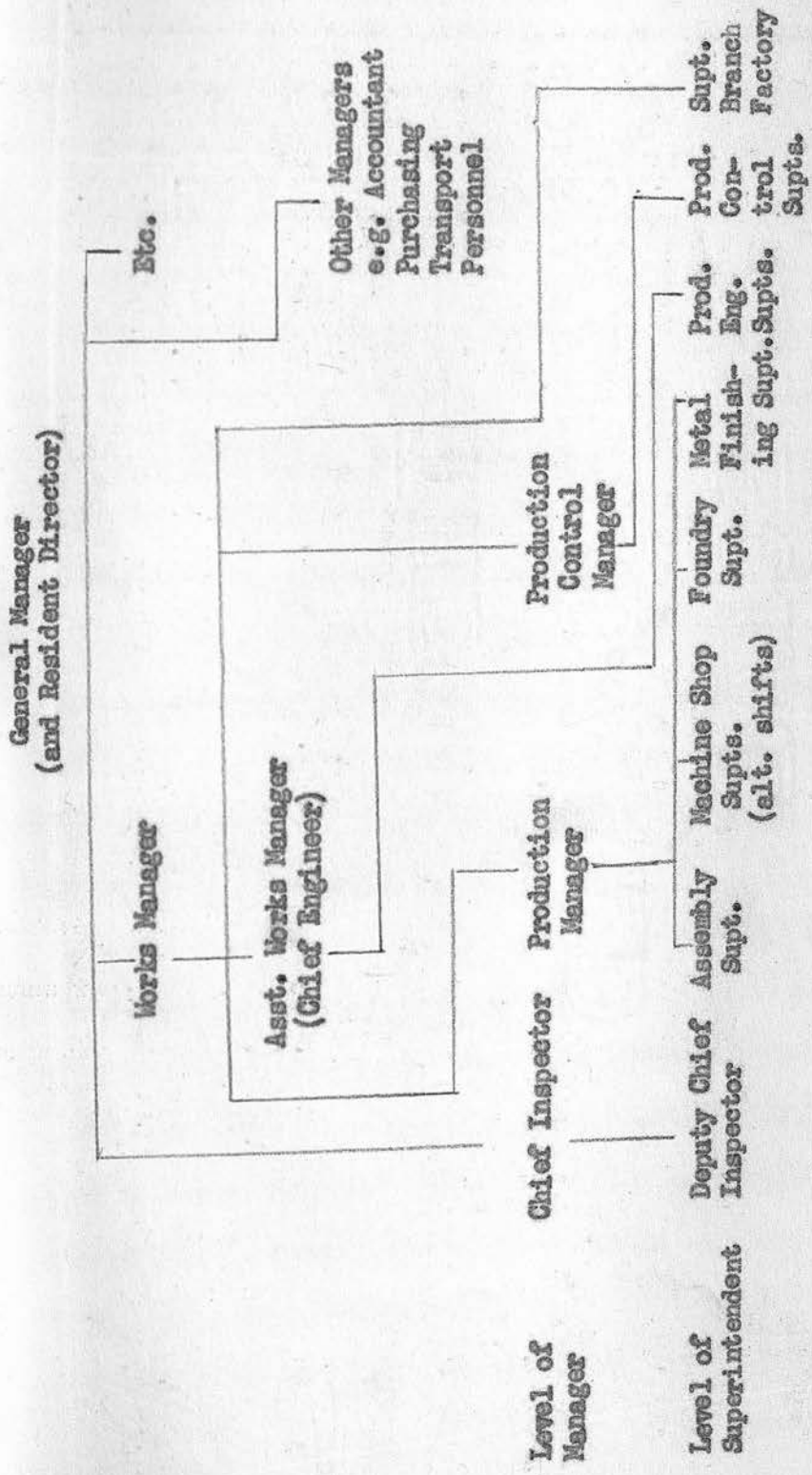


Fig. 4.5.



same time a Works Manager was appointed with duties equivalent to the Works Manager in Scotland and the Chief Inspector and the Production Manager reported to him. This continued for about five years after which the General Manager decided to have the Chief Inspector report directly to him. This change was made only three weeks before the present investigation was carried out.

This change was brought about by the need to strengthen the inspection department vis-a-vis production. There had been a number of sales complaints concerning faulty products which culminated in the failure of a number of products sent for public exhibition. The General Manager felt that both the Works Manager and the Chief Inspector was too 'production-minded' i.e. too willing to make allowances for the admittedly large production and scheduling problems of the factory. He wanted to 'put his own weight behind inspection at all levels' to make them more independent of production. At the same time he wanted to be in a position to measure the inspection organisation and its leaders personally.

After three weeks the change seemed to have had the desired effect. All members of inspection supervision felt that they were playing a far bigger part in the running of the factory than ever before.

By this time the Chief Inspector had become a Manager, although there appeared to be no definite point at which he was up-graded from Superintendent. For a long time his position was ambiguous. He was on all Management 'circulations' i.e. received managers' literature, went to Management meetings and so on, and yet was not paid in the manner of Managers, who are paid

quarterly direct from London. Other supervision are paid monthly in Wales. (The amount he received could not be used to assess his status, since in Ayes, as in other firms, the salary of a supervisor above the grade of Section ^{leader} is a purely personal one, and there are considerable differences among people of the same rank). This ambiguity meant that the Chief Inspector was of lower status than the other Managers and this coloured their attitude towards him and towards the inspection function. Eventually, the position was regularised and the Chief Inspector became a full Manager.

The organisational problem was, as always, complicated by a personal problem, the calibre of the Chief Inspector. The ambiguity arose from the Board of Directors' doubts as to the fitness of the Chief Inspector to be a Manager. 'They were asking, is he big enough to be a Manager?' We may note that from the organisational point of view the question should have been: The Chief Inspector is a Manager, is he big enough to be Chief Inspector?

The organisation of the Welsh Inspection Department is given in Fig. 4.6.

As before the basic division is between Machine Shop and Assembly. The Deputy Chief Inspector also acts as Foreman-Inspector for one product. One Foreman is concerned only with the Metal Finishing process and the remaining three, divide the machine shop between them on alternating shifts, two on day shift and one on night. The Assistant Superintendent and the Foreman on Assembly share the work between them with no special demarcation.

The duties of each level are as those of the London factory. At the Welsh factory there is a hundred per cent final test and inspection of every product made. This is done by a special grade of Final Inspector which has

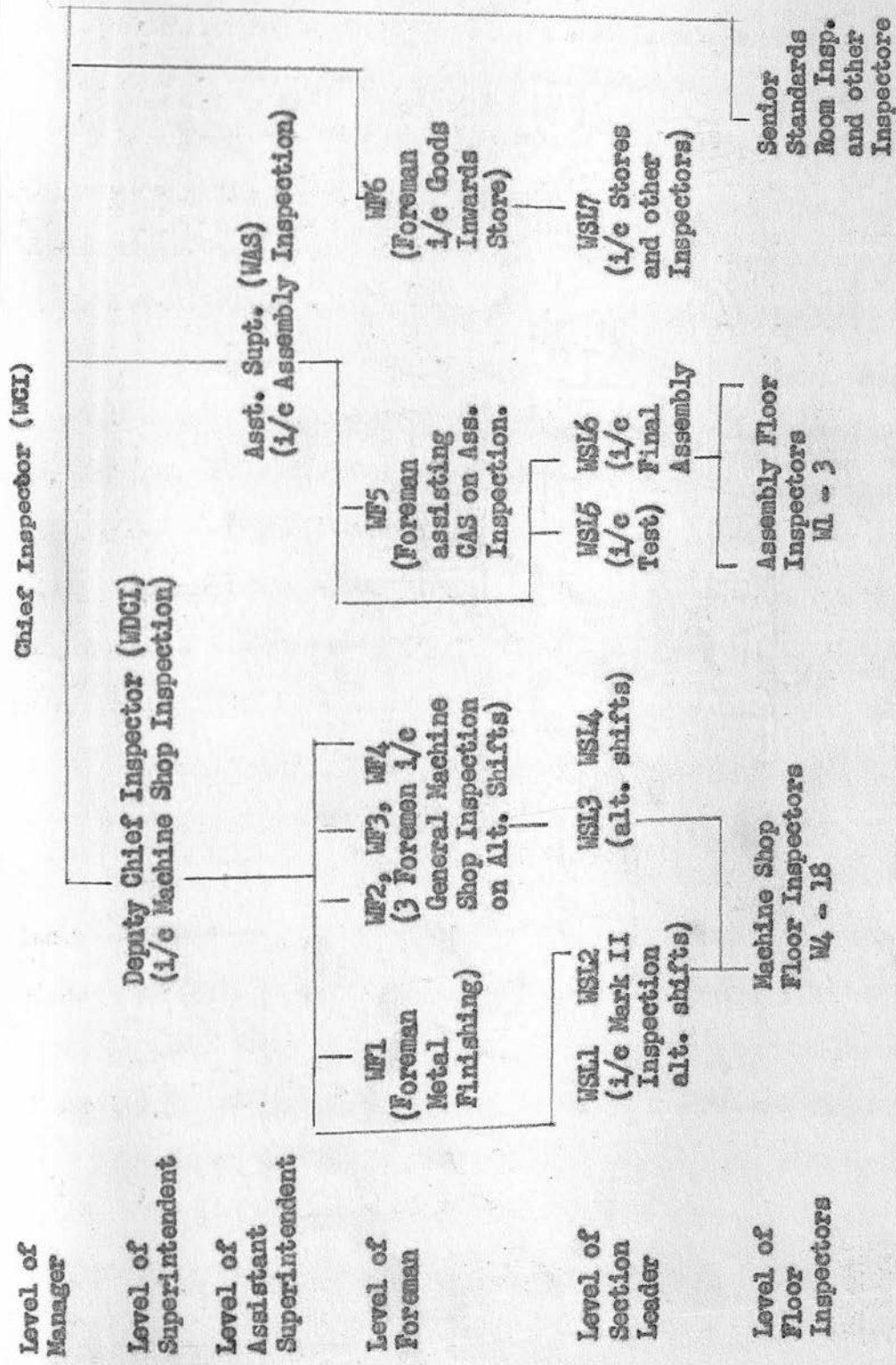


Fig. 4.6.

no counterpart in the other two factories. The Final Inspectors report to WSL5. This is the reason for there being so few floor inspectors, only three, an Assembly. The grade is below that of Floor Inspector but above that of the viewers, who do hundred per cent Inspection of piece parts.

The average wage of a Floor Inspector and an operator in Wales may be compared on the same basis as before. Here the method of payment is slightly different. A production operator gets a basic rate plus a bonus, but receives only half of the overall factory efficiency bonus, which is paid in full to indirect non-production workers such as floor inspectors. Taking this into account an average floor inspector gets about 10 per cent more than an average production operator.

The total number of operators in Wales was 860, the total number of inspectors and viewers, 107. The ratio of inspection to production is thus 12 per cent.

8. General Comments on the Inspection Organisation.

The most outstanding feature of the Group Inspection Organisation for comment here, is the variation in status of the three Chief Inspectors.

At London the Chief Inspector is a Superintendent who reports to the General Works Manager. The position of the General Works Manager is not entirely clear. But if one leaves out of account his co-ordinating function with regard to the other factories - which is ambiguous and diminishing - he may be considered as a General Manager in an organisation with no Works Manager. The most important fact is the considerably higher status of the Production Manager vis-a-vis the Chief Inspector. He is a Manager whereas

the IGI is a Superintendent. Further the status of a Production Manager in an organisation with no Works Manager tends to rise even in relation to other Managers, as he is in charge of the direct producing function of the factory. The organisational position is further complicated by a personal one; the fact that the Production Manager is a former Chief Inspector. He was the first to occupy this post and held it during all the formative years of the Inspection department and when he was promoted it had already taken on its present organisation and function.

The position at the Scottish factory is that the Chief Inspector while a Manager and of equal status to the Production Manager, is the only Chief Inspector who reports to the Works Manager, i.e. to someone who is not the Chief executive of the factory. This organisation is defended by the Scottish General Manager on personal grounds. It rests on the fact that he considers that the Scottish Works Manager, being a former London Chief Inspector, is therefore sufficiently inspection- as well as production-minded to be able to strike a proper balance between the two.

In Wales the Chief Inspector, while a Manager is of equivocal status with regard to other Managers. In an attempt to increase his status he now reports direct to the General Manager. With the exception of the Production Manager, it is the opinion of all supervision interviewed, including the Works Manager away from whose jurisdiction inspection was taken, that this form of organisation is the correct one, and should continue if inspection is to have its proper force.

It is interesting to consider here, how far these differences are made

possible by the fact that the head of the inspection department is referred to as the 'Chief Inspector'. This title does not immediately tie its possessor down to a particular rank, such as Manager, Superintendent, or Foreman. This variability in the name allows a Chief Inspector to function above his supposed rank as at London, or below it, in Wales.

The inherent latitude involved in this type of name does have its uses, particularly so in the functional specialisms and service organisations for which it was designed. It is not necessary to tie down the rank of the Chief Design Engineer beyond stating that he reports to the General Manager, and indeed it is an advantage not to do so. He can then approach many levels on equal terms. But his is basically an advisory capacity as are the other service departments. As has been shown in the previous chapter, inspection is not a functional specialism of this kind. It has a direct controlling effect on the process. Its departmental organisation must parallel Production's. It is much more akin to that department than to the Design or Time Study departments, or than these functional specialisms are to Production.

The situation in Wales would probably never have arisen if the head of the Inspection Department had been the 'Inspection Manager'. The London situation is complicated by the accretion to the Production Manager of some of the status of Works Manager in the absence of such a post, but even here the designation of the LSI as 'Inspection Superintendent' would have made explicit the need for the head of the Inspection Department to function at a higher level than his actual rank, although not necessarily putting him on the same level as the Production Manager.

It is the aim of this investigation to explore the effect of these variations in organisation and status on the inspection departments and in particular on the 'front line' of inspection personnel - the Floor Inspectors.

The Function of the Inspection Department

The functions of an inspection department have been discussed in general terms in Chapter II. Here we will consider more specifically the ways in which these functions are carried out in Ayes.

1. Goods Inwards Inspection.

The first responsibility of the inspection departments of the three factories lies in determining whether the materials obtained from the supplier are to the specification laid down. This is a very important function since in the Aye group, over half of the cost of producing an article is accounted for by the cost of raw materials.

In each of the three factories Goods Inwards inspection is organised as a separate sub-department of Inspection. Goods Inwards inspectors are on the same grade as floor inspectors, but they have not been included in the main group for study, since the social impact of their job is very different, although its content is largely the same. Their rejections and 'criticism' concern outside groups and in the main involve no conflict of interest within the factory. They come into contact with production much less frequently than floor inspectors and in performing their task of ensuring that only good material is allowed on the shop floor they are obviously acting as a production auxiliary and are closely identified with them. Occasionally conflicts do arise between production and Goods Inwards inspection, as when production would operate defective material rather than leave men idle, but these disputes are comparatively rare. Furthermore from the Goods Inward inspector's point of view, such a difference would have to be settled at a high level (i.e. Chief

Inspector) and almost certainly the Production Engineering department would be involved and would be the final arbiter.

For these reasons the possible points of friction with the production department are considerably less than with the floor inspectors, and Goods Inwards Inspectors have not been included in the group.

2. Standards Room Inspection.

The Standards Room is responsible for seeing that all the gauges, micrometers and other instruments are correctly calibrated. They also have to inspect the 'first-offs' (i.e. the first component made) on all the more complex and important jobs, and such jobs cannot go into full production without first being approved by them. Standards Room Inspectors have not been included in the main group for three reasons.

(a) They are a higher grade than floor inspectors. They are regarded as fully skilled men (although they need not necessarily have been time-served apprentices) and are paid toolroom rates.

(b) They do not have the same interaction with production as floor inspectors. They are in a separate Standards Room of the shop floor, and production people have to bring instruments and first-offs to them to be checked. Their work is extremely technical. Any criticism they make can be remedied comparatively easily, and does not on the whole reflect on direct production, if anywhere on the Toolroom.

(c) For these reasons, in spite of the fact they have an inspection task, they take a role which is much more akin to the advisory capacity of the

functional specialisms rather than to the functional management of ordinary inspection.

3. Process Inspection.

The inspections necessary during the process of making the product are carried out by two grades of the inspection department: viewers and floor inspectors.

The viewers perform the routine inspections. They are responsible, for example, for any visual inspection or gauging of component parts that may be required. This work is done on batches of components after manufacture. In Ayes this viewing is very often done on 100 per cent sample of parts, although a smaller percentage sample may sometimes be selected. A number of viewers are engaged on testing of sub-assemblies 100 per cent, using electrical machines.

Viewers have not been included in the main group for three reasons:

- (a) They are a lower grade than floor inspectors and are regarded as semi-skilled.
- (b) They work under the supervision of inspection section-leaders and have no direct contact with operators.
- (c) Their function is purely an assurance one. There is no direct continuous feed-back of information to control the process, merely a sorting of good from bad work after it has been done.

The functions and job of process floor inspectors will be considered in the next chapter.

4. Final Inspection.

There are a number of different sorts of final inspection.

A. 100 per cent machine testing and visual inspection. This is done on all the Welsh products by a special grade - final inspectors - which only exist at this factory. They have not been included in the group since they are merely viewers engaged in a task of slightly greater complexity than normal.

B. 100 per cent final inspection for noise. This is carried out on all the Scottish products. It is a 'viewing' task (in spite of the fact that it is concerned with hearing!); but the inspectors who do it have been included in the group for three reasons:

1. The workers are of floor inspector grade.

2. The work, which is highly subjective, is carried out immediately adjacent to the production line. There is direct feed-back in the sense that products rejected are sent immediately back to the line for repair or adjustment and not simply sorted into batches of good or bad work as with the normal viewing task. There is thus greater contact with production, although possible friction is reduced by the existence of a repair section to which rejects are sent. Thus, although the line has to 'carry' this section, individuals do not have to repair their own bad work.

3. In some cases this work is performed by the floor inspectors on the line in addition to their normal patrol duties.

C. Final appearance inspection.

This is done in varying degrees on the products of the London and Scottish factories. It is usually done by the final assembly floor inspectors as part of their rounds; or it may be done by the packers,

some of whom belong to the Inspection department. There is no systematic or 100 per cent, visual final inspection in these two factories as in Wales.

5. Rejection and Scrap Reports.

The Inspection Departments are responsible for the issue of rejection reports. Daily reports are given to the Foremen responsible and these are collated into weekly rejection reports. These give breakdowns by shop and by products, and they go to the production superintendents, the Production Manager, and the Works Manager. A monthly consolidation is prepared for the General Manager. It is on the basis of these regular reports that top management obtains its appreciation of the situation in the factory. The inspection department is thus here acting as a control function for management, as well as a production auxiliary.

Of course, if there are any unusually high or otherwise untoward rejections, then special reports can be made immediately. It is interesting that one Works Manager (in Wales) insists that the special reports of this nature which reach him, should be the responsibility of Production themselves and should be made by them. He insists that they continue to report until the rejects on the particular items have dropped. He has found, he says, that since he started this practice rejections have dropped far more quickly than before, since responsibility is placed squarely on production. In the other factories this control function is left with inspection.

The Inspection Department is also responsible for compiling and issuing scrap reports, for departments and for the factory as a whole. This control is re-inforced in that they also have the major say in the setting of

scrap targets and in scrap charges (see below).

6. Allocation of Re-operation and Scrap Charges.

The inspection department has the responsibility for the issue of re-operation tickets for work where this is necessary. It is their sole prerogative to allocate the charge for this to the section responsible. All scrap must be accounted for by a docket from inspection. Every week they issue to the production department and the cost office the major report on which the economy of the department is assessed. They record all scrap and re-operations together with the department against which these are charged. From this document the cost department can assess completely the cost of re-operation and the cost of scrap. Inspection extract from this cost report all items charged to individual departments and these are reported to the production foreman concerned.

It will be realised that responsibility for the allocation of costs is a considerable control in inspection's hands. A strict budgeting system is used and each department has its own budget for scrap and re-operation, amongst other items. There is considerable pressure on each production foreman to keep within his budget and thus to contest, if possible, every item charged to him. Originally decisions on this matter were taken by discussion among the various departments, but so much argument ensued that this was discontinued and the responsibility given entirely to inspection.

The Inspection department's method of attempting to overcome the friction inherent in this situation is to take some responsibility, or rather, to show some degree of involvement, by discussing with individual foremen the

causes and possible remedies of high re-operation or scrap charges.

In one of the factories of the group there is a further method open to the inspection department in reducing friction. In the London factory, unlike the other two, the inspection department itself had included in its own budget allocations for scrap and re-operations. This enables the London department to accept some or all of the charge in disputed cases. The LCI uses this provision in cases where there is a dispute over responsibility between production departments, or where a production foreman maintains that inspection is responsible too since it failed to warn him soon enough that bad work was being produced, or it passed work that was subsequently found to be defective. The LCI said that he uses this provision as liberally as he can since it helps to maintain good relations. That he does so, is borne out by the fact that, at the time of this survey, the Inspection department was the most overspent on its scrap and re-operation budget, of all the London departments.

A result of this method is that it tends to blur the responsibility for good work in London as compared with the other two factories. The Scottish and Welsh inspection departments, although they may accept work which later proves defective, must charge the production department concerned with the scrap or re-operation, and thus bring it home to them that it is production's responsibility since they made it wrong in the first place. Both the SCI and the WCI considered their systems to be correct, particularly in regard to its placing of responsibility. The LCI considered that his system worked very well and improved relations.

7. Trouble Shooting.

A further function of the inspection departments in all factories is that of undertaking the investigation of particularly troublesome problems. The SCI has a Technical Assistant whose main job is to do this, and the other inspection departments also undertake to find solutions to difficult production problems. This function is advocated as a very necessary part of the inspection task in Ayes. It emphasises that the inspection department is not merely a filter for accepting or rejecting work, but is directly involved in seeing that a satisfactory product is made. Trouble shooting is so valuable in this respect because it is the most dramatic way of emphasising the inspection department's 'production auxiliary' function. By cracking a difficult production problem they demonstrate that they are part of the production process, that they are 'on production's side'.

In addition, trouble shooting is not so liable as the normal auxiliary function, to the feeling on the part of production that 'they're telling me my job'. For by its very nature, it is concerned with jobs that production are finding it difficult to cope with, and for which they ask advice.

8. Toolroom Inspection.

One fact may be noted here, since it serves to emphasise the production process orientation of the inspection departments in Ayes. These departments are not responsible for inspection in the toolroom. The toolroom's main task is to make dies for the machine shop, and these are inspected by inspection toolmakers who are completely independent of the inspection department. They come under the normal toolroom supervision.

The reasons for this is, that in a modern light engineering firm where the basic production work is semi-skilled, the toolroom is the only department where it is necessary for all the operators to be skilled (time-served) men. It is an accepted practice (as well as a Trade Union rule) that skilled work may not be inspected by non-time-served men. Since the inspection department, like the rest of the production department, does not insist on its members being skilled men, toolroom inspection has had to be kept separate from it. The effect of this separation, as has been said, is to concentrate the inspection department on the direct production aspects of the process.

We have given above a description of the jobs which the inspection departments in Ayes have to perform, and discussed them in terms of the functions adumbrated in Chapter II. We shall now consider the responsibilities of the inspection departments. We shall approach this topic by a discussion of the perceptions of the inspection function on the part of both the inspection and production departments.

9. The Inspection Department's Perceptions of the Inspection Function.

The Inspection departments feel that their basic job is to carry out their assurance function. This may be put in various ways: "To set and hold quality standards" (SCI), "To be responsible for the quality of the product leaving the factory" (WAS). It is from this function that the ultimate sanction of inspection derives. As the LCI put it: "After all, in the end we are here as policemen".

The inspection departments seem to feel that their other functions have come upon them rather more fortuitously, because they happen to be in a

good position to do them rather than because they are a basic part of inspection's work. Their reasons for having these additional functions to assurance show this. For example, they are responsible for the allocation of scrap and re-operation charges because they have the figures available anyway and are a department not usually involved. In Wales, the practice of having the report that bad work is coming on to one section from the previous section, routed through the floor inspectors of the sections rather than through the production section leaders or foremen, is defended by the WCI on the grounds that the floor inspectors know better than the section leaders what materials are being worked on the shop floor, and so it is easier for them to take action. (A number of their other non-assurance functions are defended in these same ad hoc ways).

A result of this is that functions other than assurance, seem to be regarded as far more expendable since they are of necessity less clearly defined. They are much more easily abrogated, for example, when a 'crisis' occurs in favour of the assurance function. From the human relations point of view the difficulty is that it is precisely in a crisis that production expect the auxiliary function to take precedence over the assurance one.

10. The Pressures on the Production Department.

Any discussion of production's perceptions of the inspection function must be conducted in the light of the pressures to which the production supervision are exposed. The three major controls are on the quantity, cost and quality of the product, and are exercised by the Planning, Cost and Inspection Departments respectively. The Planning department issues the schedules, the Cost department produces the budgets, and the Inspection department sets

the standard of acceptable work.

The order of importance in which the production supervision feel these pressures is clear. While there is some disagreement as to whether the pressure for quantity or cost is the most important; it is apparent that the pressure for quality comes after these two.

For example the SPM said: "My principal responsibility is to make schedule. The next thing is that it is at the right price and quality". Both the London and Welsh Production Managers were asked: "If inspection is a production assistance, what do you think of the idea that it should report to production?" They replied: "I wouldn't want to have inspection at the moment. The problems of production have such ramifications of material control, progress control and so on that I wouldn't want to take on inspection as well. And you would be trying to push things over the borderline at times." (LPM); "I don't think it would be a good thing. The floor inspector is the arbiter between the buyer and production. Production may produce some unintentional trash. He has to meet his schedule, cost standards, labour efficiency and other things which take up so much of the production man's time." (WPM).

The WWM, when asked if it was part of his function to have the Chief Inspector reporting to him, said "I think it is better not, if inspection is to have the strength to get its points over." And we have already noted that the situation in Scotland of allowing the SGI to report to the SWM is defended on personal grounds as a special case. Thus even up to the level of Works Manager, it is felt that the pressure for quality takes second place, as compared to the other pressures on production supervision.

This is, of course, true at lower levels too. The superintendent of Assembly at Wales described his main job as: "To get the (product) out at the time required and the quality required and cost required. There is great attention to Budget Control here - that is the main part of our job." The Scottish Superintendent of Assembly A discussed the amount of time spent with the various departments with which he has to deal. He spends his time in order of amount, with the following departments: planning, costing, sales, inspection, production.

At the foreman level this situation is again repeated. A London Machine Shop foreman, rejecting the idea of being fully responsible for quality and emphasising the need for an outside person to have the last word, said: "I'll give you some idea of the pressure under which a foreman works. The scrap targets are given under the foreman's name. Every year they cut the target down, and the budget too. The scrap rate is going down compared with a couple of years ago, but the amount of money you're allowed to spend is going down." One of the Welsh machine shop superintendents, in reply to the same question, said of his foreman: "A foreman is more likely to influence the inspection. He is more likely to let things go. A foreman's job is to get the job out at all costs, to keep the line going; and he is bound to drop quality."

Two main factors appear to be responsible for this ordering of felt pressures.

1. From shop-floor production point of view, scheduling and budgeting are to a large extent outside pressures, deriving their sanctions far more

directly from sales, which, as explained above, is controlled by an entirely separate organisation. The people from the progressing and cost departments are not engineers. Inspection is very much 'nearer home' in this respect, very much more involved in the process of manufacture.

2. Schedules and budgets are relatively definite and clear-cut aims to achieve. They can only be contested at infrequent intervals and once accepted, failure to achieve them is apparent to all, as a failure. Quality standards, on the other hand, are usually far more nebulous and can, in fact be contested as often as a dispute arises. Concessions too, can be obtained. These facts, whose workings will be discussed in the next section, serve to lower the pressure for quality.

The experiences of the Aye factory in Wales may be quoted as an example of this. Their product found a ready market when it first appeared and their schedules soon rocketed to be very high indeed considering they had just begun manufacture. The WDCI's comment on the situation is typical of the inspection viewpoint. "It was nothing but arguments. It was really the survival of the fittest. It was one big argument. If it was anything that was likely to slow up production we got nowhere. The Production Manager just blew his top (over the necessity for making schedules) and then we could get nothing from the Works Manager".

It was in an effort to readjust this balance that the organisational change-over referred to in the previous chapter, of making the Chief Inspector report direct to the General Manager, was made. The comment of WF4 may be taken as typical of the inspection reaction to the change "Everyone on the

production side is eager to help. Whereas before they fobbed you off with a cock-and-bull story, now they endeavour to put into operation any worthwhile suggestion which you make." This foreman was fairly new to the job and he added: "For the first couple of months I really thought I was wasting my time down here".

The change coincided with a considerable falling off in the market (because of hire purchase restrictions), so that the change in attitude reported by inspection may be due as much to a slackening of the other pressures as to an increase in inspection pressure.

11. Standards of Acceptability.

As has been explained in the previous section the pressures of schedules and budgets are very great. This, of course, affects the standard of the work produced, and may bring the production foreman into conflict with the inspection department. The question of acceptable standards in modern commercial production is a very thorny one. In theory the procedure is straightforward. The standards are set by the engineering department who specify the dimensions and tolerances of all parts to be made. The production department produces work to these standards, and it is the responsibility of the inspection department to reject any work which does not come up to them.

In practice the position is not so simple. As the General Manager in Wales put it: "At least three quarters of what we produce here is not to drawing." The basic inspection decision thus becomes, not whether the job is up to the standard laid down or not, but whether there is a sufficiently large error on a sufficiently critical dimension to warrant rejection. This is a

more nebulous and subjective matter than the specifications and tolerances of an engineering drawing. It also requires two judgements, on the degree of error and on the 'criticalness' of the dimension concerned. An inspection decision can be challenged on both these grounds. Whether a dimension is critical or not is not marked on the drawings, so that a non-critical dimension that could be anything from say, 1 to 2 inches, will still be marked 1 inch plus or minus five thousandths.

One may ask what then is the purpose of such rigid specifications and tolerances. The answer appears to be that they act as a norm - in the sociological sense - towards which everyone is working but which may not necessarily be achieved. For example, the London Superintendent of First Floor Assembly was asked: "Why not alter the tolerance on a drawing, if a dimension is non-vital?" He replied: "The more accurate we can get them the better. It is up to us to get good engineering. You must remember that we would not manufacture anything strictly to drawing, so any alteration of the tolerances brings the standard down."

From the point of view of inspection, this results in the decisions on acceptability being not the simple straightforward ones that they should be in theory, but complex, less clearly definable ones, which are subjected to a variety of pressures.

The first of these is cost. For example the WCI said: "We could insist that every part is made exactly to drawing, but that would shoot the cost up sky-high." Then there is the schedule pressure; e.g. SFI said: "We must give production people a reasonable chance to produce the target."

There is also the direct sales pressure. When there is an expanding market, the demand for products ensures that production comes to the fore, as happened in Wales. In a contracting market, the standards of the sales force goes up, and they are willing to make complaints about faults which they would earlier have passed over. For example, it is the opinion of a number of the production and inspection supervision in Wales, that the 'incident' of the public failure of the product was 'blown up' by the sales people as a covering excuse for the fact that they were not selling many products. If there had been a good market for the products, it is maintained, then a technician would have been called in to make the minor repairs necessary, and nothing would have been heard of it. As it was, it had the consequences discussed in the previous chapter.

The variations of standards discussed so far have been those on which a drawing specification exists, if only as a norm. The arguments apply with even more force to such things as standards of surface finish, where the specifications are given only in the most general terms. Another difficulty here is obtaining and recording acceptable standards. As the WDCI said in connection with the Welsh product: "We've had lots of arguments over this. You see, we can't maintain standards by example because we get far too many different sorts of things and so many different types of (product). You would need a warehouse and an army of people to deal with it. Photographs won't do either, because you haven't got the three dimensions, and you need to know the differences with different angles of light."

It should be emphasised that the pressures described above only operate

with limits. Thus while they do serve to take a product away from drawing specification, they are not sufficient to make the inspection department pass what, from the customer's point of view, would be a functionally bad product. As the WMM said: "If there is a complaint from the field it isn't any good the Chief Inspector saying 'I had to let it go because of the schedule'". But from the points of view of standards of finish, and of the product's being a better or worse 'engineering job', and of long-term durability, and so on, these pressures do affect the standards of acceptability and cause fluctuations in them.

12. Concessions.

In addition to these fluctuations in standards, the inspection department is also concerned with the issuing of concessions; that is formal permission to accept and use a part that is not up to standard, but is, for example, urgently required to keep the line working.

Official concessions last for only a limited period, or for a certain number of parts, and the approval of the production engineering department or the laboratory has to be obtained. There are two main types of concessions:

- (a) concessions on the quality of material allowed to be processed, and
- (b) concessions on the quality of parts or products accepted.

Unofficially, because of the pressures discussed in the previous section, there is in fact, a third type of concession; concessions by common acceptance on the part of inspection and production, without consulting the other departments.

13. Production's Perceptions of Inspection.

The production department's basic perception of inspection is that it

should function as a 'production auxiliary'. For example: "Inspection is an adjunct and an assistance" (IPM); "Inspection is an advisory service to us", (LSM/C); etc. Coupled with this stress on the auxiliary function, there is the insistence that there should be no division of responsibility - the responsibility for quality rests with production in the same way as the responsibility for quantity and cost. A London Machine shop foreman was asked: "Why do you have inspection then?" He said: "Inspection is an independent party to keep a standard on such things as finish. He is not there to take the responsibility away from production people ... He is not there as a policeman, he is there primarily as an assistant. If any of my boys do a load of scrap, and say the inspector passed it - I don't want to know."

This insistence on the production auxiliary function of inspection, and their not being responsible for quality is an attempt to put them in the same category as the other functional specialisms. But there is also a feeling among production that inspection have and ought to have, a control over the process in that they have the responsibility for the decision of accept or reject. Production people accept that, because of the large pressures exerted on them, this decision should be made by a non-production department. Thus, for example, all production supervision interviewed were asked whether, since inspection was a production aid, it should report to them and not have a separate hierarchy. Although many of them thought it would be a good thing, for process inspection to be under their control, they all felt that there must be an independent final inspection, not responsible in any way to production.

From the inspection point of view, the result of this ambivalence

in attitude is to increase the possibilities of friction. For in a dispute, a production man can always set up, as the correct one, the inspection role which is not, at the time, being carried out. Thus if an inspector suggests an improvement in methods, he can be told: "You're telling me my job. You're here to inspect the job, not make it." And if an inspector keeps strictly to the assurance function, he can be reproached for acting like a policeman.

It is not, of course, suggested that production people always consciously do this. But with the inherently stressful and status-losing situations involved in receiving inspection criticism, the existence of this ambivalent attitude, allows for a switch from one aspect to the other, probably unconsciously, and can cause friction.

It is against this background that we shall now consider the job of the floor inspector.

The Job of Floor Inspector.

1. Functions.

The functions of the floor inspector may be considered under the three headings given in Chapter II. But it must be realised that these were separated out for analytical purposes only. The floor inspector acts his three roles of assurer of quality, production auxiliary, and recorder of quality information, simultaneously.

A brief sketch may be given here of the content of a floor inspector's job. The normal floor inspector is allocated to a particular production section, and his job is to check the work produced. The amount of checking to be done is generally left to his discretion, and he is held responsible if defective products leave the section. A few sections operate a type of quality control system, and here checks have to be made at regular intervals. Otherwise, apart from the initial check of any 'first-offs' that do not have to go to the Standards Room, no systematic checks are made. The main reason for this is the necessity of staying with a difficult job, or a hold-up until the difficulty is overcome, which may require a disproportionate amount of time. A second reason for not having a regular beat, is given by some floor inspectors, although only in London. These point to the inadvisability if allowing the operators to expect the floor inspector to come at particular times, since they would then be likely to take care and produce good work only at those times, and not to bother during the intervals. These inspectors

said that they arranged their work differently for each patrol, so that the operators could not tell when they were coming and they were thus able to make a truer assessment of the work produced.

The floor inspector on arriving at an operator's bench, takes a number of products or piece parts that have just immediately been finished and inspects them. This number is usually about six. The tests carried out vary and may involve measurements with gauges, micrometers, or other instruments. In almost all cases a visual inspection is involved for general standards of neatness, appearance, finish, particularly surface finish, and so on.

The inspector informs the operator (and the setter in the machine shop) if the products are not acceptable according to specifications. In only very few cases, in the investigator's experience, did the inspector report to the operator that the work was satisfactory before passing on. If the work is not satisfactory, changes are made. If there is a disagreement then the procedure operated in a dispute, described in Chapter IV, is brought into use.

If the inspector rejects a product then the task of sorting the good from the bad work in the batch just produced is technically that of production. But, in fact, it is the almost universal practice in Ayes for Inspection to agree to do it, since they have viewers available. This serves to help tide over the friction, always inherent and sometimes manifest, which is involved in rejecting work.

The decision on whether certain work is acceptable or not in a borderline case, may involve the inspector in an amount of work away from his section. He may have to consult drawings, or go to a succeeding section to

discover whether a piece will do its job adequately; he may have to 'brief' his section-leader or foreman on the consequences of giving a concession or on the possibility of effective re-working, and so on. In any case whatever is the disposal of completed work, he has to attempt to ensure that future production is correct to the standards laid down.

After a particular difficulty such as this, which can occur in regard to any one job or operator, has been cleared up or taken out of his hands, the floor inspector must proceed to the other jobs on his section. Inspector's report that there appears to be no regularity in the way in which difficulties or rejections occur; although there usually are operators who are not so experienced or intelligence or scrupulous, on whom a special eye has to be kept.

The floor inspector is given a great deal of discretion in the carrying out of his duties, much more than is usual at the level of hourly paid workers. It is possible for an unconscientious inspector to 'get away with' the minimum of work and in general the nature of the work is less arduous physically than that of most production operators. The tempo varies a great deal. It can be very fast at a time of 'crisis' but otherwise is leisurely compared with operators. For these reasons there is often a feeling among production workers that they are 'carrying' the inspector who is standing around doing very little. The inspector has to be prepared to combat this feeling, or at least deliberately ignore it.

The social factors involved in the floor inspector's job are very important. His position is in many ways like that of a policeman. He is there to see that people keep the law, and to help them to do so. He has to

go round making critical comments about people's work, reporting them if necessary to their superiors, the production section leaders. He has also to make suggestions as to how difficulties may be overcome, but as discussed in the previous chapter this duty is less clearly defined. As has been noted above he does not make, and is not expected to make, approving comments on the work to the operators, unless he is dealing with a job immediately after there has been some trouble on it. There almost appear to be two separate sanctions involved here. An inspector is 'accepted' if he is accepted, to make criticisms, but he does not appear to be sanctioned to make approving remarks to the operator. This is reserved for production supervision. Of course, inspectors could, and very often did, make approving remarks to the investigator.

The limit of the inspector's jurisdiction is an important factor in the social content of the job. The official position on this (in London and Scotland) is a quite definite ban on the inspector's having any direct part in the stopping of the job. This responsibility is left entirely with production supervision, and the floor inspectors task is simply to advise them that bad work that he will not accept is being produced. In Wales the position was somewhat different. When the organisational change was made inspectors were, at the same time, given power to intervene directly in the process, and stop a job if they thought it necessary. In fact at the time of this survey, three weeks after the change was made, no test case had yet occurred. Thus it was not clearly known yet, what inspection' stopping of a job would involve.

Unofficially, of course, the inspector does exercise considerable control over the process, as a corollary of the supervising component of his inspection function.

The implications of the description given in this section will be discussed further in the light of the study of inspectors' attitudes in the next chapter.

2. Content Analysis of Inspectors' Description of their Duties.

One of the questions asked at the focused interviews of the floor inspectors (see Appendix I) was: "Can you tell me in your own words what your job is and what you have to do?" (Question A). The replies of the 61 inspectors interviewed (see Appendix II) have been subjected to a content analysis along the usual lines (Berelson, 1952). A division was made between those references which were on general lines and referred to the function of the floor inspector, and those which were more specific referring to particular jobs the floor inspector has to do. The analysis of general references is given in Table 6.1, and that of the specific references in Table 6.2.

It is not of course, maintained that these replies necessarily constitute a full or accurate description of what the floor inspectors actually do. But they are presented here as the salient points of the floor inspector's job as they themselves perceive it. The saliency is defined by the fact that the inspector thought a reference worthy of mention.

The analysis of the 36 general references given in Table 6.1, is interesting in emphasising the control, or 'police' function of inspection. Over half the references are to the control of quality, some with special mention

	<u>London</u>	<u>Scotland</u>	<u>Males</u>	<u>Total</u>
	No. of Refs. % of London Refs.	No. of Refs. % of Scottish Refs.	No. of Refs. % of Welsh Refs.	No. of Refs. % of Total Refs.
References General, function	5	8	7	20
Keeping quality up (including special references to standards of finish)	36	80	58	55
Improving quality and training functions	3	0	2	5
Keeping rejects down	21	10	8	14
Keep production flowing	2	1	1	4
Looking for better ways of doing the job	7	0	8	2
Totals	14	10	12	36
	99	100	99	101

Table 6.1

	<u>London</u>		<u>Scotland</u>		<u>Wales</u>		<u>Totals</u>	
	No. of Refs.	% of London Refs.	No. of Refs.	% of Scottish Refs.	No. of Refs.	% of Welsh Refs.	No. of Refs.	% of Total Refs.
References specific, job								
performing a patrol at check	17	37	7	24	3	26	32	32
reporting mistakes & stopping them	12	26	2	7	6	22	20	20
saying that the company complies to law	3	7	3	10	3	11	9	9
Quality Control & sample checks	3	7	5	17	1	4	9	9
saying 'first offs'	3	7	3	10	2	7	8	8
freeing viewers	3	7	0	0	3	11	6	6
the 100 per cent saying	2	4	2	7	0	0	4	4
saying	0	0	3	10	0	0	3	3
trap Reports	0	0	2	7	1	4	3	3
saying that only good work comes on to the attention	1	2	0	0	2	7	3	3
saying that operators using the correct methods	0	0	1	3	0	0	1	1
airs	0	0	1	3	0	0	1	1
control of reoperat-	1	2	0	0	0	0	1	1
posal of bad work	0	0	0	0	1	4	1	1
Totals	45	99	29	98	27	98	101	101

Table 6.2

of standards of finish. An almost equal, but much smaller number of references concern direct involvement in the process by improving quality, training operators keeping rejects down and keeping production flowing. There were two references to looking for better ways of doing the job.

Differences between the factories may also be considered. The most outstanding point here is difference in the percentage of control responses. Although these form the largest group in all factories, the percentages range from 80 per cent in Scotland, through 58 per cent in Wales to 36 per cent in London. Conversely London has a higher percentage of all other responses except the last, where it is about equal to Wales. This would seem to imply a greater realisation by the London inspectors that they are part of the production process.

The main part of the specific references (Table 6.2) are taken up with the two tasks of performing a patrol spot check, and reporting on mistakes and stopping them. A variety of other tasks are mentioned much less frequently, as would be expected on the hypothesis that the assurance function is the basic one for inspection. An interesting difference between the factories is that the Scottish inspectors are more involved both with quality control and percentage sample checks, and with routine testing.

3. The Selection Procedure.

The methods used to select floor inspectors, and the attainments and experience looked for, will be described. The methods used for recruitment are substantially the same in the three factories.

The procedure for the recruitment of any hourly paid operator, such as

a floor inspector, is begun by the department concerned sending a requisition to the Personnel Department. This department advertises the vacancy both internally and externally, and interviews candidates, obtaining an employment history and so on, if this is not already available. If the applicant is considered reasonable, the Foreman of the department is brought in and, after suitable briefing, interviews the man himself. It is the Foreman who is responsible for the actual engagement of personnel at this level, and he makes the final decision. The Personnel Department acts only in an advisory capacity. In fact, their advice is almost always taken by the foreman, and so their views on the selection of inspectors have been included in this discussion. Technically the procedure is the same for internal applicants, but in practice it is often short-circuited.

4. The Requirements of Floor Inspectors.

We shall now present statements from the Inspection and Personnel departments of the three factories on the requirements of floor inspectors. We shall follow this with discussion and interpretation of points raised.

A. London.

On the requirements for floor inspectors the LCI said: "You don't really need tradesmen on this kind of work. A floor inspector must have personality and it isn't very easy to get the two together. We have mainly selected from our viewers, the better type of people. Very seldom do people go from inspection to production although some come the other way. We prefer to take inspectors from viewers rather than production workers, although we do occasionally get a bloke who is a cut above the average and then we take him - not very often. We have more promotions from viewers and some are taken from

outside. We would like to keep the set-up balanced by taking more people from outside, but we can't get good type people. The advantage of promoting is that you know the person. We did once devise a series of tests -- technical ones. But we usually found that they boiled back to the bloke we thought anyway -- though, mind you, not always."

On the selection requirements of floor inspectors from the outside, the LDCI listed five.

1. Ability to read instruments.
2. Ability to read drawings and specifications. (There used to be a written test, but it is not in use now).
3. Experience of the relevant processes.
4. Familiarity with the terminology.
5. Suitable personality. (We try to size up the personality, but we usually leave that to the Personnel Department)."

B. Scotland.

There is the usual procedure for recruitment. The Personnel Manager said: "In looking for a floor inspector I look for someone with a good background and apprenticeship if possible. I would take someone with no lines if he had a good background and inspection experience. Most vacancies go on the internal board first, but we get few production applications because a semi-skilled production operator can earn more."

The Employment officer said: "Whether a man or a woman is taken on, on the production or inspection side is decided by the vacancies available at a given time. For floor inspectors we try to get:

1. Skilled men
2. Impressive appearance and manner
3. Slightly higher level of intelligence.
4. Give preference to those with experience - but this is not necessary
5. Good eyesight
6. Good on their feet, as they rarely have a sitting job.

As far as transfers go we do get inspection to production transfers, but not production to inspection, because of the differences in wages. We do not encourage the transfer to production jobs of inspectors."

The Employment Officer felt that there was some difference in outlook between inspection and production, and in taking on new workers, tends to put on production work those who have been in industry before and have a bonus outlook.

The SCI felt quite strongly that a floor inspector need not be a time-served engineer. "For example, a man who has grown up with the job and has got quite intimate with it, can often do the job better than a time-served man, also it is fatal to select a qualified man with no common sense. He will work to instructions exactly and might be over-strict about a non-critical dimension." But he felt that this applied to departments where there is not a great deal of skilled labour. "It is not right to put an unskilled man over skilled men for psychological reasons."

"In selecting people from the outside we usually try to get time-served men so that we know that they know the job. New inspectors usually have been inspectors in other plants, or machinists. We try to pick out the men used to setting or checking measuring instruments; they must have a common

sense approach and be able to use initiative. Actually the only people here who are non-time-served inspectors are those promoted from viewers.

"When you select a floor inspector, you try to decide whether he is a possible supervisor. It is useless to take dead-alley men. It is difficult to get suitable people for inspectors."

C. Wales.

The Personnel Manager was asked what were the requirements for Floor inspectors. He replied: "It is very difficult to get floor inspectors from outside. The tradition here is mining and there was nothing else until the War. From 1939 light engineering did start here. Some of the firms stayed afterwards and others like us came. If you went through the records even of the toolmakers you will find that very few had apprenticeships in toolmaking, although they may have worked in it for a number of years ... They are dilutees. For our actual technicians we have to go outside our district altogether." As they cannot obtain skilled people as floor inspectors, their main area of recruitment is from the semi-skilled viewers, already employed. The usual line of promotion is from viewer to final inspector to floor inspector.

The WCI said: "Those who have proved some of our better inspectors we have trained ourselves from viewers; we have a test paper which they have to take. The best ones get a chance and are put on probation for six months. They have all made the grade."

5. The Status of Floor Inspectors.

From the replies quoted above, it is apparent that there does not appear to be a specific requirement needed to become a floor inspector, beyond having

some general industrial experience. But there is the general feeling that they should somehow be the 'better type' of men. This stress on the 'better type' supports the fact of the higher status of inspection discussed above. As a result of this status difference the 'better type' of man is required. Ideally this 'better type' would be expressed in terms of better qualifications, more experience, good at the production job and so on, but in the present circumstances it is very difficult to attract such people into inspection because of the wages differential.

In Scotland inspectors quite definitely earn less than production operators. In London an inspector on average earns rather more than an average operator. But, in fact, a bonus operator's earnings can fluctuate widely from week to week, so that he is often earning more than an inspector, whose rate is fixed. In addition, many of the best production workers constantly earn considerably more than inspectors (and even section leaders, and foremen). Because of this it is generally felt by the London, as well as the Scottish inspectors, that they earn less than the operators whose work they inspect. It is only in the Welsh factory that inspectors unequivocally earn more than production workers, and it is only here that good operators can be attracted to inspection for financial motives. But in Wales, as has been seen skilled and experienced men are, in general, scarce.

It is for these reasons that the stress is laid in recruitment on general, social or personal qualities rather than specific attainments. And it is precisely this better type of worker without specifically relevant qualifications who would be attracted to inspection with its higher status and

greater degree of responsibility and discretion, in spite of the usually lower pay.

6. Acceptability.

The possible human relations difficulty lies in the fact that it is not necessarily this type of person who is most 'acceptable' to production in the terms defined in Chapter II above. They would not in general be able to do the production job as well as an operator (Taylor's criterion) and indeed they would not wish to do so. None of the floor inspectors interviewed in London or Scotland, was willing to take a semi-skilled production job in Ayes in spite of the reputed or real greater earnings.

Further, floor inspectors have to live down the fact that, as the SMM put it: "When inspection started it was the place where people went who couldn't make the grade on production". Thus successful production experience would seem to be an important contribution towards acceptability.

7. "What makes a Good Floor Inspector?"

Before the ratings of efficiency were obtained, it was possible in London and Scotland to ask the raters to list in order of importance the qualities they considered were required to make a good floor inspector.¹

The LDCI's list was as follows, with his comments in brackets:

1. Technical knowledge. (It is not really general technical knowledge, rather job knowledge - they have all got to be able to read to drawing.)
2. Sound judgement (including intelligence.)

¹ It was not possible to do this in Wales. Because of lack of time the ratings there were not obtained by the investigator himself.

3. Manner of approach. (The way of talking to people and of making his case).
4. Energy and application.
5. Stable personality or temperament. (i.e. his reactions to the situation. Not the sort of chap who gets all worked up and wants to go and see the Works Manager, or throw in his job, etc. - which does happen^u).
6. Experience on the job in Ayes.

The IAS's list was as follows:

1. Physical fitness. (Health, eyesight, lack of absenteeism, ability to stand shift work).
2. Ability to get on with people. (Liaison with people; to save any roughness coming into the problems that occur).
3. Adaptability. (Ability to pass from one section to another).
4. Enthusiasm for the job.
5. Knowledge of engineering on the job.
6. Judgement.
7. Education (basic knowledge of maths, how to read, clear writing, reading instruments, etc.).

The machine-shop foreman reporting to LAS, IF3 felt there were four most relevant points:

1. Knowledge of the job.
2. Ability to get on with people.
3. Application to the job.
4. Judgement.

In Scotland the SGI and the SDGI agreed on the following list:

1. Knowledge of the job.
2. Manner of approach.
3. Industriousness.
4. Flexibility - the ability to judge suitable standards not covered by drawings.

The purpose of obtaining these lists was to get the supervisors to try and think about the qualities involved as a preliminary to obtaining a ranking on the floor inspectors under them. Since this ranking was a global one, no attempt was made to clarify further the lists given here or to unravel the inter-relationships between the qualities listed. The lists were felt to have served their purpose of focusing attention on the topic.

It is not legitimate therefore to attempt any detailed discussion of the qualities mentioned or their significance. Two comments can, however, be made. Firstly, the stress put on the human relations aspects of the job (manner of approach, ability to get on with people) is further evidence of the importance of these skills to the floor inspector in combating the friction inherent in his job. They are placed second only to knowledge of the job, and one supervisor (IAS) places them above technical knowledge. The second point for comment is the need for flexibility; the need to be able to exercise a balanced judgement on the importance of departures from drawing specifications which, as explained in the previous chapter, frequently occur.

8. The Rankings of Floor Inspectors.

It was required to obtain a measure of the efficiency of the floor inspectors in their job in order to relate this to the measures obtained in the study described in the next chapter. As explained above in Chapter III the only method of obtaining this was a rating by supervisors, and in order to increase the validity, this rating was turned into a ranking. The paired comparison method as outlined by Kendal (1948) was used.

The procedure was to present the name of every inspector in the rater's department coupled with the name of every other inspector in random order. The rater was then asked: "Taking into account all the qualities required for a good floor inspector, who is the better 'X' or 'Y'?"¹

An individual's score is obtained by counting the number of votes he obtains; the person with the highest number of votes is ranked first and so on. A coefficient of consistency (K) is obtained. This reflects the degree to which the rater is consistent in the distribution of his votes. A low K shows that the rater is using two or more dimensions in his comparisons between the subjects and it is not therefore legitimate to place them in a rank order on the basis of his votes. A K value of .9000 was accepted as the figure below which a ranking would be rejected as inconsistent.

Whenever this was possible the whole procedure was repeated a day or more later, and a second ranking obtained from the same rater. In addition, at least one ranking each from at least two different supervisors was obtained

¹ I am grateful to the Welsh Employment Officer who administered this procedure to the supervisors in Wales.

on each floor inspector. Between any two or more rankings a coefficient of agreement (U) can be obtained, and this was calculated between all the rankings on each particular department.

The Welsh Assembly group numbered only three, so that in this case the paired comparison procedure was rejected as unnecessarily elaborate. Here, the WAS and WF5 were asked separately to rank the three floor inspectors direct. The Spearman Rank-difference between the two rankings was .500. The details are given in Table 6.3. In this table U_1 refers to the coefficient of agreement between two rankings by the same person; U_2 refers to the coefficient of agreement between all the rankings on a particular group.

From Table 6.3 it will be seen that on the whole the rankings are very consistent. Only one had to be rejected for falling below the required K value. The coefficients of agreement between the rankings by one person are also high, being above .8 which gives evidence that the judgements obtained are fairly stable ones. The coefficient of agreement between rankings by different supervisors on the same group are lower. The general figure of about .5 or .6 seems to be as large as can be expected from this type of procedure.

An individual's rank on all the acceptable rankings was then transformed into a percentage score and these were averaged for each individual. The average percentage score was then transformed into a normalised score by means of a table given in Garrett (1947). The effect of this is to substitute for a rank (for example that a person is 3rd out of 15), a score which is then directly comparable with a similar score obtained from a person ranked 2nd out of 9 on the same trait in a different group. This transformation depends on the

Group	Names	Number in Group	Rater	K	U ₁	U ₂
London assembly	L1-10	10	LDCI (1)	.9750	.822	
			(2)	.9250		
			LF2 (1)	.9750		
			(2)	1.0000	.866	.632
			ISF (1)	.9250	.866	
			(2)	1.0000		
London machine shop	L11-25	15	LAS (1)	1.0000	.906	
			(2)	.9643		
			LF3 (1)	.9802		
			(2)	.9802	.821	.560
Notland assembly	S1-10	10	SCI	1.0000		.240
			SDCI (1)	.9750		
			(2)	.8000 ¹		
Notland machine shop	S11-19	9	SCI	.9000	.889	.524
			SDCI (1)	.9667		
			(2)	.9667		
Las machine shop	W4-18	15	WDCI	.9643		.514
			WF2	1.0000		

Footnote: ¹ Rejected: $K < .9000$.

Table 6.3.

assumption that the trait is normally distributed throughout the group, which in this case would seem to be legitimate.

The normalised score obtained can be used to compare individuals from different groups, and it is a score not a rank, and hence can be used in obtaining the usual product-moment correlation coefficients.

9. Production Rankings of Inspectors.

It had been hoped to obtain rankings by production supervision on the efficiency of the floor inspectors, in order that these could be compared with inspection rankings. It was not, however, possible to do this in any systematic way, since it was found that in general, an individual production foreman knew only one or two floor inspectors, and so was not able to make comparisons among the group.

There were, however, a few small 'pockets' of floor inspectors (in sub-groups of 4 or more) on whom it was possible to obtain rankings from both production and inspection supervision and to compare these. Table 6.4. gives the Kendall Rank correlations (T_{adj}) between the production rankings and the overall inspection ranking for the sub-groups. Since T_{adj} is a special case of U (i.e. when the number of rankings equals two), the values of T_{adj} given in Table 6.4 are comparable with the values of U given in Table 6.3.

Since the number in the sub-groups are so small, it is not possible to put much weight on the exact value of the correlations. But the trend may be commented upon. For three out of the four groups the correlations are zero or negative, and in NO group is the correlation of the same order as the inter-correlations between the inspection rankings. This is further evidence to

Sub-group	Names	Number in sub-group	Production ranking by	Rank Correlation with overall inspection ranking
London Assembly	L2, L3, L8, L9, L10	5	2 Second Floor Prod. Foremen (jointly)	.00
London Machine shop	L11, L12, L13, L23	4	Production Foreman Bakelite, etc.	.00
Scotland Assembly	G1, G7, G9, G9	4	Production Foreman Assembly A	-.66
Scotland Machine shop	G14 - 19	6	Production Machine Shop Foreman	.20

Table 6.4

show that the production supervision are not concerned with the same things in evaluating a floor inspector, as are the inspection supervision.

In the next chapter we shall discuss how these ratings are related to the other aspects of floor inspectors selected for study.

The Study of Floor Inspectors.

1. Introduction.

The general discussion so far of the human relations problems of inspection, has been in sociological and organisational terms. The attempt will now be made to discover the relevance of this discussion to a psychological study of floor inspectors. By a 'psychological' study is meant a study in terms of the attitudes and behaviours of individuals, and more particularly of those attitudes and behaviours which are tapped by the common psychological techniques of tests, questionnaires, interviews and so on.

At the level of this dissertation, the study can only be an exploratory one and the hypotheses will be formulated in an exploratory way. Techniques will be used to find out what information they provide, rather than in order to produce statistical evidence to confirm or refute very specific hypotheses.

2. The Human Relations Problem.

Before coming to the main study and the measures proper, it is instructive to consider the extent of the human relations problem as seen by the inspectors. This has been done by a direct content analysis of the answers to Questions C and D of the focused interview (Appendix I).

Question D asked was: "What do you dislike most about your job?" The replies are analysed in Table 6.1 under nine headings. The largest group about a third of the references, refers to lack of co-operation from production, and this gives a measure of the human relations problem involved in inspection.

<u>Dislike most</u> Reference	London	%age of all London refs.	Scotland	%age of all Scottish refs.	Wales	%age of all Welsh refs.	Total	%age of total refs.
Lack of co-operation from production (incl. arguments, complacency etc.)	6	22	10	52	5	25	21	30
Job Conditions (e.g. night work, shift work heat, dust.	9	33	2	11	3	15	14	20
Boredom	4	14	1	5	2	10	7	10
Job Content (e.g. amount of paper work, size of section, etc.)	1	4	1	5	4	20	6	10
Nothing	3	11	2	11	1	5	6	9
Frustration with inspection supervision	1	4	2	11	1	5	4	7
Having to reject bad work	2	7	1	5	1	5	4	7
The job is limited in its scope	1	4	0	0	2	10	3	5
Can't be too friendly with the operators	0	0	0	0	1	5	1	2
Totals	27	99	19	100	20	100	66	100

Table 6.1

As opposed to this, there were only four references (7 per cent) in which the inspectors were sufficiently identified with production to be worried about having to reject bad work against their inclinations. The most interesting difference between the factories is that it is only in London that lack of co-operation does not obtain the largest number of references, being surpassed by Job Conditions. This supports the finding in the previous chapter, that inspectors in London seem to be more involved in the production process, and they thus would be expected to find less lack of co-operation.

The other references to what was disliked most, apart from the single reference to 'not being able to be too friendly with operators', cover the usual dissatisfactions expected in a factory job.

Question C asked was: "What do you like most about your job?" The replies are analysed in Table 6.2 under 12 headings. The points mentioned are in the main as would be expected. The largest numbers of references are to the variety and the responsibility of the job in comparison with operators, with the assumption that the inspector is superior in status to the operator. As mentioned above, a possible cause of friction about this, is that this view is not always shared by production, who tend to feel that inspectors could not do their jobs.

The most interesting difference between the factories is again, the much higher percentage, in London, of references to production auxiliary functions, and good working relations as being the most satisfactory part of the job.

3. The Measures Used.

We shall now discuss in a general way the measures which were thought

<u>Like most</u> Reference	London	%age of all London Refs.	Scotland	%age of all Scottish Refs.	Wales	%age of all Welsh Refs.	Total	%age of Total Refs.
Variety	6	15	5	26	4	17	15	19
Responsibility Authority feel superior to operators, etc.	6	15	2	11	5	22	13	16
Using drawings & instruments	6	15	1	5	3	13	10	13
Job Conditions (e.g. cleanliness, interest etc.)	3	9	3	16	2	8	8	10
Working Conditions (e.g. welfare, wages attitude of firm, etc.)	3	9	3	16	2	8	8	10
Production Auxiliary (e.g. helping people, finding cause of trouble)	5	13	0	0	2	8	7	9
Good working relations	4	12	1	5	1	4	6	7
Nothing, difficult to say, etc.	0	0	3	16	2	8	5	6
Seeing the fruits of your work	2	6	1	5	2	8	5	6
Comparing the work of different operators	1	3	0	0	0	0	1	1
Training operators	1	3	0	0	0	0	1	1
Pride in catching faults	0	0	0	0	1	4	1	1
Totals	37	100	19	100	24	100	80	99

Table 6.2

relevant, in the light of previous chapters, to a human relations study of inspectors, and the attempts that were made to obtain them.

A. Information on Personal History.

1. Age
2. Length of service in the firm (LS).
3. Length of service as a floor inspector in the firm (LSI)
4. Total number of years spent in inspection both inside and outside the firm (TI)
5. Production experience in the firm (PEA)
6. Production experience outside the firm (PEO)
7. Total amount of production experience (\overline{PE})
i.e. $PEA + PEO$.

These seven variables might be important factors in 'acceptability', since older, more experienced men with production experience would be expected to be more acceptable as critics than younger ones, and would be expected to have a more sympathetic attitude to production workers and their problems. These were the general hypotheses set up. The relations between these factors and efficiency were also to be explored. The information on these seven variables was obtained from the subjects' personnel records, and cross-checked by biographical questions at the interview.

B. Intelligence.

A number of studies have demonstrated the relationship between intelligence and supervisory ability (e.g. Handyside and Duncan, 1954; McKenzie, 1955a). As has been demonstrated above, the floor inspector's job

is in many ways akin to a supervisory one with elements of discretion, responsibility and human relations skills involved. The hypothesis was set up that efficiency would be positively correlated with tested intelligence. The test used was one common in industrial studies in this country, the National Institute of Industrial Psychology Group Test 33. It has been used in many studies, including the two quoted above. It was given in the shortened version which has been demonstrated to correlate .996 with the full version (McKenzie, 1955¹).

C. Emotional Stability.

From the discussion in the previous chapters, it is clear that one of the qualities which would be required of a floor inspector is emotional stability, in order that he may withstand the human relations pressures involved, and be able to obtain a balanced perspective on the problems with which he is faced. It was thus desirable to obtain a measure of this emotional stability. It was necessary that this should be short and capable of quick application and scoring, and so the normal projective techniques were not considered suitable. In addition it was preferable to use a test which had been given to industrial populations, to enable comparisons to be made. For these reasons the Crown Word Connection List (WCI) was chosen. This has been administered to a number of industrial groups; grid casters, foremen, candidates for supervisory posts, etc., and norms are available (Crown, 1952).

The list presents a series of stimulus words each coupled with two

¹ I am grateful to the Works Psychologist who administered the intelligence test to the London group.

response words, one of which is regarded as normal, and the other as abnormal. The subject is asked to underline the response word that is connect more in his mind with the stimulus word. Two examples may be given, with the abnormal response underlined.

SINK	wash	<u>Drown</u>
EATING	drinking	<u>fasting.</u>

The score is obtained by counting the number of abnormal choices the subject makes.

The order of the stimulus words used is that of the latest form of the test given in Eysenck (1952).

D. Job Satisfaction.

The relevance of this variable to human relations problems in industry is evident.

1. The Job Satisfaction Questionnaire (JSQ)

Many attempts have been made to measure job satisfaction. One of the most attractive seems to be the Job Satisfaction Questionnaire of Brayfield and Rothe (1951). This is a scale, constructed by a combination of Thurstone and Lickert methods, which is applicable to a large variety of jobs and gives an index to overall job satisfaction rather than to specific aspects of the job situation.

The scale consists of a number of general statements (e.g. "There are some conditions concerning my job that could be improved"). The subject has to underline his opinion of the statement on a five point scale ranging from

'strongly agree' to 'strongly disagree'. Half the statements are favourable to the job, and half unfavourable. The scoring system is to score five points for a strongly favourable response down to one point for a strongly unfavourable view. With 18 statements the range of possible scores is from 18 to 90 with 54 as the neutral point.

This scale was administered to the floor inspectors as the first method of obtaining a measure of job satisfaction. The question of giving it before or after the focused interview was considered. It was decided that since it was the general non-specific attitude about job satisfaction that was required, it would be preferable to give the scale before the interview, in which specific aspects of the job would be discussed. And this was done.

1. The Job Satisfaction Ratings (JSR1, JSR2).

A second type of measure was obtained by two independent ratings of job satisfaction on the basis of the interview reports (see Appendix II). The ratings were of generalised job satisfaction rated 'globally' in the light of the whole interview. A five point scale was used, corresponding to the following definitions.

- Score 5 = says or implies with apparent consistency a high level of satisfaction in the job, with positive attractions to it.
- 4 = a fair level of satisfaction.
- 3 = neutral point: says or implies "It's a job, like any other job".
- 2 = some dissatisfaction.
- 1 = a definite dislike of the job.

Once these definitions had been obtained, and this was done without reference to the interview reports, the raters proceeded completely independently. Thus the correlation between the two ratings may be considered a measure of the validity of the scale. The two ratings were performed by the investigator (JSR2) and his senior colleague (JSR2)¹.

3. The Content Analysis of Job Satisfaction (CAJS).

A further method of obtaining a job satisfaction measure was used.

In this the investigator attempted to break down his global assessment on the basis of the whole interview (JSR2) into specific scores in answer to particular questions. For the content analysis of job satisfaction, the answers to questions B, E, F, G, H, K and M in the focused interviews were used (see Appendix I). The scoring used was as follows:

Question B: "In general how do you like your job?"

Answer	Like	score	3
	Non-committal ("It's a job, like any other job)		2
	Dislike		1

Question E: "Do you like it better than other jobs you have had?"

Answer	Yes		3
	"From some points of view" or otherwise non-		
	committal		2
	No		1

¹ I am indebted to Mr. McKenzie for carrying out one of these ratings.

Question F: "Have you ever thought of changing your job?"

Answer	No or not seriously	score	3
	Only for promotion or personal reasons (e.g. living too far from work)		2
	Yes		1

Question G: "How do you feel about working in Ayes as a firm?"

Answer	"Best firm I've worked for" or spontaneous favourable comparisons with other firms	score	3
	A "good", or a "very good" firm		2
	Any other answer		1

Question H: "Considering your experience and training do you think this job makes full use of your abilities?"

Answer	Yes	score	3
	Sometimes		2
	No		1

Question K: "How do your mates think this job compares with other jobs?"

Answer:	Like	score	3
	Indifferent, non-committal "Individuals differ"		2
	Dislike		1

Question M: "Do you think that the rate for your job is fair compared with other jobs in the factory?"

Answer	Yes	score 3
	Non-committal	2
	No	1

The seven questions give a range of scores from 7 to 21 with 14 as the neutral point.

E. Attitude to Production.

The attitude of floor inspectors to production workers and their problems is obviously relevant to the human relations aspects of their job, from the points of view both of acceptability and efficiency, and attempts were made to measure this attitude.

1. The Ratings of Attitude to Production (AP1 and AP2)

Two independent ratings of attitude to production were obtained on the basis of the interview reports (Appendix II). The ratings were again of a global type and attempts were made to assess the generalised attitude on the basis of the whole interview. A five-point scale was used, corresponding to the following definitions. Examples of items from the interviews later given the relevant score, are appended to facilitate exposition. They were not included in the definition.

Score 5 = Approval of production (e.g. How do you get on with production?
"Production I find are just exactly like anybody else. They're just people, you know. It depends how you treat people. If you're reasonable with them they're reasonable with you.")

- Score 4 = Occasional differences but approval and sympathy on the whole. "Sometimes they're inclined to think inspection a little hard on them. Of course, their complaint is that the rates are too high to give attention to the job they're doing and take note of what inspection points out to them."
- Score 3 = Neutral point or feel differently about different individuals. (e.g. What do production think of inspection? "Perhaps fifty-fifty. Some people believe you are out to cause trouble some know you are there to help".)
- Score 2 = Disapproving on the whole, but with exceptions. (e.g. How do you get on with production?" I find at times they're very co-operative and at other times they strongly disagree. You tell them the job's stopped and rejects won't be accepted. It all depends on the mood of them. Sometimes they will just run it anyway, although they know I don't pass it").
- Score 1 = A general disapprobation of production. (e.g. What do you dislike most about your job? "I would put it down to the operators more or less. Diecast fellows seem a bit illiterate. It's the same with all operators outside inspection. You can't really have good feelings towards them if you're doing your job".)

It should be stressed that these examples are of answers to individual questions but the rating was made globally on the basis of the whole interview in each case. After these definitions had been given, the raters proceeded independently. Thus again the correlation between the two ratings may be

considered a measure of the validity of the scale. The ratings were performed by the investigator (AP2) and by a colleague (AP1)¹.

2. The Content Analysis of Attitude to Production (CAAP).

As with job satisfaction, a further measure of this attitude was obtained by breaking down the global assessment into specific scores in answer to particular questions. For the content analysis of attitude to production, the answers to questions A, C, D, J and L in the focused interviews were used (Appendix I).

The following scoring was used:

Question A: "Can you tell me in your own words what your job is and what you have to do?"

Answer	A positive mention regarding production (e.g. training)	score 3
	An indifferent mention or no mention	2
	A hostile mention	1

Question C: "What do you like most about your job?"

Answer	Mention of dealings with production.	score 3
	An implicit mention (e.g. likes working in a factory and seeing lots of people)	2
	No mention of production, or Negative mention (e.g. feels superior to operators)	1

Question D: "What do you dislike most about your job?"

Answer	No mention of production or a positive mention (e.g. having to tell people who are doing their best that the job is not good enough)	score 3
--------	--	---------

¹ I am indebted to Mr. G.M. Stalker for carrying out one of these ratings.

A negative mention, but explained away (e.g. it's not
their fault, it's the bonus system) score 2

Concern with production 1

Question J: "How do you get on with production?"

Answer Very well score 3

Depends on the individual, "very well, but ..."
and elaboration of difficulties, "all right" 2

Not well, "I don't" 1

Question L: "What do production think of inspection?"

Answer Inspection a help, or "They don't think much of us,
but that's only natural" score 3

A necessary evil, tolerate us, individuals differ 2

They are hostile 1.

The five questions give a range of scores from 5 to 15 with 10
as the neutral point.

F. Production Relations Salience. (PRS)

One further aspect of the floor inspector's attitude to production
seems relevant. This has been named 'production relations salience'. It
is defined as the degree of apparent concern about relations with production.
Not merely that the inspector feels in a general way that it is important to
maintain good human relations, but evidence that this actually means something
to him, and that he has to worry about it.

The measure of this attitude was again obtained by rating from

from the interview reports (Appendix II)¹. The definitions are as follows:

Score 5 = Has no worry about relations with production, sees no difficulty

Score 4 = Is a little worried

Score 3 = Has some worry but shows understanding of production's position (e.g. the operator's not going to like you very much, is he?)

Score 2 = Has some worry

Score 1 = Has much worry, finds it a difficult job to keep on workable terms with production.

G. Efficiency.

This was obtained by the ranking method described in the previous chapter.

Table 6.3 gives a complete list of the measures obtained and the abbreviations used.

4. The Results Obtained.

For the purpose of analysing these results, the whole group was split into six sections, as given in Table 6.4.

It was not possible, because of lack of time, to give the Word Connection List to the London inspectors, and results on this scale are thus based on a group of 37. One London Inspector (I25) was away for a prolonged illness during the investigator's visit and was unable to be interviewed.

All measures which depend on the interview and the JSQ which preceded it, are based on a group of 61. One Scottish inspector (S18) refused to take the

¹ I am indebted to my Senior colleague who carried out this rating.

Abbreviation

Measure

Age	Age
LS	Length of Service in the firm
LSI	Length of Service as a Floor Inspector in the firm.
TI	Total number of years spent in inspection both inside and outside the firm.
PEA	Production experience in the firm.
PEO	Production Experience outside
PE	Total production experience (=PEA+PEO)
G.T. 33	Intelligence Test
WOL	Word Connection List:measure of emotional stability
JSQ	Job Satisfaction Questionnaire
JSR1	Job Satisfaction rating by R.M.M.
JSR2	Job Satisfaction rating by D.S.P.
CAJS	Content Analysis of job satisfaction replies
AP1	Attitude to production rating by G.M.S.
AP2	Attitude to production rating by D.S.P.
CAAP	Content analysis of attitude to production
PRS	Production relations salience rating by R.M.M.
ES	Efficiency scores, obtained by transformation of inspection supervision's rankings.

Table 6.3.

Section	Names	Number in Section	Totals in factories
London Assembly (LA)	L1 - 10	10	
London Machine Shop (LMS)	L11-25	15	25
Scotland Assembly (SA)	S1 - 10	10	
Scotland Machine Shop (SMS)	S11-19	9	19
Wales Assembly (WA)	W1 - 3	3	
Wales Machine Shop (WMS)	W4 -18	15	18
Total in Group			62

Table 6.4

intelligence test, and the data here are thus also based on a group of 61. The other measures relate to the whole group of 62.

A. Personal History.

The mean standard deviation, and range of the various personal history measures for the groups are given in Table 6.5.

The mean age of the whole group is 40 years, and the means of the sections keep surprisingly close to this. Length of service varies between the factories as would be expected, with London having a much larger LS and ISI having been established longer. The London inspectors' TI is also larger, which emphasises that both Scotland and Wales had to take on inexperienced men compared with London.

Only 12 of the group had had production experience in Ayes, though 38 of them had had some at sometime.

B. Intelligence.

Information on the intelligence test results is given in Table 6.6.

The most interesting finding here is the extremely wide range of scores obtained from 154, which is within the top 5 per cent of the general population, down to 30, within the bottom 5 per cent. This is a much wider range than is usually found, for example, in studies of supervisors. The group mean of 96 is above the general population mean, which has been shown to be 90 on this test (McKenzie, 1955a).

C. Emotional Stability.

The scores on the Word Connection List are given in Table 6.7.

The results here do not seem to be at variance with the norms

Measure	<u>LA</u>			<u>LMS</u>			<u>SA</u>			<u>SMS</u>		
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Age in years	29.4	4.94	48to31	45.0	9.30	62to31	40.8	8.86	60to30	36.9	6.03	43to27
LS	11.7	5.18	19to2	13.4	7.59	31to1	5.5	1.96	11to3	3.9	2.33	8to1
LSI	6.1	5.45	15to0	8.7	7.88	31to1	2.6	1.02	4to1	2.4	1.64	5to0
TI	11.4	5.02	19to4	13.8	7.01	31to3	5.7	3.63	16to3	3.3	1.82	6to3
PEA	0.2	0.60	2to0	2.6	3.42	10to0	1.0	2.41	8to0	0.6	1.57	5to0
PEO	3.0	4.15	13to0	4.8	8.32	30to0	6.0	10.52	34to0	5.0	3.74	10to0
PE	3.2	4.24	13to0	7.4	9.28	30to0	7.3	13.44	45to0	5.6	4.69	15to0

Measure	<u>WA</u>			<u>WMS</u>			<u>Whole Group</u>		
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Age in years	37.7	5.91	35to48	39.2	10.92	59to27	40.3	9.09	62to27
LS	8.3	.47	9to3	2.7	2.25	8to1	7.6	6.38	31to1
LSI	1.3	1.25	3to0	1.7	1.62	6to0	4.3	5.41	31to0
TI	7.3	.47	8to7	4.3	4.16	16to1	8.0	6.33	31to1
PEA	0.7	.47	1to0	0.0	0.0	0	1.0	2.29	10to0
PEO	5.0	3.56	8to0	5.5	5.12	16to0	5.0	6.90	30to0
PE	5.7	4.03	9to0	5.5		16to0	6.0	8.11	45to0

Table 6.5

Section	Mean	S.D.	Range
LA	92.6	17.22	128 to 66
LMS	92.1	35.44	147 to 30
SA	110.0	19.60	140 to 76
SMS	95.6	26.73	141 to 56
WA	93.7	13.02	107 to 76
WMS	100.0	30.91	154 to 54
Whole group	96.0	28.23	154 to 30

Table 6.6

Section	Mean	S.D.	Range
SA	6.9	1.92	10 to 4
SMS	14.2	6.65	27 to 4
WA	10.7	4.64	17 to 6
WMS	8.6	4.95	23 to 2
Whole group	9.7	5.57	27 to 2

Table 6.7

published by Crown(1952). He quotes 7.5 (± 3.9) for a group of industrial candidates for promotion, 10.7 (± 6.1) for a group of industrial supervisors and 13.9 (± 6.6) for a group of unskilled grid casters.

D. Job Satisfaction.

The results of the job satisfaction questionnaire are given in Table 6.8.

The mean of the whole group was 65.7, which suggests there is on the average a positive amount of job satisfaction since the neutral score is 54. The only other data available about this questionnaire is on the original validation group of Brayfield and Rothe (1951). They obtained the scores of the members of an evening class in Personnel Psychology, enrolment in which was considered to be an overt expression of interest in personnel work. The class was divided into two groups, those whose work seemed appropriate to their expressed interest and those whose work did not. It was hypothesised that the first group would obtain a higher job satisfaction score than the second, and this was confirmed. The interest for the study is that a mean score of 65.4 (± 14.02) was obtained for the non-appropriate work group. This score is equal to that obtained by the floor inspectors. The appropriate-work group obtained a score of 76.9 (± 8.6). This suggests that the floor inspectors are a less satisfied group compared with other groups.

The results of the job satisfaction ratings are given in Table 6.9. For JSR1, the mean score for all the group and for each section is above the neutral point of 3. For JSR2 the mean score for the whole group is above the neutral point, but the means for two sections (SMS and WMS) show a degree of dissatisfaction.

Section	Mean	S.D.	Range
LA	66.8	6.37	75 to 54
IM/S	64.4	7.32	79 to 49
SA	68.3	5.27	75 to 59
SM/S	62.7	5.50	70 to 55
WA	72.3	9.98	83 to 59
WM/S	64.9	9.51	82 to 58
Whole group	65.7	7.78	83 to 49

Table 6.8

<u>Rating</u>	<u>LA</u>			<u>LMS</u>			<u>SA</u>			<u>SMS</u>		
	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
JSR1	4.2	0.98	5to2	4.1	0.99	5to2	4.4	0.66	5to3	3.7	0.94	5to1
JSR2	3.5	1.43	5to1	3.5	1.12	5to1	4.1	0.70	5to3	2.8	1.40	5to1

<u>Rating</u>	<u>WA</u>			<u>WMS</u>			<u>Whole Group</u>		
	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
JSR1	5.0	0	5	3.1	1.09	5to1	3.9	1.08	5to 1
JSR2	4.7	0.47	5to4	2.7	1.30	5to1	3.3	1.33	5to 1

Table 6.9

The results of the content analysis (CAIS) are given in Table 6.10. The mean score for the group, of 15.3, is again above the neutral point of 14. The lowest scores were obtained on Question H (Full use of ability?) and Question F (Ever thought of changing job?). These were below and at the neutral point respectively. As would be expected the highest score was obtained in answer to the direct Question B (How do you like your job?). There are marked differences between the sections, particularly in that SMS and WMS were about 2 points below the remainder, being just below and just above the neutral point respectively.

There are differences between the sections in individual questions. The most striking are: the mean score on Question E (like better than other jobs?) of WMS is below the neutral at 1.7, with two-thirds of this group giving a negative reply; the mean score on question G (like working in Ayes?) of SMS is 1.8; and both these groups score below the neutral on Question K (What do your mates feel?).

The correlations between the measures of job satisfaction for the whole group are given in Table 6.11.

These correlations seem to be very satisfactory. The correlation between the two independent ratings is .8 which suggests that on the basis of job interviews a reliable and valid measure of job satisfaction can be obtained. The correlations between the ratings and the content analysis is also of this order. The correlations of these three measures with JSQ, about .6, are also satisfactory when it is considered that the questionnaire is a purely general one, and the interviews concerned specific topics. In general it can be said

Table 6.10

CAJS Questions	LA		LMS		SA		SMS		WA		MMS		Whole Group	
	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n
B	3	8	3	7	3	9	3	6	3	3	3	6	3	39
	2	1	2	6	2	1	2	0	2	0	2	4	2	12
	1	1	1	1	1	0	1	3	1	0	1	5	1	10
Mean Score	2.7		2.4		2.9		2.3		3.0		2.0		2.5	
E	3	8	3	8	3	8	3	4	3	1	3	4	3	33
	2	1	2	2	2	0	2	3	2	1	2	1	2	8
	1	1	1	4	1	2	1	2	1	1	1	10	1	20
Mean Score	2.7		2.3		2.6		2.2		2.0		1.7		2.2	
F	3	2	5	6	3	5	3	3	3	3	3	6	3	25
	2	6	2	1	2	2	2	2	2	0	2	1	2	12
	1	2	1	7	1	3	1	4	1	0	1	8	1	24
Mean Score	2.0		1.9		2.2		1.7		3.0		1.9		2.0	
G	3	7	3	10	3	4	3	1	3	2	3	6	3	30
	2	1	2	4	2	5	2	5	2	1	2	7	2	23
	1	2	1	0	1	1	1	3	1	0	1	2	1	8
Mean Score	2.5		2.7		2.3		1.8		2.7		2.3		2.4	
H	3	4	3	6	3	6	3	5	3	2	3	5	3	28
	2	0	2	1	2	0	2	0	2	0	2	0	2	1
	1	6	1	7	1	4	1	4	1	1	1	10	1	32
Mean Score	1.8		1.9		2.2		2.1		2.3		1.7		1.9	
K	3	4	3	6	3	5	3	2	3	2	3	3	3	22
	2	3	2	7	2	4	2	3	2	0	2	7	2	24
	1	3	1	1	1	1	1	4	1	1	1	5	1	15
Mean Score	2.1		2.4		2.4		1.8		2.3		1.9		2.1	
M	3	4	3	10	3	1	3	3	3	3	3	12	3	33
	2	0	2	0	2	2	2	0	2	0	2	1	2	3
	1	6	1	4	1	7	1	6	1	0	1	2	1	25
Mean Score	1.8		2.4		1.4		1.7		3.0		2.7		2.1	
Mean Total Score	15.6		16.1		16.0		13.8		18.3		14.2		15.3	
S D	3.67		3.10		2.05		4.08		2.05		3.64		3.51	

	JSQ	JSR1	JSR2	CAJS
JSQ	-	.602	.607	.555
JSR1		-	.801	.777
JSR2			-	.792
CAJS				-

Table 6.11

that acceptable measures of job satisfaction have been obtained.

E. Attitude to Production.

The results of the attitude to production ratings are given in Table

6.11. The mean of both ratings is about the neutral point of 3, suggesting that the average floor inspector's attitude to production is indifferent rather than approving or hostile. The London attitudes have again been shown to be more positive on average than the other two factories.

The results of the content analysis (CAAP) are given in Table 6.12.

The mean score for the whole group is 9.7 which is below the neutral point of

10. Thus by this method of analysis the floor inspectors do have, on average, a slightly hostile or disapproving attitude to production. Again the London factory scores are higher than the others with the Scottish factory scoring least. The lowest scores for the whole group were obtained on Question C (What do you like about the job?) and Question L (What do production think of Inspection?). The question with the highest score was J (How do you get on with production?). In almost every case the London scores on individual questions were higher than those of the other factories.

The correlations between the measures of attitude to production for

the whole group are given in Table 6.13. These results show that the scale of attitude to production does not appear to be as clearly reliable or as valid as the job satisfaction measures. AP1 is only correlated about .4 with the other measures. However it has a higher correlation with CAAP than with AP2.

These two measures are highly correlated, and as CAAP is a more reliable one, not being based on global ratings, it was decided that this should

<u>Rating</u>	<u>L A</u>			<u>L M S</u>			<u>S A</u>			<u>S M S</u>		
	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
AP1	3.3	1.00	5to2	3.3	.79	5to2	3.1	1.14	5to1	3.0	.82	4to2
AP2	3.1	1.14	5to1	3.1	1.06	5to1	3.3	1.05	5to2	2.3	.66	3to1

<u>Rating</u>	<u>W A</u>			<u>W M S</u>			<u>Whole Group</u>		
	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>	<u>Mean</u>	<u>SD</u>	<u>Range</u>
AP1	2.3	.47	3to2	2.5	.81	4to1	3.0	.95	5to1
AP2	2.9	.82	4to2	3.3	1.25	5to1	3.1	1.10	5to1

Table 6.11.

Table 6.12

CAAP Questions	LA		LMS		SA		SMS		NA		WMS		Whole Group	
	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n	Sc	n
A	3	2	3	3	1	3	0	3	0	3	1	3	7	
	2	4	2	11	2	2	8	2	3	2	12	2	47	
	1	4	1	0	1	1	1	1	0	1	2	1	7	
Mean Score	1.8		2.2		2.1		1.9		2.0		1.9		2.0	
C	3	2	3	5	3	3	1	3	2	3	3	3	13	
	2	1	2	1	2	1	2	1	2	0	2	0	4	
	1	7	1	8	1	9	1	7	1	1	1	12	44	
Mean Score	1.5		1.8		1.1		1.3		2.3		1.4		1.5	
D	3	7	3	10	3	5	3	2	3	2	3	7	33	
	2	0	3	0	2	0	2	1	2	0	2	0	1	
	1	3	1	4	1	5	1	6	1	1	1	8	27	
Mean Score	2.4		2.4		2.0		1.6		2.3		1.9		2.1	
J	3	6	3	8	3	4	3	3	3	0	3	8	29	
	2	2	2	4	2	5	2	4	2	3	2	3	21	
	1	2	1	2	1	1	1	2	1	0	1	4	11	
Mean Score	2.4		2.4		2.3		2.1		2.0		2.3		2.3	
L	3	3	3	4	3	2	3	2	3	0	3	4	15	
	2	5	2	7	3	2	2	2	2	1	2	6	23	
	1	2	1	3	1	6	1	5	1	2	1	5	1	23
Mean Score	2.1		2.1		1.6		1.7		1.3		1.9		1.9	
Mean total Score	10.2		10.9		9.1		8.6		10.0		9.3		9.7	
SD	2.23		2.31		2.07		1.07		.82		2.14		2.18	

	AP1	AP2	GAAP
AP1	--	.407	.449
AP2		-	.757
GAAP			-

Table 6.13

taken as an index of this attitude.

F. Production Relations Salience.

The results of this rating are given in Table 6.14. The mean of the whole group is 4.0 which suggests that on average floor inspectors have a little worry about their production relations problems. The most outstanding difference between the sections is the lower score of SMS who are more concerned about their problems.

G. Efficiency.

The results of the efficiency ratings were given in the previous chapter.

5. The Relations between the Measures.

The inter correlations (product-moment) amongst the main measures were calculated for each of the sections separately - with the exception of WA, where the numbers were considered to be too small - and for the group as a whole. (The 3 WA inspectors were, of course, included in the whole group). The measures used in the inter correlations and the results are shown in Table 6.15 for the London Assembly. For $n = 10$, a correlation must be about 0.6 to be significant at the 5 per cent level. The 11 correlations which are at or very near this significance level have been underlined.

As might be expected the personal history measures are significantly correlated. CAJS is significantly correlated with JSQ, CAJS, and CAAP. Since ES is to be regarded as a criterion in later work, perhaps the most interesting fact is the existence of significant correlations between it and CAAP and G.T. 33.

Section	Mean	S.D.	Range
LA	4.1	1.30	5 to 1
IMS	4.4	.61	5 to 3
SA	4.1	1.14	5 to 3
SMS	3.2	1.40	5 to 1
WA	4.3	.47	5 to 4
WMS	4.0	1.21	5 to 1
Whole group	4.0	1.11	5 to 1

Table 6.14

Section	Age	LS	LSI	TI	GT33	JSQ	CAJS	CAAP	PRS	ES
L A										
Age	-	<u>.611</u>	<u>.559</u>	<u>.627</u>	-.104	-.073	.046	.371	-.571	.279
LS		-	<u>.777</u>	<u>.750</u>	.143	-.193	-.228	.257	.108	.194
LSI			-	<u>.861</u>	-.243	-.417	-.363	.138	-.270	.390
TI				-	-.274	-.526	-.122	.297	-.144	.242
GT33					-	.111	.081	-.439	-.083	<u>-.568</u>
JSQ						-	.224	.384	<u>.643</u>	.332
CAJS							-	.512	<u>.554</u>	.134
CAAP								-	<u>.822</u>	<u>.627</u>
PRS									-	.383
ES										-

Table 6.15

Such a high negative correlation as -0.568 between intelligence and efficiency is very unusual and contrary to previous findings in this type of work.

Table 6.16 gives the intercorrelations for the London Machine Shop.

For $n = 15$, a correlation must be about 0.5 to be significant at the 5 per cent level. The 10 correlations which are at a very near this significance level are underlined. Again the personal history group are significantly correlated, and in this section they are all except one significantly correlated in a negative direction with intelligence. Intelligence is also significantly negatively correlated with job satisfaction (CAJS). An almost significant negative correlation between the criterion (ES) and CAJS was also obtained.

Table 6.17 gives the intercorrelations for the Scottish Assembly.

Nine correlations are about or beyond the 5 per cent level and 3 beyond the 1 per cent level of significance. There seems to be no clear pattern of significant correlations in this section. We may note the Age, LS and CAJS are all negatively correlated with efficiency, but intelligence is positively correlated.

Table 6.18 gives the intercorrelations for the Scottish Machine Shop.

For $n = 9$ the 5 per cent significance figure is 0.66, and the 9 correlations at this level are underlined. One interesting fact of note in this group is that intelligence correlates negatively with every other measure.

Table 6.19 gives the intercorrelations for the Welsh Machine Shop.

For $n = 15$, the required value for significance is about 0.5 and 9 correlations are beyond or about this level and have been underlined. The intercorrelations for the whole group are given in Table 6.20. For the individual sections it was not possible to incorporate production experience in the correlations.

Section L M S	Age	IS	LSI	TI	GT33	JSQ	CAJS	CAAP	PRS	ES
Age	-	<u>.586</u>	<u>.715</u>	<u>.693</u>	<u>-.516</u>	.025	.110	.139	-.245	-.212
IS		-	<u>.863</u>	<u>.497</u>	<u>-.479</u>	-.060	.338	-.009	<u>-.516</u>	-.048
LSI			-	<u>.746</u>	<u>-.520</u>	-.246	.176	.218	-.295	.014
TI				-	<u>-.558</u>	-.347	.049	.093	-.063	-.100
GT33					-	-.089	<u>-.646</u>	-.268	-.427	.151
JSQ						-	.383	.069	.180	-.078
CAJS							-	.110	.062	-.463
CAAP								-	.272	.128
PRS									-	.252
ES										-

Table 6.16

Section S A	Age	IS	LSI	TI	GT33	WCL	JSQ	CAJS	CAAP	PRS	ES
Age	-	.687	.135	-.427	-.767	-.054	.470	.727	-.119	.240	-.845
IS		-	.350	-.007	-.468	-.411	-.005	.398	-.504	-.157	-.553
LSI			-	.588	-.085	.337	.376	.239	-.691	-.311	-.381
TI				-	.578	.153	.172	-.564	-.355	-.332	.421
GT33					-	-.175	.284	-.692	.202	-.049	.686
WCL						-	.487	.203	-.023	.050	.104
JSQ							-	.185	-.259	.162	-.340
CAJS								-	-.141	.215	-.952
CAAP									-	.378	.249
PRS										-	.188
ES											-

Table 6.17

Section	Age	LS	LSI	TI	GT33	WCL	JSQ	CASJ	GAAP	PRS	ES
S M S											
Age	-	.389	.091	.104	-.115	.201	.421	.531	.050	.021	-.251
LS	-	-	.740	.740	-.475	-.228	.014	-.038	-.280	-.523	-.230
LSI	-	-	-	.841	-.401	-.225	-.341	-.434	-.523	-.725	.231
TI	-	-	-	-	-.705	.040	-.166	-.065	-.210	-.465	-.137
GT33	-	-	-	-	-	-.195	-.218	-.426	-.044	-.097	-.185
WCL	-	-	-	-	-	-	-.001	-.027	-.268	.019	.387
JSQ	-	-	-	-	-	-	-	.820	.658	.574	-.403
CASJ	-	-	-	-	-	-	-	-	.745	.711	-.448
GAAP	-	-	-	-	-	-	-	-	-	.517	-.123
PRS	-	-	-	-	-	-	-	-	-	-	.061
ES	-	-	-	-	-	-	-	-	-	-	-

Table 6.13

Section W M S	Age	IS	ISI	TI	GT33	MCL	JSQ	CAJS	CAAP	PRS	ES
Age	-	.201	.083	.399	-.390	.034	.086	.115	.442	.499	-.135
IS	-	-	.724	.691	.541	-.011	-.274	-.284	-.095	.328	-.140
ISI	-	-	-	.769	.603	.166	.315	-.419	-.109	.238	-.108
TI	-	-	-	-	.227	.191	-.176	-.251	.012	.463	-.117
GT33	-	-	-	-	-	-.236	-.403	-.556	-.158	.097	-.058
MCL	-	-	-	-	-	-	.302	.275	-.172	-.122	-.164
JSQ	-	-	-	-	-	-	-	.882	.335	-.434	.449
CAJS	-	-	-	-	-	-	-	-	.215	.313	.301
CAAP	-	-	-	-	-	-	-	-	-	.642	.415
PRS	-	-	-	-	-	-	-	-	-	-	.272
ES	-	-	-	-	-	-	-	-	-	-	-

Table 6.19

Whole Group	Age	LS	LSI	TI	PE	GF33	WCL	JSQ	CAJS	CAAP	PRS	ES
Age	-	<u>.405</u>	<u>.461</u>	<u>.454</u>	<u>.041</u>	<u>-.394</u>	<u>-.085</u>	<u>.093</u>	<u>.264</u>	<u>.298</u>	<u>.305</u>	<u>-.212</u>
LS	-	-	<u>.846</u>	<u>.737</u>	<u>-.074</u>	<u>-.239</u>	<u>-.095</u>	<u>-.052</u>	<u>.179</u>	<u>.236</u>	<u>.125</u>	<u>-.049</u>
LSI	-	-	-	<u>.794</u>	<u>.191</u>	<u>-.291</u>	<u>.146</u>	<u>-.214</u>	<u>.008</u>	<u>.266</u>	<u>-.004</u>	<u>.060</u>
TI	-	-	-	-	<u>.460</u>	<u>-.244</u>	<u>-.001</u>	<u>-.173</u>	<u>.046</u>	<u>.269</u>	<u>.197</u>	<u>.016</u>
PE	-	-	-	-	-	<u>.010</u>	<u>.114</u>	<u>-.084</u>	<u>.161</u>	<u>.000</u>	<u>-.254</u>	<u>-.229</u>
GF33	-	-	-	-	-	-	<u>-.253</u>	<u>-.201</u>	<u>-.429</u>	<u>-.194</u>	<u>-.093</u>	<u>.082</u>
WCL	-	-	-	-	-	-	-	<u>.095</u>	<u>.059</u>	<u>-.204</u>	<u>-.148</u>	<u>-.017</u>
JSQ	-	-	-	-	-	-	-	-	<u>.555</u>	<u>.190</u>	<u>.411</u>	<u>.067</u>
CAJS	-	-	-	-	-	-	-	-	-	<u>.287</u>	<u>.466</u>	<u>-.148</u>
CAAP	-	-	-	-	-	-	-	-	-	-	<u>.598</u>	<u>.271</u>
PRS	-	-	-	-	-	-	-	-	-	-	-	<u>.127</u>
ES	-	-	-	-	-	-	-	-	-	-	-	-

Table 6.20

This is because the group on this measure falls into a dichotomy, those who have had some experience and those who have not. Thus the product moment correlation is not a legitimate technique in this case. For the whole group however, it was possible to use the bi-serial correlation coefficient. This statistic enable a coefficient of correlation to be calculated when one of the variables is dichotomous and the other is normally distributed. The values it gives are comparable to product moment correlations. The bi-serial coefficients have been calculated between PE and all the other variables for the whole group, and they are included in the table. For $n = 62$, a correlation must be $.25$ to be significant, at the 5 per cent level. The 25 correlations which reach this level or beyond are underlined. Of these 25, thirteen are significant beyond the 1 per cent level and are doubly underlined.

The pattern of significant correlations may be examined. The personal history measures (Age, LS, LSI, and TI) are as a group highly and significantly inter-correlated, as would be expected. The PE variable, however is significantly correlated with only one of this group, TI. This shows that what production experience inspectors have seems to have been gained outside the firm. PE is significantly negatively correlated with PRS, i.e. the longer the experience of production working an inspector has, the more he is concerned with the human relations problems.

The intelligence test will be seen to correlate negatively with all the variables except two, where the correlations are positive but very small and insignificant. Thus the more intelligent inspectors are younger, have less

years service in the firm or in inspection, are less satisfied with their job, have a less positive attitude to production, but are more stable. Intelligence is not significantly related to production experience, production relations salience, or efficiency.

The finding that GT33 is not related to ES is an interesting one. It refutes the hypothesis set up; that they would be so. It is difficult to explain this correlation of .082, as compared with findings of other investigators that intelligence and efficiency correlate about 0.6 (Handyside and Duncan, 1954; McKenzie, 1955a). It cannot be that the value is attenuated by selection, because as noted above the range of intelligence scores in the group covered the entire normal population.

It might be supposed that since age is correlated significantly with GT33 and is just short of significance with ES, that this variable might be attenuating the correlation. But in fact, age correlates significantly negatively with the two variables, whereas their intercorrelation, though small and insignificant, is positive. Thus the effect of partialling age out would be to reduce the correlation of .082. (As an exercise the partialling out was performed. The partial correlation between GT33 and ES holding age constant is .06336). The same phenomenon would be found if job satisfaction were partialled out.

It appears that it must be accepted that intelligence bears no relation to efficiency in this job and other predictors must be sought.

Before passing on to this, however, we may note one further inter-correlated group of measures. These are concerned with job satisfaction,

attitude to production, and production relations salience, which are all positively and significantly intercorrelated. Thus somebody who is satisfied in his job has a more positive attitude to production and is less worried about human relations problems. All these measures are also significantly positively correlated with age, but ES has a negative correlation with age, which falls just short of 5 per cent significance.

Two other significant correlations may be noted. CAAP is positively correlated with both LSI, and TI. Thus the longer time a person has spent in inspection the more favourable is his attitude to production.

The correlations of the efficiency score as a criterion must now be considered. It will be seen that there is only one significant correlation, that of attitude to production. But two others, age and PE which are both negative, fall just short of significance. Thus an efficient inspector would tend to have a better attitude to production, to be younger, and to have no production experience. He would also tend to be less satisfied with his job, but to have less worry about problems of production relations. Length of service in the firm and in inspection, intelligence, and emotional stability as measured by WCL, seem to have ^{no} relevance to efficiency.

Using the five measures considered relevant a multiple correlation with efficiency as the criterion was obtained. The measures and their Beta coefficients are given in Table 6.21. The multiple correlation was found to be 0.4825. From tables presented by Garrett (1947), this correlation was shown to be significant beyond the 1 per cent level.

Measure	Correlation with E S	Beta Coefficient
GAAP	.271	.3859
Minus Age	.212	.2806
Minus PE	.229	.1880
Minus CAJS	.148	.1503
PRS	.127	.0020
Multiple correlation = .4825		

Table 6.21

This multiple correlation of about .5 is as high as can be expected considering the criterion measure used. One may take the average U_2 of ES given in the last chapter, as a measure of the reliability of the criterion. This is in the region of .5, and thus using the normal correction for attenuation one may say that if the criterion had had perfect reliability the multiple correlation would have been in the region of .7.

The most interesting point to note however, for further discussion in the next chapter, is the fact that it is the attitudinal and human relations measures which predict the criterion, not experience or intelligence.

Discussion of the Results.

1. Individual Differences.

The first point which a 'psychological' as opposed to a 'sociological' study brings home, is the amount of variation among individuals. The ranges of scores given in the tables of the last chapter confirm this, and when discussing organisational and human relations problems this fact must be borne in mind. It is well illustrated by the finding that in London, the two inspectors with the highest and lowest satisfaction scores are in fact, doing the same job on alternate shifts! It must be accepted that individuals subjected to study here, may have their attitudes and behaviour influenced by a number of factors which are beyond the scope of this investigation. Thus one would expect to find a range of behaviours, which for the purposes of this investigation must be taken as random. And one does. This would not reflect on sociological discussion which is conducted in general terms without reference to individuals.

2. Systematic Differences.

It is considered however, that if sociological discussion is to have any force at all, then it must be reflected in systematic differences in psychological behaviour after due account is made for individual variability. It was the general aim of the study of the previous chapter to see whether such systematic differences exist, and to relate them to the sociological and organisational discussion given in the early chapters of this discussion.

The most striking systematic group difference to arise is that

between the London factory and the other two centres.

It has been shown in Chapter VI, that the London floor inspectors are more involved in the production process and less reliant on the assurance function of inspection, than are the inspectors of Scotland and Wales. We have seen in Chapter V how the London inspection department is more involved in the process in that it has scrap and re-opezation budgets in the same manner as production. It is thus enabled to demonstrate greater involvement by agreeing to share costs of rejections and so on.

From these facts one would expect a difference of human relations outlook at London, and in the last chapter this was found. The London inspectors have greater job satisfaction, have a more positive attitude to production, and are less worried about the human relations aspects of the job, than the other groups.

A number of reasons may be adduced for the different 'culture' of the London factory. It has been in existence the longest of the Aye factories, the average length of service of floor inspectors is much higher, so is the amount of inspection experience. An older factory does not have such pressing production problems as a newer one, and it has more experienced people to deal with them. Thus friction would be expected to be less in London, because the pressures are less and the resources to meet them greater.

3. Relations between the measures.

From the point of view of human relations problems in inspection, the correlations between the measures give an indication of the factors involved. One of the most important results here is that production experience correlates

significantly negative with production relations salience i.e. that an inspector with production experience is more likely to be, or to have to be, concerned with the human relations aspects of his job. This is surprising and refutes the usual view held, that an inspector's having had production experience helps him both from the human relations and the efficiency point of view. Our finding is that both from a human relations and efficiency point of view it is better for an inspector not to have had such experience.

Two reasons may be suggested as to why this is so, but they would, of course, need further study. It may be that those inspectors with PE withdrew from their production jobs because of failure. In this case they would tend to be less efficient, and to be worried about their role as an inspector vis-a-vis production. It is beyond the scope of this dissertation to investigate this hypothesis; that would require a longitudinal study of floor inspectors through time. The investigator did, however, obtain some evidence to show that some of the inspectors did leave production because they could no longer do the job satisfactorily.

A second suggestion is that inspectors with production experience have a different conception of their duties. They may be more inclined to proffer unwanted advice, or blur the demarcation of responsibility in regard to the operating process. Although the content analysis of the job given in Chapter VI, shows no difference between the two groups (with and without PE), this does call for further detailed study.

Inspection experience, on the other hand, does correlate positively with attitude to production, as does age. This is perhaps the most hopeful

finding from the human relations point of view, since it appears that an inspector becomes more understanding of production the longer he is in the job.

The personal history group of measures inter-correlates as expected, and so does the group of job satisfaction, attitude to production, and production relations salience. This again would be expected as the two latter are components in the former, and are obviously related to each other.

4. The Efficiency Variable.

As has been shown in the previous chapter, the best method of predicting efficiency is to use, not measures of experience and intelligence which would be expected to be related to technical skill, but to use measures relating to the human relations aspects of the job, i.e. attitude to production, age, production experience, production relations salience, and job satisfaction.

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The Beta coefficients given in Table 6.20 are a measure of the amount of weight to be given to each of these measures in predicting the criteria. It will be seen that CAAP makes the largest single contribution.

Again, it must be pointed out that the significance of these findings is enhanced by the fact of the large range of scores on the other non-predictive variables.

This study has served to emphasise the attitudinal aspects of the job. It seems to be the case that, given that a man has sufficient knowledge and skill to get into a floor inspector's job, then it is the human relations factors which become important in his making a success of it, at least as this success is judged by his superiors.

5. The N.I.I.P. Job Description.

In conclusion we shall present a description of the floor inspector's job in an attempt to sum up the information discussed in this dissertation. We shall use the headings of the 'Check List for Job Study - A' for skilled work given in the paper 'Studying Work' (N.I.I.P., undated).

Part I : Job Description.

1. General: The job of floor inspector is a factory job for Men, with age range at entry covering most of the working population i.e. from 25 to 60. The numbers required in light engineering work are accepted to be one eighth of the production force.
2. Type of Work: The work is mainly practical, and said to be of a skilled nature. There is a large human relations skill component.
3. Outline of Work Done: The manifest content of the work is that the floor inspector has to patrol the shop floor, doing checks on the jobs being produced, and to report if these are not up to standard. The main implicit feature of the job is that these reports, can be regarded as 'criticisms' by production and thus lead to friction, by being reacted against. The inspector needs therefore some factor which makes him acceptable, and some skill in dealing with the human relations aspects of the job.
4. Selection and Training: The normal methods of selection by interview obtain, whether for initial selection or upgrading within the firm. Demand is made for the 'better type of man' i.e. one with somewhat higher social status. There is no probationary period as such, but a large number of inspectors are recruited from the routine viewers, who have some contact with

floor inspectors and are able to see their work. There is no specific training after entry, simply learning on the job.

5. Working Conditions. (i) Physical conditions of work: The normal factory conditions prevail as far as general physical conditions are concerned. The hours worked are normal for the factory. Shift work and night work may have to be done if necessary. The main physical feature is the almost constant standing and walking - an inspector is on his feet practically the whole day. The pressure of work is variable. On the whole, it goes at a more leisurely pace than production, but if a 'crisis' occurs it does, of course, increase greatly. There is nothing beyond the normal factory accident and health hazards or disagreeable features.

(ii) Social conditions of work: The basic social condition of the job is that the inspector is primarily working on his own, patrolling his section. Thus any companionship which he obtains on the job must derive from relations with production people. The social prestige of the job is higher than that of operators. This is the primary non-financial incentive and one reason why men are prepared to stay on inspection although they would earn more on production. Another main attraction is the comparatively small amount of supervision (who, in any case, only intervene when asked to do so by the inspector himself), and the much larger scope for initiative and discretion compared with operators, which the job allows.

(iii) Economic conditions of work: The pay is a flat rate with no production bonus. This preferred by some inspectors, and the large majority accept it as being the correct method of payment for inspectors. The amount of

pay varies, but the general practice is for it to be actually less than production workers wages, or at least to be perceived as less because of the large fluctuations in operators' pay. Thus in general, a floor inspector must be prepared to 'pay' for the other attractions of his job.

6. Opportunities for transfer and promotion: The opportunities for transfer within a firm of a floor inspector are very limited. Since it is believed that an inspection non-bonus attitude is required and that this attitude is not common, a floor inspector is very much discouraged from transferring to production as an operator. There is thus only the upward promotion in the inspection hierarchy, but with a possible chance of promotion to production supervision.

Part II : Interpretation in Terms of Attributes Needed.

1. Physical make up: Normal health; sufficient to enable an inspector to be standing and walking all day is required. Since he has to be acceptable, it is important that the floor inspector's manner is not too different from that of the operators.

2. Attainments and previous experience: The job demands a certain amount of knowledge of engineering workshop practice. But this seems to be the only attainment or previous experience required. The fact that experience in the job does not produce better floor inspectors suggests that the technical component of the job is not primary.

3. General Intelligence: On a group with a range of intelligence as large as the normal population, no relation was found between intelligence and efficiency. If one takes the top half of the group as satisfactory (i.e. with an ES of over 50) then it seems to be possible to function satisfactorily

with a G.T. 33 score of 43.

4. Special aptitudes: No special aptitudes seem to be required.

5. Interests: The job requires no special interests. An inspector must be prepared to forego the satisfaction of making things for himself, and this a disattraction for some.

6. Disposition: The job would seem to require an inspector to be steady and dependable. In terms of the WCL however, no relation was found. The most important factors, as has been stressed, appear to be the attitudinal ones. A positive attitude to production, and a willingness to be involved in the production process are the best indication of success in the job.

Concluding Remarks¹

In this dissertation we have attempted a sociological analysis of the organisation and function of inspection, together with a psychological study of a group of floor inspectors.

The sociological discussion has shown that the organisation of a modern inspection department and the premises on which it is based are such as to be inherently likely to cause social friction. The psychological study has demonstrated that it is the attitudinal and human relations factors which appear to be the primary ones in the efficient performance of the floor inspector's job. It is clear that these two levels are related in a very intimate way.

Any social system must take into account the psychological needs

¹ This section owes very much to discussions with my senior colleague.

and attitudes of those who are in it. This may be done by gaining information on these needs beforehand and adjusting the system accordingly. But a modern factory organisation is set up with an entirely different purpose in mind, i.e. efficient manufacture, and ostensibly all other needs are subordinated to the logically most efficient way of working. If this way does not take into account the human needs (in terms of status, rights, and other acceptable manifestations of approval in the culture) then the organisation is short-lived, or it is considerably modified in the light of those needs (as for example, Taylor's system was), or palliative measures must be used to keep the system in being. These measures constitute the informal workings without which no formally 'efficient' organisation could function at all.

In the case of inspection the functional need of controlling the quality of the product has clashed with the human needs of the producers because of the criticism involved in making inspection judgements. From the psychological study it is apparent that the palliative measure needed in this case seems to be 'human relations' skills and attitudes. The inspector who has these can, it would seem, compensate for the friction involved in that human social needs were not considered when the organisation was set up.

It does seem possible then to make predictions from the sociological level to the psychological one, and to see changes at one level reflected in the other. For example, the organisational change in the Welsh factory was seen to have its repercussions in the more favourable attitude to production of inspectors there, as compared with those in Scotland, who are

otherwise in a similar position. Again the organisational fact that the London inspection department is enabled by its budget to accept charges and responsibilities which those in the other factories are not, is reflected in the greater involvement in production of inspectors there, as shown by their attitude to production, their own job descriptions, the parts of the job they liked best and so on.

Thus the psychological study does seem capable of extending the sociological one and making it more concrete. And this is what we have attempted in this dissertation.

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The Focused Interview.

The floor inspectors were interviewed in a private room. They were welcomed, the project was explained to them, and they were asked if they were willing to co-operate by being interviewed. Any questions about the project were answered.

They were then asked to fill in the job satisfaction questionnaire, and from then the interview took on a standard form. It is from this point that the interview reports (Appendix II) begin. The investigator asked the 13 main questions given below in order, and any supplementary ones that were felt to be necessary.

You are the floor inspector on (naming section)?

- A. Can you tell me in your own words what your job is and what you have to do?
- B. In general how do you like your job?
- C. What do you like most about it?
- D. What do you dislike most about it?
- E. Do you like it better than other jobs you have had?
- F. Have you ever thought of changing your job?
- G. How do you feel about working in Ayes as a firm?
- H. Considering your experience and training, do you think this job makes full use of your abilities?
- J. How do you get on with production?
- K. How do your mates think this job compares with other jobs?

- L. What do production think of inspection?
- M. Do you think that the rate for your job is fair compared with other jobs in the factory?
- N. Various biographical questions; How long have you been in Ayes?
How long have you been a floor inspector? etc.

The order of these questions was occasionally varied slightly, for the purpose of obtaining a smoother flow. Thus, for example, if an inspector gave an extremely dissatisfied answer to Question B, it was considered more suitable to ask Question D before Question C.

The biographical questions at the end, apart from obtaining and confirming information, served to bring the discussion to more concrete, less emotional and attitudinal topics, and thus to round the interview off at a suitable point in the relationship with the investigator.

APPENDIX II

The interview reports with the floor inspectors are here appended.

You are the floor inspector on the A.3 section? Yes. Can you tell me in your own words what your job is and what you have to do? My job is to see that production flows through at a steady pace and at the same time to see that the quality doesn't suffer through the hazards of the job. To report small mistakes so that they don't enlarge upon it and to try to train the operators to my way of working so that I feel if I'm pushed by a lot of hundred per cent checking I can rely on the operators turning out good work. Always contacting the line leader or foreman before and lastly going to the supervisor.

What sort of things do you go to the line leader about? Take the grinding section, an operator should submit just one to me for passing. If I find an operator grinding and current work is not satisfactory and a couple of trays are the same, then I contact the line leader. I listen to what he says and if I'm not satisfied I see my chargehand. If it's a small thing then I just tell the operator, but if it's more than that I always tell the section leader, or he (the section leader) will get rollicking and not know what it's about. In any case, whatever the cause the job stops.

In general how do you like your job? In general I do like the job. I have been at Ayes for twenty years and I've been on the present job for ten years. I can honestly say that there are a good many worse jobs about. As for the firm they have always been very fair with me. What do you like best about it? What I like about job is that you have always got somebody different to talk about the job to. You can see some of the fruits of your work bearing fruit at the present time. The job is clean.

What do you dislike most about it? Nothing really I dislike about the job - but like all jobs it does get a little boring at times. There's nothing really dislike about the job.

Do you like it better than other jobs you have had? Yes, definitely.

What other jobs have you had? Here I've been a viewer, testing M.I.'s, testing machines, goods inwards. In other firms I have been on assembly lines, been in the machine shop. And you prefer inspection? Now I do, yes. In inspection you do see more of the actual workings of engineering and you do get to know more and learn more, being say, a capstan operator is just the same old monotony.

Have you ever thought about changing your job? Not about leaving Ayes now. I did think about section leader of the F.P.I. But I decided to play safe when the personnel explained to me that the job might not run, as it was a new production just being tried out on the market.

Considering your experience and training do you think that the job makes full use of your abilities? Yes, I think so. The least little thing that crops up I take it up. I do like co-operation with production. I've really been told off about it by my own people for being too co-operative, but with Ayes you can't just say that a job stops, you have got to keep production going. Only through experience can you know whether a job will affect another part of the assembly. I like contacting other shops before it gets too far.

Are you your own boss? I don't get any interference, don't get the foreman or the section leader coming up unnecessarily, they are very fair about it. How do you get on with production? Very well. You may also get the ups and downs, but the average of that is very well. What sort of awkward things crop up? An operator will say "O.K., I'll get it out," if a Y10 is out, or another will say "What about it?". If I get that answer I just report it I don't stand arguing. The rules of the firm are that a floor inspector should not have any conversation with operators, but of course, there are times when you have just got to talk.

How do your mates think this job compares with other jobs? I've heard nobody run the job down. What about production? On my round the majority of my operators - I've got no grouse at all. We do get sarcastic remarks - "When are you going to do a day's work?" - and so on. But I don't think there's any harm in it. I don't mind it because I have been here and done my graft of bench work before the war. Of course, in an inspection job, if you want, you can make it really lazy. But I like to help if I can, although you have got to draw the line somewhere or work will deteriorate in the long run through leaning too much on you.

Do you think that the rate your job pays is fair compared with other jobs? Yes, it's fair. Not overpaid, but fair. What do you think about floor inspectors being on bonus? I think inspectors should have an incentive on their own. During the war viewers were getting output bonus which to my mind was all wrong.

Do you do very much hundred per centing? It varies. I didn't do so much these last two years as I have been doing. Now if I feel a job of work should not go through I generally get a viewer to do it. If one is not available we get stuck into it. How long have you been in Ayes? For nineteen years. I've been on inspection all the time. I became a floor inspector during the war in 1943. Before that I was in a wireless firm and I did capstan work.

You are generally the floor inspector on the M.I. section? Well, no, as a matter of fact I'm not. I'm a floating inspector. At the moment I'm on the M.I. section. I do two weeks on M.I., two weeks on F.P.I and then two weeks on nights covering everything. On nights you stand or fall by your own decisions, you are by yourself. There's a section leader on the M.I. floor, but otherwise you are in charge.

Taking the M.I. section for the moment, can you tell me in your own words what your job is, and what you have to do? Most of it is visual plug gauging. The big worry is outside parts from other parts of the factory. If you could see every part that goes on to your section you could get a better job.

Do you have a regular beat? You work your way through the line never doing the same thing twice. I've got a set little routine each time I visit a section I make a point of checking the one part right the way through. Some parts you must check all the time. We pay special attention to green labour.

Are you your own boss? I always like to be. I don't believe in going to the section leader unless I'm in real trouble. Is the arranging of your work up to you? I do it as it suits me, under general supervision. In general how do you like your job? I am very interested in inspection. I'd really like to get more into it, go to night school and so on, but I've got six kinds. I've been very lucky in Ayes with regards supervision helping me with knowledge. I do get books to read, but if I could knock off twenty years I could perhaps get on a bit more.

What do you like most about the job? The use of different instruments we handle. The satisfaction of proving the job is good. For example, if at the end of the week we have run all the time and not had a major reject, I feel good. I'm one of those who feel - we claim we make the world's best in our line of product, and I'd like to see it like that.

What do you dislike most about it? I don't think I've got a terrible dislike about it. I feel a bit frustrated sometimes if things don't go right, but it goes. I may be in a better position - I do get a variation. When I was up on final assembly there were lots of things that could go wrong, you just couldn't get bored.

Do you like it better than other jobs you have had? I've only had two jobs apart from the Army. The other job was a sugar refiner. I couldn't face going back there after demob.

Have you ever thought about changing your job? Yes, quite seriously.

I live at L- and the travelling gets me. That would be the only reason I would leave Aves. If you were looking for another job, what sort would it be? I would go into inspection definitely. How do you feel about working in Aves as a firm? They were a very good firm ten years ago. They are not quite so good these days. Their attitude has changed, but it's as good as most. How has it changed? Their staff relations have gone down in small things. For example, draughts and so on. You see, in the old days you could see a Works Manager down on his knees trying to figure out how to deal with it. Now as you know the boys had to walk out on Monday morning.

Considering your experience and training, do you think this job makes full use of your abilities? Yes, I think so. How do you get on with production? Pretty well. The odd one always wants to argue. What sort of things do they argue about? I don't think any operator likes being told the job's wrong, especially if it's going to hurt his pocket. Some take the philosophical view, some want to argue. We are always prepared to see if there is some way we can use it. There are the odd people who always take exception to the inspector.

How do your mates think the job of inspector compares with other jobs?

Viewers always think that repetitive work is a bit soul-destroying. Most floor inspectors get their fits of depression. How about operators? We are always ribbed about the job. "It's easy". That's the general attitude, but I always think the more intelligent the operator, the more he tends to use inspection. I don't get many operators bringing something in front of me and saying "There's something wrong here. I can't get it out". I prefer that.

Do you think that the rate your job pays is fair compared with other jobs? No. Why not? You've got your brains, and you've got to shoulder quite a bit of responsibility. What about floor inspectors being on bonus? I think there's a danger in the bonus scheme. I always feel an inspector should be above the bonus scheme. It might tend to lower the standard of the work.

How long have you been in Aves? Ten years. I came as a packer inspector, was then a viewer, then a line leader viewer, and I've been a floor inspector for eight or nine months.

You are the floor inspector on the 417? Yes. Can you tell me in your own words what your job is and what you have to do? My main job is to stop faulty assembly, to keep scrap down to a minimum. The other work is that the orders we get from various countries that we build the product according to what is laid down on the drawing.

Do you have a regular beat? Oh yes. Really, it's an irregular beat. I choose my own time. If the operator knew I was coming at a certain time he would turn out good work then. I'm liable to come at any time. What do you look for? Well, welding and check that it is good, that the position is correct - you use gauges for that - it's a percentage check. Then there's the enamelling. You check the oven temperature, you see that the colour is the same as laid down by the lab, you check that the various rivetings are correct, that the sub-assembly is correct, that the connections are correctly connected up, you see that the different specifications for different countries are correctly assembled. The piece parts should officially come up on the floor all right, but human nature as it is, I check on them all. Downstairs I check on our own inspection viewers that they are keeping to the correct standards (downstairs is where the product is finally inspected and packed). I check any special order or contract. If I see at the end of a line too many rejects of one type of fault I report to the line leader to see that it's corrected.

Are you your own boss? In as far as my job is concerned I am. If I say something it has to go, unless downstairs go against me. I can go to the supervisor to stop the job and he can do nothing about it. But I'm responsible to my immediate supervisor. Do they give you pretty much of a free hand? Oh yes, as far as work is concerned. In general, how do you like your job? I like it very well. Sometimes I get browned off, but in the main I like the job very well. What do you like most about it? The conditions of work and the people I work with. What conditions? They are reasonably good, don't get mucked about - we are more or less left alone. The people I work with are pretty considerate and are reasonably people to work with - production people.

What do you dislike most about it? Periodically I get frivolous complaints, people who can't make up their own minds, unnecessary work sometimes. I do a spot check on the five lines of stuff coming on to the floor. It gets me if I have to send it off the floor if it's supposed to be good. And there are other things. What sort of things? The chap on the oven knows the standard, and comes down to ask me if it will go. A person will call you in if something is wrong instead of calling in their chargehand or supervisor, which is unnecessary. That's not very many - about four out of about fifty.

Do you like this better than other jobs you have had? Oh yes, I've had a few. What kind of jobs? I came to England in '38. I worked in building, bar work, club waiter, and I was in the army for five years, and I've been a foundry operator. I've always been on inspection in Ayes, and I've been in Ayes for nine years. A viewer for seven years. Do you prefer being an inspector to being an operator? Oh yes. Why? If I was an operator I would get bored doing the same thing continuously.

Have you ever thought about changing your job? No, except improving it. In inspection? Yes. How do you feel about working in Ayes as a firm? Very good. Very good firm. Best I've ever worked for anyhow. Considering your experience and training, do you think that this job makes full use of your abilities? Yes, as far as the present job is concerned, yes. Whereas there are higher grades of inspection, standards room, I don't know if I would be fit for it.

How do you get on with production? Very well. Sometimes now and again we have a tiff, but on the main we get on very good. What sort of things do you have tiffs about? If I stop a job there would be a lot of arguing why I stopped it. They would try to get it started up again, or I reject piece parts and they think it's unnecessary and they take it further to get it passed, which they very rarely do. Take it further to whom? The supervisor of inspection. Does he generally back you up? Yes, invariably does.

How do your mates think this job of inspection compares with other jobs? Some have their grouses and grumbles, but in the main they like the job. And the operators? I've heard complaints when the inspector goes off his own floor to another job and has been ordered off the floor. It has never happened to me. And the operators on your own line? I get along very good with them. Most of the grouching from them is about a bad piece part. What do they think of inspection? To hear them talk they don't like inspection. But the minute inspection is taken away from them they start shouting for inspection.

Do you think that the rate your job pays is fair compared with other jobs? Yes. What about floor inspectors being on bonus? I disagree with that. I think the quality of work would deteriorate if it was paid on the basis of output.

How long have you been in Ayes? About nine years. I came as a viewer. I sat for the exam. for the floor inspector and passed it the second time.

Why did you put that you disagree that you are satisfied with your job for the time being? I'm satisfied, not for the time being, but as a job.

(L4 had a minor epileptic fit on the way down. Apparently he is subject to these).

You are the floor inspector on the M.I. section? Yes. I used to be on the ground floor, but after the trouble that I had I was transferred on to this floor, owing to the heavy machinery there. The hospital said there would be no danger whatsoever for my being on the machine floor, but the Works Doctor would not allow it. (He told, in some detail, how various letters were sent between them.)

Why did you prefer the machine shop? I was given the opportunity to become a floor inspector after an exam and a vacancy occurred down there. I was doing the viewing of very small pieces in Goods Inwards as floor inspector and I didn't like that. Then I was given the job of floor inspector on the M.I. I work near heavy machinery anyway on nights, because then I cover three floors. It's interesting that I have far less attacks, if any, when I am on night work.

Could you tell me in your own words what your job is and what you have to do? You go along the lines and look for piece parts made in the machine shop and do a percentage check. We've just had a job on hand just before I saw you. You might find some screws undersize. You take them away, but you try not to stop the line if you can. You watch for assembly faults. Whether riveting causes cracked cases, or bad moulding is the cause. Right up until the whole thing is completed you see what you can find wrong with it yourself. The other line works on the same principle. Bearings we cover, we check up on the sub-assembled, if not correct the whole thing must be stripped down. Just before I saw you, bale shafts caused a lot of trouble. A bale shaft might go right the way through without an operator knowing and the whole thing has to be stripped down. The chap from the machine shop said "Well, can't you have it do this, that and the other?" I said "Well, we've had it long enough, we want somebody to do a hundred per cent." But who is this chap you go to from the machine shop? He's a production chap. A chargehand setter sent him up to hundred per cent. The chargehand had to send him up. Do you often get things like this? You get them one week, one thing after another for about three days, and the rest of the week there won't be a thing wrong.

Do you have a regular beat? I have a certain beat to cover, but I don't make a point of going to a particular thing at a particular times. Because if they know I'm coming at 10 o'clock they may keep an eye on it, so they don't know when you are coming round so they are not prepared for you with their work. How many times a day do you get round? Approximately five times a day, but on a job with a bit trouble, you would go six times and skip something that is going well.

In general how do you like your job? I do like my job. What do you like best about it? It's the variation. You are not doing the same thing over and over again. You get different trouble, you try to find the root of the cause. I can't think of anything else on that point.

What do you dislike most about it? There's one point which to my view are a waste of time - the report sheets. The time that's wasted on the paper could be used on the line to prevent bad work going through. Sometimes you get a foreman coming asking for report sheets. I said "Blast the sheets; they can be done when the work is rectified."

Do you like it better than other jobs you have had? Yes. What other jobs have you had? I came here during the war. I was on viewing, then testing. That was interesting on the electrical side. Then I went on to armature testing. Then the section leader suggested that I go in for the Floor Inspection examination, so I took this course in inspection engineering. Where was this? It was an I.C.S. course. Before the course as regards Maths I was a dead loss, but it has helped me terrifically.

Have you had any other jobs besides inspection? When I left school I went to S- on hand block printing, wallpaper, patterns and things. Then there was the war and I went to R-, checking bottle necks. That didn't suit me at all, then I came to Ayes on viewing.

Have you ever thought about changing your job? Not from inspection. I feel that the time I've spent in punching up on the course would be a sheer waste of time if I went out. How do you feel about working in Ayes as a firm? Everybody has their grouses here and there, but I'm satisfied. You couldn't wish for better conditions. We have differences of opinion here, we have meetings and if the majority decide not to do so and so, we stick by the majority.

Considering your experience and training do you think this job makes full use of your abilities? There are points for and points against. There are, say, 70 pieces that I might reject. People, other than me, may say that just because there is a large number they might let them go. I disagree with that. A thing is either right or wrong. People say "They won't see that, let it go." I work on the principle that I like to see the job turned out as I would like to buy it. That is only in exceptional cases, of course. (Repeat question). When I was in that machine shop I know from experience that that is down so and so and I know where to go, and what the cause of it is because I have been on the job. I am able to fill in, if someone is away ill, on testing.

How do you get on with production? On the whole I get on with them very well. You get one or two people who try to belittle you in front of operators, which I think is a bad thing. Other than that on the whole I never

really bear a grudge against anybody. I can take a joke. If they like to take the micky I don't mind. The lines I am on now I get on with them very well. I get on well with the chaps I was with downstairs.

How do your mates think this job compares with other jobs? There's a lot of fuss been made up just lately. I'm not in a position to speak for them. The others - well, night work has been the biggest grudge for some of them. And production? They might say "Oh, here it comes again", but not being nasty - but just as a joke. Do the operators think that the floor inspector is a better job? They think we don't warrant our money. The way they look at inspection - they feel it if you are going to stop their job because they lose bonus over it. Do you think that operators would prefer to be inspectors? Some say "I don't know how you get these cushy jobs". I tell them "why don't you take it, there's apprenticeships?" They say "Don't you get bored, doing nothing?" And they say "Doesn't your hand shake on Friday when you get your pay packet?" Things like that. You tell them "if I don't do it, somebody else would." I find I'm still learning on the job and taking course.

Do you think that the rate your job pays is fair compared with other jobs? We take into consideration the bonus rates for viewers. Some of the viewers can earn more than a floor inspector does, but we want floor inspectors to come under the skilled job, but the differential is practically nil now. If we just took our time and didn't do certain things everybody would lose bonus.

What about floor inspectors being on bonus? I haven't really thought about it. I haven't delved into it. It could be worked. Viewers get a certain per cent of the line's bonus. Each time a Floor Inspector stops his line, the bonus will go down, so that is one reason for it.

How long have you been in Aves? About 15 years, always on inspection.

You are the floor inspector on assembly? Yes. Can you tell me in your own words what your job is and what you have to do? To walk round, to attempt to stop rejects before being built. In short, trouble finding before it builds up. Any trouble - to rectify and find the cause of it. Do you have a regular beat? Yes. How long? Very hard to say. I'm supposed to get round at least twice a day, but that is controlled by the amount of trouble found on the section. What sort of trouble? Bad assembly, bad rivetting, drilling, bad parts, bad sub-assembly from other floors. What do you have to do about it? If I come up against trouble on the line I get in touch with the line leader or chargehand concerned. Do you always go to the section leader? Yes, in case of trouble holding up the floor. I see that they rectify the job concerned and mustn't run until I give the O.K. If I get no satisfaction I notify my chargehand. In regard to the other floors I have to find the cause of the trouble. If I can prove it's not my trouble I hand it over to the chargehand concerned via the floor inspector. Do you get any arguments? No, the chap on the job generally criticises that you are being too fussy. But they are on bonus. But in regard to the chargehand and foreman I can say no.

In general how do you like your job? I enjoy it very much. What do you like best about it? I like most the knowledge that when something goes wrong you can use your instruments and drawings to keep yourself up to date and find out the cause of the trouble. What do you dislike most about the job? I wouldn't say that I dislike anything about the job. Do you like it better than other jobs you have had? Yes. What other jobs have you had? Before that I was a line leader on the inspection department, and just an ordinary inspector before that. I have always been an inspector here. Before that I was a machine tool setter. Do you prefer this to that? Yes, definitely. I left that job to take over an inspection job here. Why? Very hard to say. I worked at D- for 15 years. I packed that up because of the travelling, every day. Were you looking for another type of job? I was looking for another type of place to work at. The Labour Exchange sent me here.

Did you serve an apprenticeship? No. Have you had any other jobs? I can't honestly remember much about them. Have you ever thought about changing your job? No. You wouldn't like to go back to production, say? No, definitely I wouldn't.

How do you feel about working in Aves as a firm? I could only judge on two firms. Ayes and the place before that. Ayes is a vast improvement but there are still improvements that they could still do, but cleanliness and facilities are a hundred per cent better off than the last place.

Considering your experience and training do you think this job makes full use of your abilities? In my job, yes, I think that I have full scope to do what I want to do. How do you get on with production? I have always got on

very well indeed, one or two small and minor arguments, but serious arguments - very well indeed. No trouble. How do your mates think this job compares with other jobs? They don't feel so bad about the job as a whole. What do the operators think? A certain number are very dissatisfied. Why? There's a bonus pressure and so on, some would prefer to work on flat rate. Would any prefer being inspectors? Not many.

Do you think that the rate your job pays is fair compared with other jobs? Yes, in comparison with other jobs in the factory. What do you think about floor inspectors being on bonus? I think it's a good idea with a viewer, on the system they are working at the moment. And for floor inspectors? I think it would be too dangerous for any firm.

How long have you been in Aves? Ten years. I started as a viewer, but they did away with that and I then became a line leader of the viewers, and I have been a floor inspector for about three or four months.

You are the floor inspector on the metal finishing section? Yes.

Can you tell me in your own words what your job is, and what you have to do? Our job is to maintain a standard of finish for all components. It's also part of our job to test certain items of plating for thickness, and that also applies to enamels. We also cover spot welding.

How do you see that the standard is maintained? The standard of welding is checked by visual and by destructive tests, we also cover the polishing department. Is most of the work visual? Yes. It's just a question of knowing the standards set up by the company and working to them. You must know the subsequent finish required.

Is it difficult to set a standard of finish? When the job is just started it's time studied and we already know what finish is required. We send the pieces to our supervision and we get it back if the work is O.K. to that standard, and we work up to that standard right the way through.

How do you keep the standard up? The standard had definitely gone up in finishing since the 417 came. It has right nickel and chrome parts. At the outset the standard was low. But we built up the operators to give a good standard as they got used to the job. How did they react to having the standard pushed up? They didn't know it, that's psychology. We did it by building up knowledge - pep talks, you know - if I was to show them the standard now - well I wouldn't do it.

In general how do you like your job? I think it's the most wonderful job I ever had. I've always been very, very happy here. I've encouraged a lot of people to come here. My brother, my brother-in-law and my wife. Most people might think I live for my job. I like the work, I like this particular section, it's ever changing, keeps you on your toes.

What do you like best about it? I think working on your own. Working out problems on your own. You haven't got supervision running after you all the time. A fast moving section gives plenty of scope for a chap with initiative.

What do you dislike most about it? Of course, I don't like night work. How often do you have to do it? Fortnight about. It's really my wife who doesn't like that, but she knows that I'm happy here on this section, so she puts up with it. Do you like it better than other jobs you have had? I've only worked here after coming out of the army. I've always been on inspection. In the army I was a Warrant Officer Inspector. Were you always a floor inspector? I started as a viewer and I've been on other sections, mostly assembly. Do you prefer this one? If I was given a choice, yes. There's so much there - a lot of meat, something you can get stuck into. You can look into the shops and see the machines going.

Have you ever thought about changing your job? No. Have you worked in any other firm? Before the war for a few months as a viewer elsewhere.

Considering your experience and training do you think the job makes full use of your abilities? I was a Warrant Officer in the army. We all want promotion. I'm getting to the age where I must start thinking about it. This is a marvellous firm - the conditions are marvellous, our bosses are out of this world, not the boss attitude. In the army were you in charge of people? Thousands. It was native labour. Actually I was in the Indian Army, not the British, and I was concerned with arsenals in India. I must have a job that I can like. I did then and I do now.

How do you get on with production? Extremely well. No troubles. Do you have a lot to do with them? A lot. What about? Standards. What do you say? Well, the sort of tie up I have is an inter-marriage of ideas for the improvement of the job. It's mostly standards and also efficiency.

You are concerned with efficiency, too? Yes, it concerns us all, we are all tied up with that. Every pound we can save this firm we are putting ourselves in a better position for future employment.

How do your mates think this job compares with other jobs? You mean the other chap on this section. I don't know, he's been here so much longer. And the other inspectors? None as keen on it as I am, but they're generally keen. And operators? Taking the metal finishing department they find us very useful. If we can put them right and they don't get work thrown back at them, they like it. They have got a healthy respect for the department. We get on pretty well with them.

Do you think that the rate your job pays is fair as compared with other jobs? Yes. What about floor inspectors being on bonus? I don't believe in it. I think the standards will suffer. I think it would encourage bad work to go through. We shouldn't get tied up with production, we're a separate department. We shouldn't get tied up with production.

How long have you been in Aves? Nine years. Started as a viewer, been a floor inspector for about five years and on metal finishing for about three years.

You are the floor inspector on the metal finishing section? Yes.

Can you tell me in your own words what your job is and what you have to do?

On metal finishing it's polishing, plating and part spray finishing. In polishing we cover scurfing. What are you there for? I make sure that they do their operations and that the job is done properly. I also make a check for deposit for colour, staining and for general polishing. In general, I don't do the hundred per cent work.

In general how do you like your job? I am fairly satisfied. Like everything else we have our dissatisfied moments. There could be great deal of improvement. What sort? If supervision was to come down with us more. They don't come down and you may have a lot of trouble and you have to thrash it out on your own.

Do you have a regular beat? I have, yes. I must keep it up, or the job goes wrong. How long does it take? We estimate about an hour. Do you have much to do with the man on night shift? I have a close contact with him, by the book which we fill in and by coming in a bit early in the morning so that we can have a chat for a few minutes.

Are you your own boss? More or less. I think that's the job. If a floor inspector can't do his job, he is not a floor inspector. If you are not your own boss, you are not a floor inspector.

What do you like most about the job? Being on the job a number of years, knowing my job and being able to assist operators, to help them. Somebody will say "Can I do this" "can I do that", and I can help them.

What do you dislike most about it? At the present moment my dislike is night work. I really detest it. I think these factories should be stopped from doing it. I have done it for twenty years for the firm on and off, and I think it's time it should be stopped. Anything apart from that? A general worry to a man as an inspector is when he gets awkward operators who do not have proper supervision. I went to hospital a little while ago with mouth ulcers. They reckon it's worry. I reckon it's the night work. Floor inspector is a very worrying job. You have got to worry how to tackle the operator, and how to get the job put right. Because a factory is concerned with production from a psychological point of view, so floor inspection is a very worrying job.

Do you like it better than other jobs you have had? Yes, it sort of has something. Probably the casualness, the friendliness, I don't know. As regards most other jobs I should prefer it. I left my other job during the war on the machine to come to this. Of course, with a firm like this you feel you are doing a capable job.

What other jobs have you done? For the last twenty years I have been on inspection, but during the war I was put on the milling and I did that for three and a half years. I could do that, but I feel that here I'm satisfying the firm and myself. But I could go back to milling and probably get more money after a few weeks. There's a certain amount of lassitude on a floor inspector's job holds you.

Have you ever thought of changing it? Very seriously for the last few months. If I don't get off night work I shall have to. I would like to go back to electro-plating, but with my age I shall have to go back to inspection. Is it just the night work that's the trouble? Yes, I'm not dissatisfied as regards the job itself.

Considering your experience and training do you think this job makes full use of your abilities? In most respects, yes. Most of my experience is fully stretched out on the job. Yes. How do you feel about working in Aves as a firm? The firm is very good in itself, but the individuals are not always very good. In what way? The old Managing Director tried to create an Aye happy family, but it's not always so by the time it gets down to the workers. For example, on the merit rating scheme a man under you may get more than you. Or the man in charge of men, my section leader, knows much less about the job than me. This should not happen from the start - although he is a very nice man.

How do you get on with production? That, from my experience, is difficult. The inspector is a stool pigeon for everybody. He treads on everybody's toes. I've heard a lot of them say they get on all right, but do they? You are always a source of worry and trouble to them.

What about your own section? You're more a stool pigeon there than anywhere else. You've got a lot of viewing. An operator may say "I think it's good enough this way", you say "no". I don't think supervision realises this. Over what sort of things do you have this argument? Finishing and products that are ... This is concerned with subjective judgement? Yes, that's true, putting it that way. A lot of work is just waiting to go out when the one o'clock van comes, and you are the one they are waiting for.

How do your mates think this job compares with other jobs? They feel the job is all right, the supervision could give them something. The operators? They always think they're hard done by. Got very little interest in the job and inspection. They think it's here just to make the number up. They have very little time for inspection. They treat him worse than the supervision. They sometimes hate the sight of them. I think the inspectors ought to have more money than supervision in that respect.

Do you think that the rate your job pays is fair compared with other jobs?

Very low. It's being debated now. What about floor inspectors being on bonus?
I agree with it. I think it could very well be done.

How long have you been in Aves? Twenty years. I was away six years during the war. I started same as now - a floor inspector on metal finishing.

What were you doing before? I was doing electro-plating. I gave it up. I'd heard quite a lot of bad reports about the health, and I decided to give it up. I started about 18 at electro-plating, stayed until I was about 21, then came into inspection.

You say here that you strongly agree that you consider your job rather unpleasant, how is that? You are a floor inspector, and you come up against these operators, unless you can get an operator who is covered down by his supervision, it can be very worrying. You can fetch the production supervisor in, but they don't like to tell the operator off.

You are the floor inspector on the switches section? Yes. Can you tell me in your own words what your job is and what you have to do? The job of any floor inspector is to see that good work is turned out. What do you do? I make sure that all the piece parts are correct. You've got to use discretion on the job. It's simple enough for a floor inspector to stop the job, but he has got to know why. He should know the way to overcome the trouble.

Do you have a regular beat? Yes. How long does it take you to get round? Normally it should be an hour, excluding the time for queries, to keep the job tied down. What sort of queries? All dimensional questions. Things going out of drawing? Yes. Oversize, undersize, ovality and so on. The point is that on final assembly you get piece parts from the machine shop. They probably make a 10 per cent check and they find about 5 per cent rejects and pass it. But when you get on the floor you might find 15 per cent, so the floor inspector proceeds to get the job one hundred per cented. Do you have to check all the stuff? Not all, but I usually do a batch check myself. On the P.S.1 switch it's more like building a watch, you can't afford to take any chances, it can do so much damage.

In general how do you like your job? The answer is simply that I have been 20 years here. Has that always been on inspection? I was a chargehand for 18 years on inspection in the machine shop. Then owing to ill health I was away for 15 months. I want to be a section leader again now that I'm fit. My whole life has been concerned with organisation. I'm organising the children's party, as you might have heard up there. I'm a member of A.B.A., a referee, judge, and so on. How long have you been in Aves? Just over 20 years. Before I was a chargehand in charge of the final inspection I was a floor inspector. How long were you a floor inspector? Four or five years. I could have ... There are certain individuals in this department that don't see eye to eye with me. I'm probably just a little outspoken for the higher ups in our department.

What do you like best about the job? I think it's interesting, it's always ever-changing. Different queries and different things are cropping up. It can be very interesting, but it can be very boring if you let it. It's up to the individual. What about a production job? Oh yes. The chargehand there, if the production is in trouble the first one they come to is me. The floor inspector, if he is on the job, should have the answers. You think he should know more than the operators? Oh yes, floor inspection is a technical job, but the operator doesn't need to be a technician. When I served my time I had to make piece parts by hand, now they don't. Floor inspectors should know more than anybody else. You served an apprenticeship? Yes, to C-

What do you dislike most about the job? It's a hard point. Dislike isn't the word. The word is more aggravate. The things that aggravate are these. You probably find a job wrong, you go to your supervisor and they override you. The majority of the floor inspectors are of the same opinion. More frustration is the word really. Do you like it better than other jobs you have had? The answer is in the length of service. Have you ever thought about changing it? Many times. With me, I don't like to be beaten. I'm a floor inspector, but I want to get back and I want to sit in the Chief Inspector's chair. I hope it will be very soon. As far as this firm goes they looked after me very well. Before the war it was a pleasure to come to work, but now the managers, or rather the people under them, are different.

Considering your experience and training do you think this job makes full use of your abilities? Certainly not. How do you get on with production? Very amicably. If there's any question they just come to me. No matter through the factory, from top to bottom, though I wouldn't say that you are liked by the people, they know that they will always get a fair deal. On the whole, we get on pretty well, I have never had any complaints. There again, psychology comes into it. I always think a floor inspector ought to have a spell through psychology, ought to be psychologists.

How do your mates think this job compares with other jobs in the factory? It's a job to them that's all. You've got to work to live. Do production people prefer this job? They are on a tedious job, because they are doing nothing more than putting in two screws day in and day out. When you look at some of their faces there's a complete blank.

Do you think that the rate your job pays is fair compared with other jobs? No, because we have got more responsibility. After all, if the floor inspector fails there could be thousands of pounds worth of scrap.

What about floor inspectors being on bonus? I've seen it happen. I can give an instance. On George V Jubilee they gave the inspection an output bonus and what went through is nobody's business. No, give them a wage according to their responsibility.

You are the floor inspector on the F.P.I? Yes. Can you tell me in your own words what your job is and what you have to do? (No Answer).
Do you have a regular beat? Not in rotation. They get to know when you are coming round otherwise, and they would just automatically reserve one or two special castings, and you'd see that every time. I make it spasmodic so that whatever you are picking up is being machined at the present time.

In general how do you like your job? Engineering always has appealed to me, if it didn't I'd have got out of it, wouldn't I? Does inspection specially appeal to you? I have done the machining side for 15 years and every inspector should have some background of machining. What sort of machining did you do? I was a setter, then a chargehand and then a foreman. Then you changed over to inspection? Yes. You have always been an inspector in Aves? Yes.

What do you like best about your job? Well, the point I like about it is it's not a thing that's stabilised, it varies from day to day. What do you dislike most about it? Nothing at all. Do you like it better than other jobs you have had? On the whole I would say so, it was average. What jobs did you prefer? When I was on my own. What about other factory jobs? I did like on the machining side, but the war period near enough finished me off. I was doing 17 hours a night with one night off a month. I'd actually seen enough of machining after that. So it was after the war I decided I could put my knowledge to better advantage to other people by going over to inspection.

Have you ever thought about changing your job? Unless something better occurred, not really, no. I live locally, the conditions of work and everything are satisfactory. The factory is clean, and what more do you want? You can get some dirty ones still. How do you feel about working in Aves as a firm? Quite satisfactory compared with others. But can you compare a factory of 10 or 12 years ago with the conditions of to-day? You can't really. There's a big improvement which everybody expects.

Considering your experience and training do you think this job makes full use of your abilities? No. What sort of abilities are not being used? For instance, say you pick up a job that's wrong, I could say where it's wrong and how it's wrong, but I'm not allowed to voice my opinion, otherwise you would be telling him his job. But I may be an exceptional case as an inspector because of my past knowledge.

How do you get on with production? That all depends. If you are stopping a man earning his money by rejecting his job, he is not going to like you very much. It all boils down to the individual, who you are really dealing with. You get one individual who is very conscientious, wants to do a perfect job, another is more or less slap happy and he doesn't like you when you reject his work. Generally they don't like us. We only have to go around picking faults with their job. I know how I felt when an inspector used to turf my stuff out.

How do your mates think the job of inspection compares with others?

I wouldn't like to pass an opinion. You hear so many different versions. And the operators? If they had the knowledge they would probably be inspectors. I'm classing it that inspectors are a higher grade than operators, which in my opinion is only natural.

Do you think that the rate your job pays is fair compared with other jobs?

You could always do with more. Basing it on my knowledge you could have a bit more for the job you have to do, the responsibility, you can't go around looking like a dustman. What about floor inspectors being on bonus? It just couldn't be worked. How would you base an incentive bonus? How could it possibly be worked? You would be going away from your job just to get your incentive bonus. Now you're unbiased.

How long have you been in Aves? Two years. I came as a floor

inspector. Before that I was six years on my own, and I've spent twelve and a half years on the machine on the production side before that.

You are the floor inspector on the B.2 section? Well, I cover the B.2 and the A.3 winding, the 417 winding and the carton assembly. Can you tell me in your own words what your job is and what you have to do? Take one section, the B.2 section. I would start and pick out a particular model and I will follow it through from the first operation to the last. Do you want the details of what we have to do? You would go round to see that it's done correctly? We see that it's working to the method laid down from the point of view of finishing and appearance. I look to see how these products come in, and I've got to see that everything is straight and in the right place. Does this apply to all your work? Generally speaking we see that the operator works to methods and standards. That's pretty general, you could apply that to anything.

Do you have a regular beat? Yes, but it doesn't work out. Being on the B.2 section you always get diversions. You might be called off to see something - you could not work a complete hour. It might be a morning. How often do you go round? Theoretically for the size of my section I should get round maybe about six times a day. But I don't. In practice if I get round three or four times a day, I'm lucky. I'm given a fairly big section, you see. The rest of the time is filled in with seeing people, checking back, and keeping coming back to a bad job. As I told an operator to-day, as long as I keep coming back for a job, it's a sign that I'm not satisfied with it.

In general how do you like your job? I don't dislike it. I like doing it. What do you like most about it? The variety of it all. Thinking in terms of somebody doing a thing all the time. Are you your own boss? Yes. We've got a supervisor but unless he is called in because I can't handle the trouble ... In deciding my own job I'm my own boss. He doesn't interfere and he is there when I do want him. Like when I keep checking back to a job it was because I was not satisfied. If my section leader kept checking it, it was a sign that he didn't trust me.

What do you dislike most about the job? It's hard to detail. I can't pinpoint anything. Would this answer? Mild complacency, you see certain things which should be done but they are not. Is there anything about your own job you dislike? No. We floor inspectors clock in. Should it be a higher grade? At the moment our pay is not in excess of theirs. Our job should be a grade higher than theirs.

Do you like it better than other jobs you have had? Well, I've been a supervisor and I preferred that. I came off it for health reasons. I was three and a half years in a Sanatorium. Before the war I was an assembler, I prefer this job to that. I used to do the supervisory work in inspection being an inspection foreman then a superintendent at a branch factory with Ayes. Have you ever thought about changing your job? I would only change for up-grading in the job I'm doing.

How do you feel about working in Aves as a firm? When I compare it with others it compares favourably with any others. I would rather be here. Considering your experience and training do you think this job makes full use of your abilities? No, I would not say that, considering I have been a supervisor. What of your experience is not being used? My supervisory experience from 1941-48. I have also had experience of other forms of inspection, machine shop work, goods inwards inspection and so on.

How do you get on with production? Generally speaking I get on all right with them - to my own satisfaction, not necessarily to theirs. I'm firm with them and they know that. What do you have to do with them? I might tell the section leader to draw their attention to faulty work being done, or change in methods and ask them to get it put right. If the production supervisor didn't agree with me I would notify my own supervisor.

How do your mates think this job compares with other jobs? The only thing is the grade of the job and the wage of the job. We only earn on a par with a good operator. I wouldn't say we earn less, but we have to know about a large number of jobs.

Do you think that the rate your job pays is fair compared with other jobs? No. What do you think about floor inspectors being on bonus? You couldn't apply it, because of the difficulty of where the inspector is half the day.

How long have you been in Aves? Eighteen years. I was supervising for eight years and I have been ill for three and a half years since then.

You are the floor inspector on the bakelite section? Yes. Can you tell me in your own words what your job is and what you have to do? We do a routine check of parts produced by all machines. That is visual checks, dimensional checks, gauge checks, clocking, run out of threads in parts that are tapped. What do you do if something is wrong? If there is a serious fault, work is stopped at once and is 100% inspected. If it is slight you would not stop it.

In general how do you like your job? It's a job. I wouldn't put it more than that. Before the War I was in charge of a Goods Inwards Inspection and coming back to a routine job is a ... well, you know what I mean. I wouldn't exactly say a come-down, but ...

What do you like best about it? It's got the advantage that it's a clean job; there is less noise on the bakelite as a section than most others in the factory, and it is at least as interesting as any other routine inspection in the factory.

What do you dislike most about it? Shift work has advantages and disadvantages. Two out of three weeks you lose your evenings. There is an irregular number of hours worked each week which gives you a very irregular amount of pay. And the job is limited in its scope. Do you like it better than other jobs you have had? Difficult to say. I went into the Army in '43. I was on totally different work in the army on Radio VHF - a Section Sergeant in Burma. It makes it difficult because conditions in post-war factories are so different from pre-war. I was in charge of Goods Inwards but it was a nightmare really. Undoubtedly, conditions generally are better, very much better, than pre-war.

Have you ever thought about changing your job? Yes. For what sort of thing? If I did change it would be a job where I could get a better job on inspection - higher rank. But my age is beginning to tell against me now.

How do you feel about working in Aves as a firm? Aves as a firm is very good. Among the best for working conditions. I'm a shop steward. Considering experience and training do you think this job makes full use of your abilities? No. What experience is not being used? I've had a lot of experience in supervisory work; section sergeant, in charge of goods inwards, and also my sheer inspection knowledge alone is greater than is required for the job.

How do you get on with production? Quite well. What do you have to do with them? If the job is wrong you've got to convince them that the job is wrong. You've got to have good relations. There are times when we are at loggerheads but not as a general picture. When are you at loggerheads? If they refuse

to stop a job - I must report to my superiors and that does create ill feeling, whether you're upheld or not.

How do your mates think this job compares with other jobs? All other jobs are bonus jobs, and it's rather difficult to draw a comparison. I think that almost without exception inspectors would prefer to be on inspection rather than working to a time limit. Do you think that operatives would prefer to be inspectors? I wouldn't like to say. Some would and some wouldn't. A floor inspector is working on his own - using his initiative. He can decide whether a job should be looked at once every three hours or one hour. Inspection is all right if everything goes all right.

Do you think that the rate your job pays is fair compared with other jobs? Yes. How long have you been in Aves? 9 years. I came as an inspector; I've been on every job on the machine shop floor. I served my apprenticeship with F-'s in the machine shop - unindentured. Then I went on to jig and tool maintenance. In 1939 I became an AID approved inspector and I've been on it ever since.

You are the floor inspector on the bakelite section? I do other work on night work. I cover three departments then. I came here as an electrical inspector on the motor floor first. During the war I had a supervisory position on an outside factory. The Managing Director was Area Controller, and we had other factories which we controlled. I was in charge of inspection at S-. At the end of the war I came back and was asked to take over the tube section which was just started. I have been around on all sections of the machine shop.

Can you tell me in your own words what your job is and what you have to do? Primarily, my job is to keep up the standard of work, as near perfection as possible, and to keep within the limits of assembly, so that it will assemble; to see that drawings are complied with, to see that dimensions are maintained, taking into consideration the shrinkage which is controlled by a number of things, for example, the pre-heating of the mould.

Are you your own boss? Yes, in so far as I can decide whether a job can run or doesn't. If in doubt, I can go to my chief, but most of the time nobody is there, as I am on shift work. If there is a reject, what do you do? Usually I know what to do myself. I go to the moulder and I try to tell him, if he doesn't know, what to do. If I can't do that I go to the chargehand.

In general how do you like your job? I like it, I think I do. Speaking for me personally, I'm frustrated because I was on my way up, but was stopped by your class - the university trained - I trained people from university who became my boss. That happened when I worked in C- R-, for example. I was a bright young man wanting promotion, and originally I was told I was too young for it. Then the policy changed and about ten years ago I began to be told that I was too old. I think it is a change in policy. I've got three sons and they have not been impeded in that manner.

How do you like the actual job of floor inspector? I think a floor inspector is the vital man on the engineering floor. He is the man who has the responsibility of keeping up standards and egging on production, but he doesn't get any of the credit. The foreman gets the credit for production, the foreman inspector gets the credit for standards, but if anything goes wrong, it's the boy they go straight back to and blame.

What do you like most about the job? Shift work. It gives me a little time to follow out some of my home interests. Of course, you always miss evenings two weeks out of three, but you have time to do a bit of gardening and motoring. The job itself - I do like an article to be good. I take a pride in it. I like to educate the men to take a pride in their work. If I do that, then I'm pleased. I'm very pleased if I discover a fault early enough to prevent bigger faults.

What do you dislike most about it? The sameness. Year in, and year out. This sort of thing comes with standardising production. I look forward to a new model, but when we are running out we get the same thing day after day. It's not surprising in a way we get bored. I don't want to put myself on a higher plain than other people I'm working with, but they're told exactly what to do, they're naturally on a lower plain. I sometimes want an intelligent conversation and I look round and there isn't anything. If you know any man from the shop and his subject is either football, sex or racing, then you know that you can't talk about gardening, carpentry or motoring. That's one of the things I miss.

Do you like it better than other jobs you have had? I think we have had a lot of work in my time. Really hard, manual work, making gramophone records. I was happier when I was doing my own work rather than supervising standards.

Have you ever thought about changing your job? I have thought about it, but not in recent years. I am well paid and that barrier, the pensions scheme, keeps you honest and keeps you with the firm. Perhaps I haven't got the courage. You don't have it if you are married. I'll go further and fare worse. What sort of job have you thought about? I chose right in going into engineering. I would like to be in a job where you experimented and worked towards something new. I have a flair for engines and machines. I know what is going on inside. For example, with a car. I like a job where you can make new designs. I have done some and I was very happy when I was doing it. That was a G-.

How do you feel about working in Aves as a firm? I've got to say they're very good. If I thought they were bad, I'd say so. Although their system of bonus stretches everybody to their limit, they give you the return for it. Considering your experience and training do you think this job makes full use of your abilities? No, definitely no. I'll give you an instance. Some years ago, I had some electrical welding in my department and I was sent on a twelve weeks course. Since then I have had nothing to do with electrical welding. They utilise my experience in one way. I know lots about plastic moulding and they utilise my experience in the bakelite department. They put a square peg in a square hole.

How do you get on with production? I get on with them very well. Have my ups and downs. It all depends who they are. They have their different moods. You don't have to go to some of them and say "Oh, this is wrong, put it right". I'm reasonable. I don't deliberately put them out, I'm not hyper-critical. They know if I say a job is wrong, it's true. But if it's a very tight schedule that they can't stop, they know that I'm reasonable.

How do your mates think this job of inspection compares with other jobs?

They think my job is absolutely 'it'. I tell them I'm paid for what I know, not what I do. Do you think that the rate your job pays is fair compared with other jobs? It's not quite so easy as that. Our job is well paid, but I always took the view that the job should not be keyed up with production. For a long time they didn't have any bonus, but then they put in for an increase some years ago. We got a penny an hour increase which they could have placed on the wall, and the viewers got a bonus. That brought their job to equal ours and in some cases to exceed it. For the responsibility we carry we should get considerably more than a viewer. Naturally we don't think we earn enough, because we are putting in for more money.

What about floor inspectors being on bonus? I don't think inspectors should have any connection with production bonus. I think he would be inclined to push bad work through.

How long have you been in Aves? Fourteen years. I came as a floor inspector. Before that I had been a chargehand and a foreman in charge of production and inspection. As the chargehand I was under the foreman responsible for standard. I was really a floor inspector with more authority - I could adjust machines myself, etc.

How do you think that compares with the system here? I think it would work here, but I don't think that the chargehand and the floor inspector here could take that responsibility, but other people could. If you could get the people, would it be better? I think they would have more responsibility and a greater interest in the job.

(We went on to discuss the late system where the foreman was in complete charge of everything. He told a number of stories about the old days when this system was worked. He prefers it. It's big defect was favouritism - the blue-eyed boy. But he maintained that there was just as much of this in the present system.)

You are the floor inspector on the bakelite section? Yes. Can you tell me in your own words what your job is and what you have to do? Firstly I am responsible as floor inspector for any mechanical faults or dimensional errors. Secondly, for good piece parts. I must do a quality control, which means to say that the article must be sound from the plastic angle. Third, I keep vigilance that no parts have been sent off the section unfinished. I'm supposed to keep my eyes open for any improvements that can be made. I endeavour to get the co-operation of the people whose work I spoke of. I have to treat everyone as an individual - no two people are the same. The prime object of my job is any dimensional errors and quality control. Do you have a regular beat? I have a regular round. I don't always go the same - they possibly know when to expect you.

Is it mainly visual inspection you do? Visual and mechanical. We use gauges, miks, verniers - all those gauges pertaining to inspection. How often do you get round? On average about once every hour and a half to two hours. Do you take those that are coming out? First, the ones that are coming out, then you dive into the containers that are finished. How many do you take? Generally look at two batches - from one to a dozen in each. Are you your own boss? Yes, as a floor inspector you're given the responsibility. If you're up against anything and you want a bit more added weight you go to your chargehand. What sort of things? To give you a concrete instance; a wheel might be coming off with a bent pin. I want it cut out; but sometimes their supervisor or chargehand might argue it's not as bad as it seems and if I can't get the co-operation in a matter of a quarter or half an hour, I generally go to the chargehand and leave the matter to him.

In general how do you like your job? I like it very much. I'm never browned off about coming here. You can make it interesting. It's up to me to make it interesting. What do you like best about it? When I find any trouble - that's when I can get my teeth into something; finding trouble - I don't mean causing trouble - finding out what is wrong when there is trouble.

What do you dislike most about the job? Sometimes it's rather distasteful when you've got one or two people who you've found fault with their work and then they're rather naughty about it. They're in an unco-operative mood. Is this in particular people or in everybody at some times? Only certain people. It's part of the routine to try a different approach to them. Whereas one will co-operate another will start getting really nasty about it. It's always certain individuals.

Do you like it better than other jobs you have had? In it's way it's equally as good, in fact, it's better because you've got variety. What other jobs have you had? I've been a welder, came to Ayes as a welder. Then I went

as a setter during the war. Then when the war ended I thought my intelligence was better than being a press operator or something like that so I applied for inspection on the bakelite, and have been here ever since. Do you prefer inspection to setting or welding? Yes, I prefer inspection. Why? Well, it seems to require a higher plane of intelligence. Have you ever thought about changing your job? I have thought about it, but at my age I dare not think about it. And the job in Aves? Only job I would change for is electrician - one of my hobbies. How do you feel about working in Aves as a firm? Well, I can honestly say, I have been here about 18 years, you would go a long, long way to find a firm that's better. Aves is far above the average firm for looking after the workers.

Considering your experience and training do you think this job makes full use of your abilities? Yes, there are certain occasions on nights when I have to cover the spot welding. (Repeat question) I am a mechanical inspector, but if I was to go upstairs to electrical inspection I think I could do it.

How do you get on with production? The production people are primarily here to get out production. You've got to make a really good, hard and fast case to drop out any piece part that's faulty. You've got to state the case really watertight. Otherwise they're quite co-operative; but from their side of the fence they're only concerned with production. To whom do you state your case? Section leader first. What about to the operator? Just to tell him that I'm going to the section leader - to Reg or Jack. Do you usually go to the operator before? I generally mention it. I say - "I don't like this, I'm going to Jack about it."

How do your mates think this job compares with others? Don't see much of them. And the operators? In my experience they only tolerate us - they're not offensive. They know we've got a job to do. They know that we're always out looking for trouble - that is what they think is what we're for. As individuals I get on with them all right.

Do you think that the rate your job pays is fair compared with other jobs? Yes. First, we don't produce nothing. The rate I get for my job is quite reasonable for the job and class of work I am doing. What about inspection being on bonus? I don't hold with any bonus for inspection at all. Even the monthly bonus. I accept it but I don't hold with it. I don't produce anything at all for Aves. I accept it as all hourly paid do - but if they turned round and said "Inspection will not get bonus any more," I wouldn't blow my top ... How long have you been in Aves? 18 years. I've been nine to ten years as an inspector. I started as a floor inspector.

While he was filling in his questionnaire L14 remarked, "The big difficulty is the sameness - day in and day out. If you come down next year into the foundry, they will still be doing exactly the same." As he was answering No. 9, "when I say I'm satisfied, you must remember that at my age I couldn't get another job anyway. So I'm glad to be here."

You are the floor inspector in the diecast foundry? Yes. Can you tell me in your own words what your job is, and what you have to do? With our job we have no dimensional measure. We select them and if they are too bad they are thrown out, but if they are salvaged we let them go through to be welded. You just look at them? We have four viewers, so everything is hundred per cent inspected before it leaves the foundry. I go round and keep a regular check on the job.

In general how do you like your job? Reasonably well, but you must bear in mind that I speak personally, because of my age. What do you like most about it? Good fellowship. I've been with them so long and so I get to know that every individual is different. In general I kid myself I get along very well. What do you dislike most about it? The atmosphere is not very good. In summer the heat is terrible and in winter it's as draughty as hell.

Do you like it better than other jobs you have had? Yes, I've been with the company about 30 years as an inspector. I've been on the presses and the autos - I prefer this one. Why? Presses are terribly noisy; on autos you are covered in oil, which can bring on anything. Have you been on anything else? Not with the company. Outside? I was a building line machine operator. Why did you change to inspection? Just went into it and coasted along partly satisfied up to the present. Have you ever thought about changing your job? Not since I've been with the company. I've been content to stay on inspection. How do you feel about working in Aves as a firm? Quite satisfied - been here 30 years. I've spent most of my time with Aves in Canada. I moved here with the company in 1932, when jobs were scarce and then stayed. During the war you had to stay, of course.

Considering your experience and training do you think this job makes full use of your abilities? I think so. What training have you had? The inspection I have learnt, I learnt with the company. Prior to that I had no special training. How do you get on with production? Very well. How much do you have to do with them? I wouldn't say very much. If we have trouble we turn it over to the supervisor who would settle the difference. Suppose I go back now and there is a batch no good. I would throw it out. The production would do something like salvage work. What if they don't agree? That wouldn't happen. If something was badly formed they would scrap it.

How do your mates think this job compares with other jobs? They've all been here a long while. Labour turnover is very small. What about production people? That's where a little difficulty comes in. To them it's never bad. They want everything to go through that they can get through. You will always have that friction naturally. In fact, it runs very high sometimes. When? It's a matter of not getting credit for work. If they query it they see their own supervisor. He might decide and extra operation to put it right. Do they get paid only for good things? Yes, that's all we register. The viewers count it as they view it.

Do you think that the rate your job pays is fair compared with other jobs? Yes, I must say that we can't find any one better.

How long have you been in Aves? Thirty years. I started in 1926 in Canada.

You are the floor inspector in the diecast foundry? Yes. Can you tell me in your own words what your job is and what you have to do? Whatever machine is casting I have to check the work that is coming off each casting periodically. Jobs that have caused trouble in the past, I go to more frequently. I should cover my machines two or three times on a normal shift. All work in the department is 100 per cent inspected by viewers who mainly see that the visual part is right. That is their responsibility. Do you do a check on the viewers? Yes, you first look at what the operator is actually casting, then you check what the viewers have passed. If you find that what the operator has cast is doubtful you can put the viewer right to the standard of work he should pass.

Do you have a regular beat? Yes, at the first part of the shift I go right round the work, then if I find that there are certain parts that are doubtful I go back to them and contact the setter or chargehand to bring the job up to standard. Then often queries are settled, then I start my round again.

In general how do you like your job? As far as jobs go I like it. What do you like best about it? Yes, definitely, because I'm well acquainted with the job and quite confident. (Repeat question.) Yes, where jobs have to be checked with instruments I prefer that to the ordinary viewing and general checking. Another I like the job is that it's three shift working and I prefer that to any other.

What do you dislike most about the job? What I dislike ... are conditions such as fumes and so forth from the machines and also the uncomfortable feeling that you might get a small splash of metal from the machines on to you, like I got last night (showing where). Is there anything in the actual routine of the job you don't like? No, I can't say there is.

Do you like it better than other jobs you have had? Since I have been in engineering I have only been on inspection work. I couldn't tell you straight yes or no. But I've often thought I don't like the position where you see a man on the machine where you know he is doing a job you couldn't very well do, and yet you have to tell him that his work is not as it should be. Have you ever thought about changing it? Not seriously.

How do you feel about working in Aves as a firm? I'm quite satisfied. I feel as firms go, you are fairly well treated here. Have you worked in other firms? Yes, I worked at S- just at the beginning of the war that was, too, on inspection. Before the war I worked at B- in 1935 on inspection on a drilling job far below the standard set here.

Considering your experience and training do you think that the job makes full use of your abilities? Personally, I feel that after my years of experience on diecasting inspection I feel my ability and experience could have been made more use of. You mean in another job to do with diecasting? At Aves, yes.

How do your mates think this job compares with other jobs? I should say the older hands of us treat it more so now as a day's work. We only do what we feel is necessary. When we have viewer who has been up-graded to an inspector he is filled with a bit of enthusiasm, and does things we feel are unnecessary. But I'm afraid there's a tendency to get into a rut and to do only what is necessary, some sooner, some later.

How do you get on with production? With supervision? Yes. I personally have got on well apart from one or two little isolated cases. I make no difference between a production worker or supervisor than I do to my own.

I know you were a shop steward, who was that for? I was a shop steward for inspectors, but I became floor convenor and spoke for all the jobs. How do you find the operators take it when you have to tell them that the stuff is not good? Quite a number resent it. There again it's a matter of approach. If you have a bad batch, instead of making a big show about it by throwing it on to the scrap heap, I go up to the operator and explain to him why it won't do and quietly put it away. Personally I understand when you are working hard and somebody throws out your stuff. I have not had a lot of trouble, some are more awkward than others, but I've not had a lot of trouble.

How do the operators look on inspection? On the whole they don't look on it very favourably. I'm talking about the job not the individuals. They don't like it. I don't say they disagree so much that they cause a fuss, but I always get the feeling that they resent somebody checking their work, that's why I feel which happens very often, when a man has been an operator and for some reason or other he hasn't been able to do it, then he has been put on inspection. Well, if you have worked with an operator and you know you are better than him and he inspects your work. Many times, especially in the foundry inspection supervision has been at fault. This mistake does tend to bring out this resentment to inspection. I think it's wrong, I think care should be taken in choosing those on inspection.

Do you think that the rate your job pays is fair compared with other jobs? Yes, I should say so, compared with the effort and with the usefulness to industry I should say yes. What do you think about floor inspectors being on bonus? I think it would be a good thing myself. They say a man on bonus will tend to consider his bonus earnings and not the quality of his work, but I don't think that. I think it would be an added incentive to inspectors to help production. It would help them to be more conscious of quantity and quality. It should be based on the number going out of the factory and those scrapped at the fettling and filing process. If you had a bonus, it would make you more interested, you would go to the section leader and ask what was the scrap rate yesterday and things like that. At the moment they are only waiting for the

section leader to tell them if they passed bad work.

How long have you been in Aves? Eighteen years this month. I came as a viewer packer, then I left because of the war for a little while and then came back as a viewer, and I've been a floor inspector since 1941.

How long were you a shop steward? I was a shop steward from 1946-54, that's when I got disillusioned. I had a difference of opinion with the manager of the foundry over trade union matters and I was moved from the diecast. (He explained in some detail how he was moved apparently as part of a general reshuffle of inspectors, but he feels this was really a blind, so that there could be no suggestion by the Union of victimisation. However, he said that in private conversation the manager of the foundry had told him that he was doing his best to get rid of him. Since he was moved to another floor he had to give up his trade union activities. Later he was offered the job of the diecast foundry back again, but he feels that it was made clear to him that this was only on condition that he doesn't take up his trade union activities).

You are the floor inspector in the diecast foundry? Yes. Can you tell me in your own words what your job is and what you have to do? The first thing is to see that the viewers are allotted out to their job of what machines they've got to inspect. Look at contact book from previous shift - any complaints, anything wrong I always pass it to the viewer on that particular job. Go round each machine and then start gauging, checking, mike-ing various jobs that have got to be done. On the morning shift only we see to the soulplate - take two or four samples for x-ray inspection. Then take three castings of each cavity on the 119's over to finishing department for milling and drilling and passing up to point shop to get O.K. on them. Then at 8.30 we take the quality control jobs. We take five castings of each cavity, check up for variation and balancing purposes; after that it's about 9.30. Then we go round the usual check to see that the viewers haven't missed anything. In between you get a viewer come up with certain jobs - "Is this all right?" Then at 1.30 you take five castings for Q.C. again; fill up the contact book if things go wrong that you see the toolmaker about, pins breaking, dies collapsing. Also you take two samples of metal on the shift, on the soulplate and break them to see there's no deposit in the metal. Also in the usual floor check you look in the basket to see what the viewer has passed in case he has missed something which very often happens. An hour before time, you check that everything is O.K. for the following shift.

Do you have a regular beat? You can't really. If you've got a job in trouble you've got to stop there until you can pass the job. You have to pass it O.K. before the toolmaker leaves the job. All takes time.

In general how do you like your job? Very much. What do you like most about the job? It's interesting, and I don't know, but I think you feel a bit superior to the operators, that's what it amounts to.

What do you dislike most about it? I would put it down to operators more or less. Diecast fellows seem a little bit illiterate. It's the same with all operators outside inspection. You can't have really good feelings towards them if you're doing your job. You don't bear them no malice, of course.

Do you like it better than other jobs you have had? Yes, actually I've been on inspection most of my time. How long? 14 years. In Aves? Been in Aves for 19 years. What were you before? Leading hand in the Plastic section. And you prefer inspection? Oh, definitely.

Have you ever thought about changing your job? No. How do you feel about working in Aves as a firm? I think they're very good, else I wouldn't have been here 19 years.

Considering your experience and training do you think this job makes full use of your abilities? In the certain department I'm in. Yes.
What other experience apart from plastics have you had? Been in department 3 - metal finishing inspection. I've been in inspection in practically the whole of the machine shop.

How do you get on with production? Quite well. Have little arguments, but that is only natural. What sort of arguments? We get our orders that a job is no good and they disagree - they always try to get it through - that's what I mean by illerate. It's surprising what lengths you have to go to prove it to them. Only some, mind you - not all like that.

How do your mates think this job compares with others? They like it very much - had no complaints from them. And production people? Rather difficult question, isn't it. Shall we say they know the inspector is here to do a job but they don't like him doing it.

Do you think that the rate your job pays is fair compared with other jobs? Definitely, yes. What about floor inspectors being on bonus? I don't think it I don't think it will work. I don't agree with that at all. It stands to reason that they might skip a lot of their work, since you never get two castings the same. One might take half an hour and so on.

How long have you been in Aves? Nineteen years; started in Plastics.

(He then became floor inspector - in effect - on plastics, i.e. bakelite, then over to diecast.)

You are the floor inspector in the press shop? Yes. Can you tell me in your own words what your job is and what you have to do? Just passing the first off of each job. If you're not satisfied, seeing the person in charge to get the job right, constant patrolling and checking to see that jobs are O.K. thereafter. How long does your beat take? Half an hour or so. Do you do it regularly? Yes, but you get queries, for example from the toolroom. Are you satisfied with the tool? Or from upstairs on assembly who want to know what is causing trouble, whether it is a piece part.

In general how do you like your job? I look at it this way, it's as interesting as any job here. When I think about changing the job - you would probably get bored in any job in industry - I like it. What do you like most about it? I like it when you have got some queries on hand to be sorted out, or when new parts come along and you've got new pieceparts to check. How often does this happen? You get new models every other year. How often do you get queries? Some weeks all week. Sometimes one a day. It depends largely on the action you are in. If jobs don't conform to gauges you can stop it just like that, but presses, when a job is not strictly to drawing it's a question of getting the best job out.

What do you dislike most about it? When nothing is happening. Do you like it better than other jobs you have had? No. What other jobs have you had? Turner. Here in Aves? Yes. And a setter and a machine setter. Why did you prefer them? It was a more varied job - it was during the war. How long were you a turner? Five or six years. Why did you come back into inspection? I went into the R.A.F. and when I came back my old job was no longer existing. Have you ever thought about changing your job? Yes. For what sort of thing? You come up against a dead end. As a married man I want to get as much money as I can. But seeing the jobs advertised and qualifications wanted and money given I don't think about it. Leaving aside the money point of view what have you thought of? Well, journalism. Have you done anything in that line? No. When I came out of the R.A.F. I realised it is a job to get into it.

How do you feel about working in Aves as a firm? I like it. I realise that people who work in the other places I know are just the same or worse. Considering your experience and training do you think that the job makes full use of your abilities? We all don't think that. What experience is not being used? My past knowledge of engineering, experience I have had on turning and setting. Have you ever thought of going back as an operator? No, the job I was on doesn't exist now.

How do you get on with production? Fairly well, very well I should say. Occasional upsets. What sort of upsets? You say that the job is no good, and perhaps production people are being chased for it and they try to convince you that it will do. What happens? It's generally settled at the section with the section leader and often the foreman is called in.

How do your mates think this job compares with other jobs? No idea really. And operators? Perhaps fifty fifty. Some people believe you are out to cause trouble, some know you are there to help. Some get annoyed if you tell them about bad work and that they should have seen it. It doesn't often happen.

Do you think that the rate your job pays is fair compared with other jobs?
Yes, I do.

How long have you been in Aves? Seventeen years. I had another job in the office. I came in the office and then went on to the engineering side.

You are the floor inspector on the press shop? Yes. How is the work split between you and L17? Approximately in half. One covers blanking and two progress lines, the other does the lamination lines and welding. We swap over every day. Can you tell me in your own words what your job is and what you have to do? The main job is checking that the right material is being used on the job. Checking your blanks off for burrs, oversize, distortion, checking from each operator right through to the finished job. Do you have a regular beat? Yes. How long does it take? About half an hour continuously going round and round. Sometimes you get one which you pay more attention to. Perhaps you go to that one twice and the others once. What do you do if something is away from drawing? Stop the job and see if it can be put right. If it can't find out if the job is suitable for assembly in its present condition. You have the job put right in any case. The fact that they are all right is no reason to run the job in that condition. If it necessitates taking the tool out and they are near to the end of the run you might say "all right" and let it run to the end. Do you have many arguments about this? Not too many, you can do. You have to be a bit diplomatic, particularly if it's tough job for the setter. I suppose the human element comes in at times - we feel a bit off colour - but I don't get a lot of arguments.

In general how do you like your job? I think it's all right, rather like it, quite interesting. What do you like most about it? You're your own boss to a limited extent, you are allowed to make decisions for yourself rightly or wrongly, you can move about - that's a big asset from one point of view.

What do you dislike most about the job? The facilities. You have seen our section and our benches. You are in a corner right on the shop floor. You should be segregated, so that you can read drawings without all the noise and so on. Do you like it better than other jobs you have had? Oh yes, definitely. Mainly because it's interesting and I find it more interesting than the other jobs. And another reason, it gives me much higher basic rate and as a family man I must consider that. I did try assembly work just after the war and it drove me up the wall doing repetitive work all the time. What other jobs have you tried? I was away from here once. I tried the buses from the angle of security of employment but fell into the old trap of repetition. What did you do on the buses? Conducting. This is more varied and interesting? Oh yes.

Have you ever thought about changing your job? Not seriously. I thought that I would like to have a change often, but I think that I'm doing right staying as I am. How do you feel about working in Ayes as a firm? Outside of here, I would never work in another factory. Have you had any experience in other factories? No, but I have heard from relations something of the conditions that prevail in other factories and Ayes has set quite a high standard. I don't think I would be prepared to miss it.

Considering your experience and training do you think that this job makes full use of your abilities? Yes, I think so. How do you get on with production? Fairly well, very well, actually. How much do you have to do with them? A reasonably amount of time is spent with queries from other floors. Sometimes they come down and blame a particular piece part, so we check and find we have overlooked something else. What about the people on your section? All right. How much do you have to do with them? You are in pretty close contact all the time. You may have a word with an operator and we tell him very diplomatically. I get on all right with them.

How do your mates think this job compares with other jobs? Fairly much the same as I do. Doing an essential job, in spite of things that some production may say. They may term them an unnecessary evil, but I think that they are very necessary. What do your operators think about inspection? On my section they look on me as an aid. Do you ever have any arguments? Not a lot, occasionally. Perhaps I want something put right that they don't think is really necessary, but it comes out smoothly again.

Do you think that the rate your job pays is fair compared with others? It's difficult this, not entirely. Compared with viewers - our viewers get a bonus and sometimes with bonus the difference between us is too small.

What do you think about inspectors being on bonus? Either bonus or a bit better difference than at present. But I don't think we are badly paid in spite of that. Do you think that a bonus would be a good thing? Yes, I do. I can see nothing detrimental to it. If I was earning bonus I wouldn't walk round my section thinking if I stopped the job my bonus will come down.

You say here that you strongly agree that there are some conditions concerned with your job that could be improved. What sort of conditions? Oh, the facilities, like I told you.

How long have you been in Ayes? Five years this time, two and a half years prior to that on assembly. Before that I was in the Army and prior to the war in a shop. I have had all my industrial experience with Ayes.

You are the floor inspector on the press section? Yes, and I also cover department 13. Can you tell me in your own words, what your job is and what you have to do? The first and most important thing is when a setter sets up a job you must check it. You get a record card with the number of the job operation. You sign it O.K. if it is O.K. The sample you get you date and put with Ticket, and record card on the press. As you walk round to check the jobs then you compare the two - the part you've left and the job you've just done. It saves going to the drawing every time and helps the operator when the floor inspector isn't there, to compare. You patrol the section which usually takes about 30 to 40 minutes, depends on the condition of the jobs. Sometimes you may have some trouble and you have to stay to see it's put right. Do you always stay? Myself, I do. Unless it's a long job. If I find a job that has gone wrong, I have those sent in to the checkers bay and there it is 100% inspected. Then I fill in a scrap sheet for that job stating the reason for scrap and number. How often does this happen? On average you sometimes get a job every hour, sometimes two hours, sometimes you may go a whole day without finding any. It largely depends on the operator.

In general how do you like your job? Generally speaking, I like it very much. What do you like best about it? Checking jobs from drawings and comparing operators how they work and how they differ in regard to a poor job and a reasonable job. Some jobs you have to be extra careful about. You make a point of checking these every opportunity you have. You also warn the operator. What happens if there is a rejection? Stop the job, tell the operator the reason I'm stopping it and then tell his charge-hand. Are you allowed to stop the job yourself? If definitely wrong, by all means I stop it; but if not so sure I see the supervisor and usually come to an agreement about it.

What do you dislike most about the job? Can't recall anything at the moment. Things crop up occasionally that you dislike - not to have to do night work, I suppose. On the job itself with this firm the conditions are pretty reasonable.

Do you like it better than other jobs you have had? Definitely. Why? It's more interesting - to sum it all up. That's the only thing that saves you from being bored. What other jobs have you had? Been a diecaster. In Ayes? Yes. How long? 3 years. And then you changed to inspection? Yes. You prefer inspection because it is more interesting? Yes. Have you ever thought about changing it? Not really. I don't want to change. How do you feel about working in Ayes as a firm? That is one of the reasons why I don't want to change. From hearing other people talk, conditions are good. You haven't worked in another firm? Not worth mentioning - worked for 4 or 5 months when I started first.

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Considering your experience and training do you think this job makes full use of your abilities? Yes, I do. Diecast helps to a certain extent when I cover 13 department, which are diecasted parts being machined. How do you get on with production? Very well. Sometimes you may have to explain your point very strongly before they see eye to eye. But they are co-operative as a rule. How do your mates think this job compares with other jobs in the factory? The majority, I should think like their job. Some of them in the minority seem to get bored occasionally. What about production people? Sometimes they are inclined to think that inspectors are rather hard on them - expect too much from the operator. 'Course their complaint is that the rates are too high to give full attention to the job they're doing and taking note of what the inspection points out to them.

Do you think that the rate your job pays is fair compared with other jobs?

It is fair - there is a case where I don't think it is fair: the rate of pay between viewer and floor inspector. Why? A viewer gets bonus. When the firm get 25% or 15% bonus, then they get 25% of shop bonus. I'm not quite sure - it amounts to from about a £1 to 30 bob a week. Sometimes there is very little difference between the wages of viewers and floor inspectors. What do you think about floor inspectors being on bonus? I don't agree with bonus for floor inspectors. I think it comes on their flat rate. My reasons for that are: practically every section, their floor bonus differs and if a floor bonus differs every week you naturally have different wages of bonus of floor inspectors and that would cause ill feeling and dissatisfaction. That's the reason I think it should be on a flat rate.

How long have you been in Ayes? 6 years. I came as a diecaster for three years, then viewing for 18 months, than a floor inspector. Why did you come off diecasting? Three shifts didn't agree with my health, and I thought inspection was more interesting - less money, of course.

You are the floating inspector in the machine shop? Yes, at the moment I'm on autos. Can you tell me in your own words what your job is and what you have to do? Keeping rejects down to a minimum - the basic point. How do you do that? By a period check of the complete section. How often? Three times a day - it varies according to how much trouble you have. What do you do on these checks? Give the piece part a visual check and use gauges. How many do you check? Usually five. Why? Because you can have a fault from a machine which is not producing them consistently, but with five you'll find it in that number. Which five do you take? Five consecutive pieces that are first coming off the machine. What happens if there is a rejection? You notify the setter and he will stop the job. Then what do you do? Continue on your way down the line and when he's corrected it he will notify you and you drop back to check again. Do you keep any records? I have a quality control chart. Is that on all machines? Only on specified jobs picked by supervision.

In general how do you like your job? Quite a good job. What do you like best about it? A bit of a poser. The best part I would say is when a new job comes out and you have to give a thorough going check, sometimes with instruments - a brand new job. What do you dislike most about it? The dirt, the oil. Anything particular to the inspection job? Oh, the only thing I can think of - the sort of sharp cleavage there is between production and inspection in the matter of opinion as to whether a job is of good enough quality to go, and production don't agree. What happens then? Have a bit of an argument. Who has? Originally it's between the floor inspector and the setter, and then the chargehand is brought into it. The chargehand settles it at that level. It's very rare to bring in supervision. How often do they have to come in? Once a month. How often do you have to check a setter? Rather difficult - no two days alike - average will be, I suppose, 4 times a day. How many checks do you make in a day? Three times a day, 32 machines. So you do about a 100 checks a day and 4 of them are out? Round about.

Do you like it better than other jobs you have had? Yes. Why? It's more interesting than the other jobs. What others have you had? Motor testing, gauge stores, final inspection on motor floor. These are the three jobs I've had in inspection. Outside inspection? Worked in a shipyard. I've had no job outside inspection in a factory. Have you ever thought about changing your job? Have done, I suppose. For what? One time there was a bit of friction between another chargehand on production and I - nothing to do with the job. Have you ever thought of other things? Not of changing the job. It would be inspection but in another factory. How do you feel about working in Aves as a firm? Good firm. How does it compare? I haven't had experience of other factories. Of course, you do hear reports of other factories over the years. They disagree on most things, but one thing they will all agree that this is a good firm.

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Considering your experience and training do you think this job makes full use of your abilities? I do think that a floor inspector could be given a refresher course in the use of instruments. (Repeat question). Not completely no. The nature of the job itself is repetitive. What sort of experience is not being used? A floor inspector is only using the gauge given on the job. They utilise very few instruments indeed and a clock gauge is the only one, except from ordinary gauges, you're liable to use. In the gauge stores I was using slip gauges - never use them as a floor inspector. There are other ones you never use and it's inclined to make you rusty.

How do you get on with Production? Pretty good - with a few exceptions. In a set of humanity you get the odd obstinate chap. There is the old attitude of production to inspection. Inspection is a necessary evil. I think the higher level of production, not management but just below them, could do something to dispel that, because it doesn't always make for easy working.

How do your mates feel this job compares with other jobs? They all have individual grouses but they don't amount to much. Night shift is deadly and we all agree on that. There is the general agreement that if possible it ought to be made obsolete. It upsets your stomach, apart from your social life. Night work is the fly in the ointment. What do production think of inspection? They think you're a necessary evil as I said. The attitude being that they earn your bonus. That is sometimes a sore point with them. Something could be done about that. It could be pointed out to them in some way or other by booklets. When you stop a job the production man's bonus goes, so that his attitude is a fairly natural one.

Do you think that the rate your job pays is fair compared with others? No, I think we could get more - we are due to more due to our skill. We get less than a setter and in my opinion we are more skilled than a setter. What about the inspector being on bonus? Yes, I think he should if that is the only way in which his money can be raised. After all he is decreasing the rejects which cut the bonus down, and he should be given something for that. How long have you been in Ayes? 10 years. I've always been an inspector; I was on the M.I. floor for quite a while.

You are the floor inspector on the automatics? Yes. Can you tell me in your own words what your job is and what you have to do? Making periodical checks on components coming from the machines. Try to ensure that they are a reasonable standard. The section really is too big for one man to cope with. So it is a matter of co-operation with the setter and operator in between my calling on them. What happens if you find something out of tune? Depends on the job. Some dimensions are more important than others. You must know where each component is used. If it's out then the operator or setter must sort them out. If it's doubtful you try them out - keep that batch separate, but use them if you can. A lot depends on what the job is. If it is for an outside firm, you scrap right away. Do you have much outside work? Stuff going to Glasgow is checked 100% before it leaves. Usually applied if you get a tolerance of 10 thou, a thou or so either way won't make a great deal of difference.

In general, how do you like your job? In general, I don't like it at all. Not really my kind of work, much too repetitive. You're wondering why I took the job? It's a short term policy with me. I can get more money. I'm buying a house, children, etc. But the actual work is not to my liking at all. What do you like best about it? Working conditions here are very good. You mean company policy? Yes. What do you dislike most about it? Oil and dirt, of course. Fact of working so many repetitions. Do you like it better than other jobs you have had? I don't find it nearly as interesting. What other jobs? Inspection - more like standards room. I've never been used to all this gauge work.

Have you ever thought about changing your job? Yes. I did have an opportunity of an assistant-chief Inspector's job. I would like a job in the standards room or the tool room. Because inspection can be very interesting. You would want to stay on inspection? Yes.

How do you feel about working in Aye's as a firm? I think they're very good indeed - probably the main reason I'm still here. Considering your training and experience do you think this job makes full use of your abilities? I don't really think so. No. What experience is not covered? The type of work I've been used to is not big batch stuff, but when you adopt different means of checking. But here everything is laid on. I have been used to where every job was a new job to you. There is one aspect of inspection which depends on what you're producing. If, as in Ayes, it's for your own use it's different than for outside firms. You've been used to outside firms work? Oh yes, much more complicated than what we do here.

How do you get on with production? Very well indeed. I found out many years ago you have to work with them not against them. It doesn't mean whatever they say, goes. What does it mean? You get some type of people in inspection who think that whatever they say, goes - gauge-minded; if the job is about half a tenth out they will not use it. That doesn't go down well with production. It's a matter of discretion. Inspection is largely a matter of discretion. Tolerances are nominal - not like precision work. In this factory in particular, the most important thing is getting to know where the component is used and so use your own discretion if a job is running wrongly as to whether it is usable or not. That is where co-operation or working with production comes in. If it is doubtful you take a few on assembly and try the thing out. If the job is wrong it should be put right. I've had one or two differences of opinions about that - they say, if it works it should run.

How do your mates think this job compares with others? Here the vast majority of floor inspectors are made up from viewers. Only one in the machine shop has had experience of outside firms. I should imagine they're quite satisfied. They have known no others besides Ayes. Their attitude would probably be entirely different from mine. What about production? In some respects a necessary evil. A lot say that all that is really unnecessary - until something goes wrong. Then it is 'What about it?' I passed it. Doesn't apply to all. Some have a different attitude from the rest. Their feelings will change entirely from day to day. Do you think that the rate your job pays is fair compared with other jobs? Yes.

How long have you been with Ayes? 8 months. Before that I was 10 years as a Floor Inspector with G. It was really the equivalent of the Standards Room. There you did your own marking off, not just had it passed over. New jobs wouldn't run until you'd passed it, not the Standards Room. You didn't have just gauges. But they don't pay as much money as here.

You are the floor inspector on the capstan section? I cover the capstans, the grinders, and the milling and drilling. Can you tell me in your own words, what your job is and what you have to do? Floor inspector involves when the job is set up I check the first off to the drawing and if the job is satisfactory the operator is allowed to run the job. Then I do a patrol inspection every hour to control the job. If it is a new job it is submitted to the floor inspector, and if he is satisfied, it is passed to the Standards Room. Then it is put into production. Then the onus is on the floor inspector to keep the job to the Standards Room requirements. The job is to see that the parts produced meet the production standard. There is also quality control on some parts such as grinding to see that the standard is maintained. Only grinding has quality control? On this section, yes. Because we work to a fine limit of half a thou on the shaft. We try to maintain it within about 3/10 ths.

In general, how do you like your job? In general, I'm quite satisfied with it. What do you like best about it? It's hard to define really. Can't very well single out anything in particular. You like the atmosphere, people you work with, general routine; can't really single out anything.

What do you dislike most about it? Don't know really, not as a point. Running into trouble, I suppose. You happen to fall on some work you know there's been trouble over and you know there's been a lot of argument about it. Do you like it better than other jobs you've had? I wouldn't say it was better than some jobs because I was a Foreman in Inspection at one place. And other jobs? It compares with quite a few. The essence of the answer to that is the time spent in a job. I've been here 10 years now. That answers a lot. Compared with how long in other jobs? This is the longest length of time. Have you ever thought about changing your job? I've thought about going into business on my own account. But nothing else. How about an operator? I'd be outside the firm. No.

How do you feel about working in Ayes as a firm? Very good. Have you worked in other firms? Yes, M. for about 7 years. Ayes compares well? Oh, yes.

Considering your training and experience do you think this job makes full use of your abilities? Not for me to say. The point is the system they work here is that when you have attained a certain age, you are more or less excluded from any upgrading. What do you feel you could do? The only thing is a supervisory job. Is that because of your technical experience? I don't think it is so much from a technical angle as a disciplinarian angle.

How do you get on with production? Quite well with them, myself. How much do you have to do with them? Quite a lot with the Foremen on my section. Anything to do with the work usually have a few words with him - good words or bad words as the case may be. What sort of things do you talk to him about? Any particular trouble on a job and nothing's been done to rectify it. Start chasing him. You try and clear these things up between you. Do you have any arguments? On occasions, nothing personal, all about the job. What sort of things do you have arguments about? You might not think finish is good enough. The foreman thinks it is good enough. If you get no satisfaction you go to your own foreman and then they settle it.

How do your mates think this job compares with others? Very few have been anywhere else than this particular job. What do production feel about inspection? They just have to tolerate it. What production think in most firms is that we're just a necessary evil. Do you think that the rate you job pays is fair compared with other jobs? Yes. What about inspection being on bonus? That's something that could be gone into really. They want added production. They give an incentive to the production worker but there is not an incentive to indirect work. There has always been a feeling that bad things would go through. There is no doubt about it that if inspection got a bonus, production would benefit greatly because an Inspector would do far more to help the operators than he does. How long have you been in inspection? 10 years always as a floor inspector. Before that I was chargehand inspector at H. I've always been in inspection, except that I had a couple of years on the machine to start with.

You are the floor inspector on the tube section? Yes. Can you tell me in your own words what your job is, and what you have to do? Checking and gauging piece parts, control of work. Investigations, we take part in, if there's any trouble. We have to control scrap so that it doesn't get out of hand. Writing out tickets for re-operations - control of re-operations and scrap. How do you control scrap? When you've got a tricky job you spend more time on that job especially when you've got a new operator. Do you have a regular beat? We try to make a check every hour if we possibly can; of course, if you get detained you might not make it. When you look at a job, what do you do? Check with gauges and notify operator - tell him to carry on. If there is trouble the job is stopped and the chargehand notified. How many checks do you make? Depends what job is running. Normally take about half a dozen, small work, a handful - nearly all done by instruments down there. Do you take ones that have just been made? I take them as the operator is working. I do take one or two from the basket to check what has been happening.

In general how do you like your job? Quite O.K. Different from what I was used to. I was electro-plating for many years. That was very interesting. What do you like best about it? The personal contact with the operators - that is a lot to do with the job really. If you get to like the chaps and they you, the method of approach has a lot to do with it. Get a chap's back up and you've got an enemy for life, you might say. Then they don't bother to look so much. Do they regularly check? Yes, the gauges are available on their job for them.

What do you dislike about the job? Nothing I dislike about it in any shape or form. Is there anything you like least? Don't think so. I suppose I'm a very easily pleased person.

Do you like it better than other jobs you've had? Yes. Why? More interesting, more personal contact with people. How long were you in electro-plating? 25 years. And you prefer this? Yes, from the medical point of view. I had a serious operation caused by acid.

How do you feel about working in Aves as a firm? Very comfortable. Was your previous job in Aves? Yes, in polishing and plating. Have you ever thought about changing your job? No.

Considering your training and experience do you think this job makes full use of your abilities? Yes, I think they are. What about your knowledge of electro-plating? That assists in a lot of ways as regards the tube section, as regards scouring and polishing that goes on there. Comes in very useful indeed at times.

How do you get on with production? Very well indeed. What do you have to do with them? Hard to say - method of approach. Conversations you have with them, family conversations. They're always inclined to make a confidant of you; because they regard us as a cut above them if you know what I mean. You would be surprised the number of people who can't read or write here, you know. The standard of intelligence varies with every section; on autos it is high, presses - low.

How do your mates think this job compares with other jobs? I've heard no complaints from any of them. Production people, how do they feel? I've heard no actual complaints. Now and again you might get one or two. They say they won't have that chap on the job. Like you can pick up a chap's work and walk away with it without saying anything. You should tell them what you are going to do. There is only one snag. Most inspectors haven't been operators and don't have sympathy with a bloke on production bonus. Do you think operators would prefer to be inspectors? No, nobody's mentioned that. Do you think that the rate your job pays is fair compared with other jobs? Yes. What do you think about inspectors being on bonus? I'm not at all keen on that. You would be inclined to let things get a bit out of hand, if you could get something out of it. How long have you been in Aves? 20 years last Friday - I had a very nice letter from the General Manager. I started in the electro-plating, but I've been on inspection 15 years. I've passed the A.I.D. - I've been round the whole firm in the machine shop.

You are the floor inspector on the Diecast Finishing section? Yes.
Can you tell me in your own words what your job is, and what you have to do?
 It is to see that the job is correct according to drawing. That's laid down as
 final. What does that involve? I've got to check on all dimensions to the gauges;
 and the drills and measurements specifications. You look for faulty castings,
 and porosity and cracks. Are you your own boss? Yes, you really are, you decide.
 You've got a Foreman to go to if you're not sure, or your charginhand. What happens
if the job is out? You stop the job, but first of all you want to know whether
 it would be able to go or not. You would have to find out from assembly if that
 could go through.

In general, how do you like your job? As far as I'm concerned I'm satisfied
 with it. How long have you been on it? Two months. What were you before?
 Viewer on presses.

What do you like most about the job? There is more free and easy movement,
 you can get around. Nobody obstructs you in your duty. You mean compared to a
viewer? A viewer, you're in the once place, you're just fixed there. On floor
 inspection you've got the whole section, you keep going round. How long does it
take you to get round? Roughly an hour.

What do you dislike most about the job? Difficult to say. Don't think there
 is anything. You dislike a thing if the job goes wrong. Are you responsible
if that happens? You are in a way. You shouldn't let it go. They give you a
 telling off. You shouldn't let it occur too many times.

Do you like it better than other jobs you've had? Yes. What other jobs
have you had before? I was with B., testing cylinders, weighing, looking for
 pressure leaks, etc. Rather like viewing? Not so monotonous. Viewing is
monotonous? Yes, you can do the something three or four thousand times.

Have you ever thought about changing your job? You think about that many
 times. It just runs through your mind. What sort of job have you thought of?
 The job I'm interested in I'm too old for, now - commercial traveller, out in the
 fresh air.

How do you feel about working in Aves as a firm? Very good - a good firm.
 Of the factories I've worked in this is the best and cleanest, and conditions are
 good.

Considering your experience and training, do you think this job makes full use of your abilities? Yes, up to the amount I acquired, quite full. Of course, if I gained more knowledge it wouldn't be. At the moment I'm right to full capacity, but if I went for a course that would be a different thing.

How do you get on with production? Very well, indeed. What do you have to do with them? You have to talk to them, pass the time of day, have a joke. There are always the exceptional few who think that a floor inspector is trying to find fault with his work. What happens if you reject something? Some don't mind, others do. If a chap is working on a bonus, which they all are, they naturally don't like it. Some do as they should, and put up with it, and don't let it happen again.

How do your mates think this job compares with other jobs? Viewers? Yes. Some think that it is a better job, others not. And production? They take it for granted. They know they've got to have them to keep the wheels going. Do they prefer production? Depends, some chaps like the job, think it's easy, doing nothing. Others want the extra money of production. Do you think that the rate your job pays is fair compared with other jobs? Yes, I think it is in line. How long have you been in Ayes? Five years, I came as a viewer. I had inspection experience in B. but of a different kind of inspection. It was really good viewing - not instrument work. I was 15 years in the job.

You are the floor inspector on winding? Yes, the A.C. 6 and S.P. 6. Can you tell me in your own words what your job is and what you have to do? I think my job is to try and get the best possible quality of work according to Aye standards, without hindering production. To get that standard working on the line and progressing on the line. We could all go out and say 'stop' but that's daft in a production factory. You don't want that. Also to make sure that the people are working to pieces to drawing, using the proper pieces and the proper methods. Do you have a regular beat? Yes. I have. That is left to my own discretion. I usually take a percentage check at various stages. If I think that one particular part needs more attention I use my discretion. Do you decide on the sample? Yes. You don't have quality control charts? It's very difficult on the line, there are no machines, there is so much of the human element, everything is done by hand. So you're liable to get anything. In general, how do you like your job? I like it very much. I find it very interesting. I wouldn't call it a boring job. There's always something cropping up, something different. You're always busy looking for something - never a dull moment. I think that the beauty of an inspection job is that it keeps your mind on the hop.

What do you like most about the job? This may be a funny answer - I think the responsibility. I think there is a sense of security where you have a bit of responsibility. On a production job it's a repetition all the time, it can be very very boring. There is a certain responsibility there too, but there is more on inspection. What do you dislike most about it? I should think sometimes the frustration of the job. I mean where you strive to do something, to get the product to the best standard that you think you can maintain it at, but due to some mishap through no fault of your own, maybe they think the standard is too high, we should loosen it. Somebody comes and says 'I think you have been a wee bit too strict here. You can let it go.' Who could say that - inspection or production supervision? Usually production supervision, I must admit. I can't see myself setting a standard too high. It doesn't matter how good the quality gets an inspector who gets inspection in his blood, will want to make it better. Somebody will say you're splitting hairs. That somebody is usually a production supervisor. Do you like it better than other jobs you have had? Yes, I would say so, yes. What other jobs have you had? I've been in the electrical trade quite a while. This is the first time I've done inspection, for 5½ years. Other jobs can get monotonous but not inspection in Ayes.

Have you ever thought about changing your job? Oh yes. For what? On the same line actually. The only time I'd think of changing my job would be either if prospects are better or money is more. I think a bit about it, but I've never done anything about it. I'm quite content to stay where I am. How do you feel about working in Ayes as a firm? I think they're very good. Have you been in other firms? Yes, in several firms. Last one in B- & W- but Aye are quite a good firm. Considering your experience and training do you think that this job makes full use of your abilities? Well, yes. I think I'm not going to be big headed and say no. I'm quite happy. How do you get on with production? Well, I get on pretty well. I don't always agree but I get on pretty well. What sort of differences do you have? Setting the standard too high. In my opinion production seem to consider inspection in three sorts (1) sometimes they're all right (2) a damn nuisance (3) a necessary evil. Do you have any arguments? No, I don't at all. We have our differences certainly, but we should be able to settle that without argument. I make a point of not getting into arguments.

How do your mates think this job compares with other jobs in the factory? The general feeling is that they are underpaid for a start. They don't get enough say in certain matters according to their responsibilities. Which matters? Matters on the floor regarding quality. Too often in the past, I've seen an inspector - it's happened to myself - go to production and then has to go to his own supervision to drive the point home to production supervision. It's only then he gets the point clear. That shouldn't need to be. There is a standard and the inspector should know it. The root of the trouble is that their outlook is solely produce, get the schedule out. We think of quality as well. I wouldn't say they put out bad work, but if once you let them go down on the standard you've had it. You'll never get it back up again. Do you think that the rate this job pays is fair compared with others? I don't think it is. Compared with which other jobs? Well, keep women out of it. As far as a male operator is concerned, any bonus job at all has got the edge on inspection, as far as wages is concerned. They are underpaid in this respect, they have that bit of responsibility in my opinion that other operators don't have. I've seen in the past an inspector pass something then go on his patrol. Then something goes wrong, the turner goes merrily on his way turning out scrap, and when it comes to it the inspector is blamed. The finger of scorn is always pointed at the inspector. I think the man who takes the can back should get the lolly.

How long have you been in Ayes? 5½ years, always on inspection. I started as a tester for about 9 months, then a floor inspector ever since. Did you have any inspection experience before? None. But I was 4½ years as an electrician artificer in the Navy, through that I got the job.

You are the floor inspector on the winding section? Yes. What is the difference between your section and G1? He covers just the one type, we do a variety of types. Can you tell me in your own words what your job is and what you have to do? I control the inspection from the quality angle of all stators that pass through the section. That takes in every operation on the stator winding. Do you have a regular beat? It really depends on how the work is coming up but there are days when you're pushed for time and if you're getting a recurrence of one particular fault you clamp down on that section and try and rectify it. In general how do you like the job? I like it pretty well. What do you like most about it? It's a bit hard to say. What do you dislike most about it? The part I dislike most is having to go up to somebody and regularly tell them they're making a poor job of things. It doesn't very often crop up but there are occasions when you have to go back three or four times. To tell an operator? Yes. You don't have to go to the section leader? I see the operator herself. If it's going too far I see the section leader. Are the section leaders girls too? Yes. Does that make a difference? Yes. You usually find that the men are more co-operative. Does that include the section leader too? No I wouldn't say that. A section leader will try to get a grouse put right for you, male or female.

Do you like it better than other jobs? I wouldn't say that. You've just got to adapt yourself to what jobs you're in. What jobs have you had? On inspection in a steel works and heavier industries. Is it the same sort of thing? Yes. Have you ever thought about changing your job? Yes. For what? For same as everybody else; a bit more money or promotion. In inspection? I've been willing to go over to production. Would you be willing to take an operator's job? No, too much repetition in it - wouldn't suit me. In most of these jobs, no thoughts are required of them. How do you feel about working in Ayes as a firm? Generally, I think it's a very good firm. How does it compare with others you know? Compares quite favourably with every other firm around. Considering your experience and training do you think this job makes full use of your abilities? No, I wouldn't say so. What abilities are not used? On inspection in heavier industry, I was doing quite a responsible job. We were to a greater extent analysing different types of steels. During war service I was a Warrant Officer Mechanic.

How do you get on with production? I get on pretty well with them, but there are times when you are all up against them. Why? There are certain occasions arise when you try to point something out and they try

to go against you. What happens then? Usually take it to your foreman and let him know your point of view. 9 times out of 10 the inspection foreman agrees with you. You've got to consider, well, all the pros and cons before you dig in your heels. What happens when the inspection foreman takes it up? Do you generally get satisfaction? Maybe after a wee bit of arguing, you find you come out on top. Usually you do? Yes.

How do your mates think this job compares with others? I think that most of them like their jobs, but they would all like a bit more money. What do production think of inspection? There are quite a few of production that don't think much of inspection at all. Why not? They seem to think that we are just a stumbling block and we're overpaid because they seem to be working harder manually than we are. What about production supervision? I think production supervision realise that we're there really to assist them. Do you think that the rate this job pays is fair compared with others? No, I don't. What other jobs? Quite a number of people here that I know of, that I wouldn't let them lace my boots, walking out with more than me on many occasions. On what sort of jobs are they? A production bonus job, of any sort. Do you think inspectors should be on bonus? I would disagree with it. For myself I'm there to see that the job is correct, but others would say this will mean a bit more money for me if I can let this go. How long have you been in Ayes? Almost 6 years. I came as a tester for about 9 months then on floor inspection in this section.

You are the floor inspector on the Mark II final assembly? Yes.

Can you tell me in your own words what your job is and what you have to do? Originally it was the flange 100% inspection, but now it's rather a roving commission. Checking quality of paint, checking sub-assemblies, final machining, and end frames. Checking final marking on the stators and switch base assemblies. Do you have a regular beat? I go more or less round all these points. How long does it take? About an hour say. It would vary depending on any snags or troubles that would crop up. It might take a couple of hours just sorting out the trouble. What do you like most about the job? This fact, that you're left to your own initiative and you have a variety of functions to perform and one gets moving around that we bit more than on a tied job. What do you dislike most about the job? That's the hardest question to ask. There isn't anything that stands out? No, I can't say there is. There are always occasions when something crops up that you don't like doing, but rarely. What sort of thing? The type of thing I don't like at times - you have such a large area to cover but there are times when they're short of labour at the testing and and they ask you to help, and you can't tell what is happening on the area you're responsible for. Do you like it better than other jobs you have had? Yes. What others have you had? I've been on testing, rivet treating, bolt making, machine minder. Have you ever thought of changing your job? Yes, for a better job - but I don't know which. You have a particular thing you'd like to change to? No. How did you come on to inspection? I was working short time and looking for a better job, and it happened that an inspection job came up.

How do you feel about working in Ayes as a firm? Reasonably good.

Conditions are good. Considering your experience and training do you think this job makes full use of your abilities? No, I hardly think so. What sort of abilities are not being used? I think there's much greater scope for teaching people things here. You could learn more about paint, the different types of machines, which floor inspectors should learn how to operate, and how they operate. I feel that at times a few floor inspectors are worked extensively leaving them very little time for reflection, for finding out little points in their job.

How do you get on with production? Quite good. Do you have a

lot to do with them? Yes. In this particular section all my contacts are with production. When standards are tight you get the usual little niggles but generally speaking things are quite good. Do the standards vary at all? Well, sometimes they do. They shouldn't really, but

experience teaches us that things do vary according to circumstances, plus one other thing in the Mark II. Take the paint for instance, the Mark II is quite a lax job, but then we do the Chelsea, which is a tight job, an export job, and it sometimes takes a little pushing to get them to realise the difference in the two standards.

How do your mates think this job compares with other jobs in the factory? I can't tell you one thing right away - they're underpaid. I dare say most will tell you that - but I know a bit more from that angle. (N.B. G3 is Shop Convenor). The comparison between inspection and their counterparts in production leaves a lot to be desired. What about the general feeling about this job? I think it would be true to say most floor inspectors quite like the job. It gives them that bit of scope for moving around and that wee bit independence. Nobody's standing around all the time to see what you're doing. What do production think of inspection? A nuisance at times, it would vary according to different groups, whether the inspector was rejecting work which was having a bearing on their earnings. Just so long as the fault is obvious they don't mind. When inspectors start rejecting the borderline, that's when you start getting complaints from production. Even if it wasn't their earnings, if it cast a reflection on their ability, say in the eyes of the foreman, then they'd feel a wee bit unhappy about it. Do you have many arguments? On the whole, no. The occasional blow up now and again. What happens if you do get a difference of opinion? As far as I'm concerned if I reject it, the setter goes to the foreman. I tell the foreman why, and if he disagrees with me he can go to the section leader inspector and he can decide from there. Do you get backed up? This is sometimes where inspection standards differ, when it comes to an argument amongst the lower supervision, depending on the numbers involved and the pressure brought to bear on them. They may let 100 go, 50 go, that are definitely below the normal standard but because there are that number involved they'll get concessions for them. This sort of thing is one of the things that undermine the authority of inspection. If you get a batch that regularly goes when they're under standard the operator tends to discount your opinion. When you go back you say 'that's the standard, try and keep it', but they say 'you let it go last week'. That's one of the sore points all over inspection.

Do you think inspectors should be on bonus? Well, I don't mind how it comes, as long as it brings more money. Would an increase in the flat rate be better? From an overall point of view a bonus would reflect that situation better - when your group is earning high bonus you would be too. How long have you been in Ayes? 2½ years. I came as a tester for 14 months, then became a floor inspector always in this section.

You are the floor inspector on the Mark II in the sound booth?
 Yes. Are you in the sound booth all the time? Meantime yes, I do the running rack as well. Can you tell in your own words what your job is and what you have to do? First of all I have a check - special details. I know quite a number of them without looking up the sheets, but I have to look them up in the normal way. In the sound booth I have eight different types of sound rejects.

In general how do you like your job? My real trade was a dental mechanic. When I got into inspection here I made up my mind that this was the job for me. A few disagreements with various people, you know, but on the whole I like it. Who do you have disagreements with? Sometimes production. They say it's right, I say it's wrong, and they want to pass it. What do you like most about your job? It is the variety really. You never have the same thing coming down all day. What do you dislike most about it? Difficult to say.

Do you like it better than other jobs you have had? I certainly do. I'm more happy in this job than I was in any other. Have you ever thought of changing your job? Not seriously. Not since I changed over from dental mechanic. That was the big change I made in my life. Why? It's a long story. (Explained that he never really had a regular job, he had been doing it on and off for a number of years according to fluctuations of trade and circumstances.)

How did you come into inspection? There was a job in the viewing line when I applied here first. I was on that a few months then I was put into the sound booth. How do you feel about working in Ayes as a firm? I've always said Ayes looked after you pretty well. I think the facilities here are pretty good though I'm not really experienced in many other factories to say.

Considering your experience and training do you think this job makes full use of your abilities? I sometimes feel I could be better employed, you know - although all my training has been with sound - because I'm an organist and choirmaster and that helps me a bit.

Do you have much to do with production? I did have when I was working on scrap material, but I'm not doing that at the moment. How do you get on with them? On the whole very good. There are ones when slight disagreements come in.

How do your mates think this job compares with other jobs in the factory? I can't say I've heard any of them really complain of the job. What do production think of inspection? It is a case of they think inspection is all right if it passes the stuff. Does the standard vary at all? As far as the standard is concerned I don't think there is a great deal of variation. Does the standard change with pressure of work? Very occasionally. Last week, for example, we had a run of products which we just put out even though they had a higher schedule on last week. But it has happened - colour of paintwork or something like that.

Do you think that the rate this job pays is fair compared with other jobs? That's a sore point with inspection. As far as inspection are concerned production can get a bonus which brings their wages slightly above the inspection. Are they paid on good work only? As far as I know they're paid on the work they build whether it passes or not. That's a point which always annoyed me. How long have you been in Ayes? Nearly five years. I started as a viewer, then went to the sound booth as a viewer. Then I took on looking after scrap as well and after 1½ years they made me a floor inspector. Now I'm in the sound booth and running rack only.

You are the floor inspector on the Mark II final assembly? Yes.
Can you tell me in your own words what your job is and what you have to do?
 Name plates and cards to be checked and the detail numbers to see it's correct with the book. I relieve the man on the running rack if necessary. Do you have a regular beat? Whatever comes up. I start off the morning with scrap material, then I go to the section leader and ask him 'What do you want done next?'

In general how do you like your job? I definitely like my job.
What do you like most about it? Difficult to say. I was 26 years in S- as a furnaceman. I came down here as a hot oven attendant and from that I came to inspection and came up to floor inspector. But I definitely like the job, and particularly compared with other firms.
Why did you come on to inspection? It was advertised here and I thought I would go after a job in inspection.

What do you dislike most about the job? I don't know, it's difficult. I've been happy as long as I've been in. I wouldn't say I disliked anything about it. Sometimes you get angry or disgusted at the work that comes to you. What sort? In the running rack you've got work coming from production. They've got bonus work and they just push anything through and you get things down that shouldn't come in. I'm very quick about that and I shout back to the line 'Get it sorted!' But sometimes you find with these production fellahs that a telling off does no harm. Do you like it better than other jobs you have had?
 Oh definitely. Furnace work was very heavy work and excessive heat.

Have you ever thought about changing your job? Since I came here, oh no. At my age in a sense, I can't think of changing my job.
How do you feel about working in Ayes as a firm? Comparing it with the firms that I've working in I would work here before any other firms.
Considering your experience and training do you think this job makes full use of your abilities? Well, I think so, I would say it does.

How do you get on with production? I get on fine with them. Even if you say sometimes sort of anything to the line - 'Get that sorted' - we're the best of friends every way.

How do your mates think this job compares with others in the factory? I really couldn't tell you how they feel about it. What do production think of inspection? It depends on who you're talking with. They think inspection is always up against production. But it's not a matter of being up against production it's only being up against bad materials or something like that.

Do you think that the rate this job pays is fair compared with other jobs? Of course. My age is against looking for a job and I'm well enough satisfied with the rate. How long have you been in Ayes? About 10½ years. I started as a hot oven attendant for 2 years. Then on the running rack as a viewer. I've been a floor inspector for about 2 years.

You are the floor inspector on the Mark II in the sound booth?
 I'm actually on the D.C. Section but that's off at the moment so I'm transferred on to the Mark II. I do the whole thing on the D.C., patrol and sound booth. It's practically 100% the whole way through. Can you tell me in your own words what your job is and what you have to do?

First and foremost we're responsible for the quality of the job. We get material from the machine shop for winding. We check it for a percentage check. Then it's wound and inspected with a patrol check. Then check the various other processes, see that everything is connected and put it through the tests. We have a full test on final assembly, torque, starting test, noise test etc.

In general how do you like your job? I'm quite happy with it.
What do you like most about it? I've been trained in every part of the factory. I'm moved about from place to place. I'm not allowed to stay in one job except when the D.C. is running. There's not many floor inspectors that's really had that experience. What do you dislike most about it? One thing I get an aversion for is concessions. Something turns up and production says we can get a concession, and they go to the Engineering department and get one, and it makes you look a fool. You have a job to do and if they can get away with it once they can get away with it every time.

Do you like it better than other jobs you have had? Yes.
What others have you had? I was in the Army for 12 years I'm a radio mechanic to trade. I've been in P- and I've been a chauffeur.
Have you ever thought of changing your job? I have once or twice, but I don't think I could get anything better. Change it for what?
 For financial reasons. Would you want to stay on inspection? No. I was trying to get on production at one time. How do you feel about working in Ayes as a firm? I think it's quite a good firm as far as I'm concerned anyway. How does it compare with P-? Far superior, no comparison.

Considering your experience and training do you think this job makes full use of your abilities? Yes, I think so. How do you get on with production? I get on fairly well. Do you have any disagreements?
 On the D.C. you usually get one or two. About what? The quality of certain jobs. Whether they should go or not? Yes. On what things have you disagreed about? Quite a lot of bother on the diamond turning on the under cutting. You see, the setter on the line went down to Bondon to see the job there before it came up and he took the line that what's good enough for London is good enough for Glasgow. We have to try and talk him out of that.

How do your mates think this job compares with other jobs?

I think they're satisfied as far as the job goes. We usually get co-operation. What do production think of inspection? Not very much. I think it's more the psychological effect than anything else. They always think you're trying to put something over them. It's very difficult for a floor inspector to convince a production man. Usually you have to call the section leader or foreman in to get a final settlement. It's better now than what it was a few years ago. You're getting more co-operation now from production than what we've ever had for a long time.

Do you think that the rate this job pays is fair compared with other jobs? Yes, taking into consideration the factories round about it's pretty fair (repeat question). I think it is. How long have you been in Ayes? 5½ years. I started as a viewer, but I've been a floor inspector for 5 years now.

You are the floor inspector on the Mark V? Yes. Just at the moment I'm on repairs, but they should start up the Mark V just about now. Can you tell me in your own words what your job is and what you have to do? I'm responsible more or less for the quality of the finished article. I sound test it and check the point finish and general appearance. Do you have a regular beat? The majority of the time I'm in the one place. Doing 100% inspection? Yes. Do you do a patrol inspection? Yes, in any spare time. If a bottleneck crops up I have to go down and investigate and tie up with production ways and means of straightening it out.

In general how do you like your job? I like it, I think it's very interesting. There's something new crops up every day. What do you like most about it? The variety of different jobs. The different faults that crop up; you have to be alert for the little things that come up from day to day for no reason whatsoever. You may get a make of products with a peculiar noise - you find out the reason for it. It may never crop up again for weeks. What do you dislike most about it? One thing I dislike if we have a bad production supervisor and we don't get co-operation. We prefer someone who would discuss our point with us, instead of being high-handed.

Do you like it better than other jobs you have had? I had a job prior to this that I've liked equally as well. What? Not in Ayes, outside on maintenance work. Have you ever thought about changing your job? No. Not in the past two years anyhow. How do you feel about working in Ayes as a firm? I think it's a good firm - the best firm in the West of Scotland is my contention.

Considering your training and experience do you think this job makes full use of your abilities? Yes. How do you get on with production? Well, I get on quite well. We don't always see eye to eye. But taken as a whole we get on quite well. What sort of things do you not see eye to eye about? Paint spraying is one. The quality may not be like it should be and an inspector may approach production and not get satisfaction. The inspector will know why, for example because a new operator is on, but they won't agree.

How do your mates think this job compares with other jobs in the factory? It's 50-50 there. You get an occasional one there who thinks he's got a bad job. Some think he's got a good job. What does production think of inspection? A necessary evil, some think stronger

than that. Do you think the rate this job pays is fair compared with others? It's debatable. Quite a number think we don't get the rates compared to the operator. An operator can earn more money than we do, and we get more responsibility. For example, the man who packs the products I test, he handles the same number, but he is on bonus and he gets £1 to 30/- a week more than me.

How long have you been in Ayes? I've been in twice, 1950-52 and 1953 onwards. In 1950 I started as a viewer in the diecast then I became a diecaster in 1951. Why? Viewing isn't very interesting - 100% checking. Had you been on diecasting before? No. In 1953 I came back as a salvage operator, then I was a viewer on the Mark V for a year, then a floor inspector.

You are the floor inspector on the Mark VI line? Yes. Can you tell me in your own words what your job is and what you have to do? It really is inspection naturally. It's a sort of gathering place for faulty material coming off the Mark VI line, which I inspect to determine what is wrong with it and return to the various places. All the stuff comes to you? Yes, there's a lad that brings it to me. You only see work that has already been rejected? The stuff comes from the repairers if they can't repair it. I examine all the parts that the repairers scrap, and all scrap from the line, to see it is scrap.

In general how do you like your job? I like it very well. What do you like most about it? I don't think there is any special thing - more or less general. What do you dislike most about it? I don't find any fault with it. I like working in the factory because for 26 years I was in an operating box in the cinema. It's much more interesting here. And the change is so great. You have Saturday and Sunday off and every night. I haven't got used to this yet so I still like it.

Do you like it better than other jobs you have had? I've only had the two jobs and this is better - more money as well. Have you ever thought of changing your job? Not so far. How do you feel about working in Aves as a firm? I think it's a very good firm. Considering your experience and training do you think this job makes full use of your abilities? No. I don't say I couldn't do the jobs. But I'm quite satisfied.

How do you get on with production? Do you have a lot to do with them? I have a certain amount. I always get on very well. There is a feeling between inspection and production but from what I hear it's the same in all factories. Of course, personally I get on all right - in personal relations. What do you have to do with them? Only on anything being wrong. Can you give me an example? Say they're doubtful about whether anything should go. They come and ask me if they should carry on.

How do your mates think this job compares with others in the factory? I wouldn't like to tell you sometimes, but I think it's more gas than anything else. On the whole I don't think that any of them would like to change it, other than for more money, you know. What do production think of inspection? In my own case - I haven't a very big area to cover - anyone down there, they take my word for it.

If I say it should be they try to remedy it. The reason for that is perhaps I know, and should know, just how it should be and that's the way I want it.

Do you think the rate this job pays is fair compared with other jobs in the factory? That's something I hear very much talk about naturally, but I can't compare them because I've never actually seen it. How long have you been in Aves? Nearly 5 years. I came as a tester for 2½ years. Then went to being a floor inspector.

You are the floor inspector on the rotor line? Yes.
Can you tell me in your own words what your job is and what you have to do? Mostly our job is to keep the quality of the job to the standard required. Check each machine on size and finish. Do you have a regular beat? Yes. I check each machine about once an hour - a sample. A set sample? Yes 5 an hour is the set sample - but you've got a spot check in between as a double check. Is it Quality Control? Yes, a quality control check - we kept charts.

In general how do you like your job? It's quite a good job. Quite interesting. What do you like most about it? I've had quite a few jobs. I was a long time in the Army. This is the first factory job I've looked at and I seem to take to it. What do you dislike most about it? Probably trouble. You get trouble cropping up. You've always got to be prepared to look for it. What sort? Like on the grinding a small fault - you can hardly see. You have to look for them? Yes.

Do you like it better than other jobs you have had? This is the best job I've been in. It took me a while to settle down after I came out, but I settled here all right. What were you in the Army? Sgt. Signals Instructor - electrical and wireless. Have you ever thought about changing your job? I think it would be very hard at the moment to get a job as good as I have at the moment. I dare say that if I found something better I would take it. But I've not been looking at the moment. How do you feel about working in Ayes as a firm? I think they're quite a fair firm to work for. Have you worked in many others? A telephone company. It was a very interesting job wiring up automatic telephone exchanges, but it was being away from home all the time and I'm married.

Considering your experience and training do you think that the job makes full use of your abilities? Oh yes, definitely. How do you get on with production? I seem to get on all right. You use your head a wee bit - a wee bit diplomatic at times. You get our wee differences of opinion at times, always manage to get over it. Differences about what? Probably I'll stop the machine and say the finish is not good enough and the setter will say it is good enough. So we go the production supervisor. What happens? Do you get satisfaction? Usually. If I don't I go to my own supervisor.

How do your mates think this job compares with others in the factory? I think most are quite pleased with their jobs. The only complaint I hear them make seems to be that big gap in the money angle. There is a gap of about £3 to £4 a week between my setter and me. I only get about the same as an operator on the line. What do production think of inspection? At times they don't think much. If everything is going all right it's all right, but start up some trouble and it's different.

Do you think that the rate this job pays is fair compared with others? Operators' pay averages out much the same as a floor inspector's. A Floor Inspector should be getting more? He should, he has quite a bit of responsibility. How long have you been in Ayes? 4½ years. I came as a viewer for a year then went on to this line as a floor inspector.

You are the floor inspector on the S.O.C. section? Yes. Can you tell me in your own words what your job is and what you have to do? We look after the standards on the line and maintain the standard on the sub-assemblies and also scrapping off any part; look after scrap reports. We test the stuff. At the moment I spend my time jumping about from three different sub-assemblies. Under normal conditions when schedules are high we have control charts on each machine with very little viewing. At the moment you have viewing? Yes, we all do viewing. Under normal conditions there is a viewer for each part. We 100% each component. Just recently we started that a machine shop floor inspector comes and does an unofficial assembly to see that it's all right. We clear first offs against drawings and we check from an assembly point of view that it is satisfactory.

In general how do you like your job? In general it's quite pleasant. There are times though... as in every job there are times ... What do you like most about it? There's one thing. It gives a great deal of satisfaction to see an old job come back and check it against the current ones to see how the standard has risen. It has risen quite considerably. What do you dislike most about it? That's fairly simple. You see somebody working, doing his level best and you've got to turn round and tell him it's no good. That's always annoying. A second to that is paper work.

Do you like it better than other jobs? I rather like this one the best. There is a bit more variety. I like it better as a floor inspector than I did as an inspector. What other jobs have you had? I started off as a warehouseman, then served my time in armature winding (electrical engineering) then back to the warehouse, then back in here. Have you ever thought about changing your job? Oh yes, everybody does. What for? I wouldn't like to go back to engineering or the warehouse again. It would have to be another inspection job. Despite all the drawbacks.

How do you feel about working in Aves as a firm? I don't find any major drawbacks. There are niggly bits but no major drawbacks. Considering your experience and training do you think your job makes full use of your abilities? I'm quite pleased that I did serve my time. It helped me considerably. It is an asset to have done something before.

How do you get on with production? Production I find are just exactly like anybody else. They're just people you know. It depends on how you treat

people. If you're reasonable with them, they're reasonable with you. How do your mates think this job compares with other jobs? There are very few that leave for other jobs. What do production think of inspection? I rather think, my own feeling is that whatever they may say they agree it's a necessary evil and it's a buffer for them to lean against. It takes some of their decisions away from them.

Do you think the rate this job pays is fair compared with other jobs?
A sore point. I think we could really do with a lift. Anyone with a production job on the floor can make more than I can, in a busy week. They don't have to make any decisions. We have to work to them, we are production inspection and we work as hard.

How long have you been in Aves? Nearly five years. I came as a test board and cartridge inspector for three years. Then floor inspector in the S.O.C.

You are the floor inspector on the diecast section? Yes. Can you tell me in your own words what your job is and what you have to do? I have to make sure that no bad units leave the foundry. Every unit that leaves has to be correct. Do you 100% everything? Mostly everything. Do you do that yourself? Yes. Do you have a regular beat? Yes. How long does it take? It varies with the amount of machines on. What do you do when you find something out of tolerance. We go to the setter right away to get it rectified. If we don't the job is stopped. Do you have much difficulty about getting a machine stopped? On rare occasions. Can you give me an example? Say they're short of a particular unit on the line and say there's a slight fault in this unit. The setter says it could go; that's where the argument starts, and you could win or you could not. Who decides? If I can't get satisfaction I go to my section leader and he takes over from me. Do you have a section leader? Yes, Mr. GF2, the foreman is my section leader.

In general how do you like your job? I like it very well. What do you like most about the job? It's very interesting. You've got a different thing cropping up every day. There's always something cropping up. What do you dislike most about it? That's a hard question. There's sometimes when there's a lot of machines and there's a great strain on the eyes, consequently you get subject to headaches - it's all visual. Anything about the inspection job itself? That's quite all right.

Do you like it better than other jobs you have had? Oh yes. Quite definitely. What other jobs have you had? I've been a steelworker since I left school - it's only just sort of labouring; you're very rarely using your brain. Have you ever thought of changing your job? No, quite definitely not.

How do you feel about working in Aves as a firm? I'd say it's just about the best firm I've ever worked with. How did you come to change to inspection? It was a slack time in the steel works and money was short and I was forced to leave it, and luckily I got started in Aves.

Considering your experience and training do you think this job makes full use of your abilities? Oh yes, it does. How do you get on with production? Fairly well. Do you have a lot to do with them? Only when trouble occurs. That's the only time we really clash. Do you clash? They try to let production go and we try to stop it.

How do your mates think this job compares with others in the factory? I really can't speak for them. The mates I've got they seem to like the job all right. What do production think of inspection? They don't think much of it. Why not? You see these men don't get paid for the scrap and we're there to throw scrap out - it's a natural instinct.

Do you think the rate this job pays is fair compared with other jobs?

No. With the decisions we've got to make I don't think our pay is justified. You've got to be careful, you could make a blunder just easy enough and your pay is not justified. How long have you been in Aves? Three years. I started as a viewer in the diecast and got made up to a floor inspector six months ago.

You are the line leader floor inspector on diecast? Yes. Can you tell me in your own words what your job is and what you have to do? My job is new dies, doing first offs, getting them checked - rejection or acceptance form must be completed, checking between diecast and toolroom, for new piece parts. Tie up for any die that can run although the piece must be altered - tie up with machine shop on that. Check on metal, paper work, scrap reports. Do you have a regular beat? Yes. How long does it take? It varies a lot most times it takes one to one and a half hours. It can take more if you get in trouble.

In general how do you like your job? I like it fine. What do you like most about it? The variation in the work. What do you dislike most about it? Fighting with production. About what? Trying to get the job rectified to meet a correct standard. You don't agree about the standard? Yes. They say that'll do - I disagree. Often? Not often. They're more or less very co-operative.

Do you like it better than other jobs you have had? It's hard to say. I'm the type of person that no matter what job I go to I do my best and enjoy it. What other jobs have you had? I served my time as a printer, then in an aircraft factory, on the buses, then in here. Always in diecast here? Mostly. I was in the production side first, then transferred to inspection. Why? More or less, my health. The heat was getting too much for me. I was getting colds all the time. It's not so hot on the inspection side of it.

Have you ever thought about changing your job? Often. For what? Hard to say. I feel that the inspection in this place is getting cut out and in full time there will be no inspection in the place. You can see it coming, taking men away from inspection and off viewing little jobs to production. I'd also like to better myself.

How do you feel about working in Aves as a firm? Very good firm - nothing at all against this firm. Considering your experience and training do you think this job makes full use of your abilities? I would say yes.

How do you get on with production? I get on very well except for an odd argument. How do your mates think this job compares with others? I'm afraid I couldn't answer that. What do production think of inspection? A necessary evil, like a policeman. Do you think any want to be on inspection? No. I don't think so. They're on bonus we're not. They get more pay than we get. Do you think that the rate this job pays is fair compared with other jobs? This is the only thing I have against it. We do get a $1\frac{1}{2}$ cooling down allowance,

but diecasting conditions call for a little more.

How long have you been in Avas? Eight years. I came into the machine shop for six months, then went on to diecasting for $4\frac{1}{2}$ years, including one year as a section leader. Then I was a floor inspector for two years and I've been line leader for a year.

You are the floor inspector on diecasting? Yes. Can you tell me in your own words what your job is and what you have to do? The job is primarily from a cost point of view. To see that the castings are properly made and no excess scrap is going down the line. Second only to be a quality control. Do you have a regular beat? Yes. How long does it take? A 60 minute cycle. That is the maximum allotted time - we are round oftener than that.

In general how do you like your job? Oh, very well. What do you like most about it? It's interesting. What's interesting about it? Well, I take a pride in my job as far as being able to do the job well; to catch faults quickly, it's a personal challenge. What do you dislike most about it? The inability at times to get production to agree with what I think should be the action taken. Sometimes they don't take action quickly enough. Do they agree with you and do nothing? No. They disagree with what I say. In other words inspection should have more authority to stop production. Can you give me an example of the sort of thing you mean? In diecast, where a casting is running in a dangerous condition, due to excess of scrap coming from the die or a die needing dressing - production are inclined to allow it to run until the situation becomes dangerous before taking action.

Do you like it better than other jobs you have had? In the main, yes. What other jobs have you had? I'm a spray maker. I have been a commercial traveller. And you prefer this? I really think in the main, I do. Have you ever thought about changing your job? Not in the last two years. How long have you been here? Three years.

How do you feel about working in Ayes as a firm? I think they're an excellent company. Considering your experience and training do you think this job makes full use of your abilities? I wouldn't say reservedly, no. What abilities are not being made use of? We have so much coverage from the toolroom and the standards room that . . . we could do more measurement.

How do you get on with production? In the main very well. Do you have much to do with them? Oh yes. We're constantly viewing the production and bringing to their notice things. How do your mates think this job compares with others in the factory? There's none of them leaving their jobs - they must like it all right. There's no

discontentment. What do production think of inspection? I feel that they welcome it. Do you think that the rate this job pays is fair compared with other jobs? In the main, yes. You don't get as much as a diecaster? No. But I've no feeling to change my job for a diecaster for the difference in the money. I should add though, I'm not an anti-diecast man.

How long have you been in Ayes? Three years always on inspection, mostly in the diecast. I was in inspection in spring making - that was the first time I was on inspection. How do you come to change over? It was by an accident. They found they needed somebody and as I had been taken on for a job they weren't ready to start yet, they put me on to it.

You are the floor inspector in the press shop? Yes. Can you tell me in your own words what your job is and what you have to do? When they set up tooling in a press whenever the setter and the chargehand of production has satisfied himself that the components for that particular tool are satisfactory to them they submit those components to me, I check on them and find for myself whether that particular tool can run or not. Sometimes those components are not to drawing but they meet with the assembly parts. We allow that job to run. Other components from other tools must be drawing otherwise they're scrapped, or they may be satisfactory after a re-operation. Do you have a regular beat? Yes, more or less. I do an hourly check, but C.V.A. presses turning out 12,000 components an hour I go round every 15 minutes. We do anything from 5 to 10% check on all components. We don't get a great deal of scrap compared to what we used to.

In general how do you like your job? I like the job very much. It's a rather interesting job. We've got such a variation of tooling, up to 150, or more. I can settle down to more or less anything. What do you like most about the job? I like chasing up and down to the toolroom, and production people. Arguing about the pros and cons. With production? Oh yes. I like coming into contact with production people, very much so; and toolroom people. What do you dislike most about the job? Well, up against faulty tooling, components are not coming off correctly and you get in touch with production people and they seem to be quite satisfied with the job. The toolroom says there's very little they can do. It still worries me that the job is not correct. A job that would still assemble, you mean? Yes, it would assemble properly, but it's a horrible locking job.

Do you like this job better than other jobs you have had? Yes, I really do. What others have you had? I was a bus driver for 20 years. I don't think I could pick anything better. There is something to take your attention all the time. There's no job that you can't find some fault with. Have you ever thought of changing your job? No. How do you feel about working in Aves as a firm? I think it's a very good firm to work with - a very generous firm. The Chief Inspector is really a very good link. If you feel you're not getting anywhere at all with production people or your own foreman, you can walk into his office and he will try to help you out.

Considering your experience and training do you think this job makes full use of your abilities? Yes. There are lots of things I don't understand but I just need to ask. How do you get on with production? I find at times they're very co-operative and at other times they strongly disagree. You tell them the job's stopped, the rejects won't be accepted. It all depends on the mood of them. Sometimes they will just run it anyway. They did that yesterday, although they know I won't pass it. It's not that they're bad fellows but they are being pushed on to get the work off these presses by their own supervision. Although there is many a time we've run scrap if the job is wanted as it is cheaper to reoperate than change or repair the tool. What happens to those they ran yesterday? The re-op that they have to do - they wouldn't have needed to if they had done what I told them.

How do your mates think this job compares with other jobs in the factory? Some say they like it and I know one or two who couldn't care less - don't like it at all, absolutely bored with it. I believe I've got the most interesting job on the floor. I'd be bored stiff on any other job but floor inspector. What do production think of inspection? I don't think they think very much of it. Personally speaking, I think that if production could get away with it, they would do away with inspection. I've seen so many jobs here of inspection taken over by production people themselves. But this place would be in a sorry state without inspection. Do you think that the rate this job pays is fair compared with other jobs in the factory? I think the rate is fair. How long have you been in Ayes? 5 years, always on inspection. I'd not done any before. I'm only sorry I didn't come in years earlier at this job, otherwise I don't think I'd have stuck at Floor inspector. I'm 51 now, I'd have gone to night school and got ahead if I'd been here 10 years earlier.

You are the floor inspector on end frames? Yes. Can you tell me in your own words what your job is and what you have to do? It's more of a quality control job. The actual size of the work is left to the setter. I have to maintain that good quality on the work. You don't take first offs? On the standard end frames - the bulk of our work - we don't bother, but for specials we do. Do you have a regular beat? You don't just go by clock work. You tend to leave jobs that are running well and get to the trouble spots. Do you take a sample? Yes. A set number? It depends on the auto I take a sample of each check. A dimensional check? Yes and visual. What happens if you find one out of line? It's up to you. If it will affect assembly you scrap it and you notify the setter in most departments on that. To get it changed? Oh no, you can get it changed. Why then? At one time there was some friction between inspection and production on this but not on my section now. It also depends on what job it is. It might be better to let it run and then rectify.

In general how do you like the job? Well, sometimes it's boring, other times you get a new job going and it's quite interesting. It depends. It tends to get on the boring side on the whole. What do you like most about it? Nothing particular. What do you dislike most about it? They've not got new jobs now and everything is running smoothly. It gets boring - you don't have to get your teeth into anything. Do you like it better than other jobs you have had? No, I can't honestly say that. What other jobs have you had? Turning. Why did you come on to inspection? I was offered the job and I didn't quite know the standard and I thought it would be good experience, and the main item was the money was good.

Have you ever thought about changing your job? Never really given it much thought. The only reason I'd change is if I went back home. Up here there is only heavy engineering and mass production. Where are you from? London. How do you feel about working in Ayes as a firm? As a firm it's a good firm. Considering your experience and training do you think this job makes full use of your abilities? No. What abilities are not being used? No precision work. Very rarely asked to use precision tools. You don't have to think - you tend to go stale.

How do you get on with production? If you'd asked me about 6 months ago . . . At the moment things are not too bad. What sort of difficulties? You'd get a job and I'd say it wasn't good enough to go

on the line. I'd call in my section leader and he'd agree with me and it would stand about and after a few days somebody would say, let it go. Then to get something changed; we were working 3 shifts and one setter would keep leaving it for the others and so on. Why has it changed? I think given one setter and one inspector, the setter realised that the inspection wants something and you can get an understanding between the setter and inspector. With three shifts there would be variations in inspectors with the same setter. Another thing they're not frightened of discussion now - before it was always argument. Is it because the pressure of production is off? It could be because we are slack, but human nature comes in. If they can get to have a good view of inspection then they won't say 'to hell with you, I'm doing it my way'. It's a big thing to approach each individual - specifically.

How do your mates think this job compares with others? The majority of floor inspectors find it just the same as I do. Rather boring. What do production think of inspection? Again it depends on who the inspector is. Some of them must have thought I was an idiot, others took my word for it. Do you think that the rate this job pays is fair compared with other jobs in the factory? No. Compared with whom? I have as much responsibility as the setter. I have to use as much knowledge as the setter and yet he can walk out with more money than I can. How long have you been in Ayes? 2 years last May. I came in as a floor inspector. Did you have any inspection experience before? No.

You are the floor inspector on the grinding section? Yes. Can you tell me in your own words what your job is and what you have to do? My job is to do a control check. On all the grinding machines? Yes. Do you have a regular beat? We have a patrol beat every half hour. Do you take a set number of samples? Maybe three from every machine. We find the mean size and put that on a statistical graph and we find the range of variation between the three. What happens to the graph? It's passed on to the technical adviser and he has his calculations on how good the work is that is going through the line. What happens if it is out of line? If we find that the tolerance is lower than what it should be for safety then we take another check and if that is the same then we approach the setter to improve it.

In general how do you like your job? In general I like it fine. What do you like most about it? Since they brought out the statistical quality check it's made the job a little bit more interesting. What do you dislike most about it? You might know that things are running to a low tolerance but they are quite within the gauge limits, but the job could be improved upon. But because of schedules and bonus work the setter is willing to let it run. If there wasn't so much schedule and bonus work the quality would improve. If you know they've got to meet schedules, you've got to come and go a little bit. Do you like it better than other jobs? I would say yes. What other jobs have you had? I'm a toolroom turner to trade. Although I get a great variety of work in turning it's good experience from time to time to be on inspection staff.

Have you ever thought about changing your job? If I thought I could improve myself by changing. For what sort of thing? Maybe more money or a job which I could gain more experience. Would you like to go back to turning? No, I don't think I would. I'd like to stick to inspection.

How do you feel about working in Aves as a firm? I find they're a very good company to work with. I find on the whole they treat you very well. Considering your experience and training do you think this job makes full use of your abilities? Yes, I think it does really.

How do you get on with production? I get on quite well because I'm a turner to trade and I know the different mistakes you can get off machine work. Do you have any arguments? I haven't had any arguments since I came here - touch wood. How long have you been here? Fourteen months. Is this the first time you've been an inspector? The first time. Why did you change over? I wanted to gain some experience on the inspection side of work. I thought it was a step in the right direction as far as improving your working conditions. Inspection is better than turning? Yes, I would say, yes. In turning you are working with all materials and you're very dirty.

How do your mates think this job compares with others in the factory?

The general feeling with some of the others some of them are not too keen finding things that shouldn't go. They put them out for rejects and along comes an inspection supervisor and lets it pass, even though it's outwith drawing limits. Has this happened to you? It's happened to me, but I just take it. Me, having a lot of experience in turning, I know that mistakes happen and might not affect it. I don't let it bother me. Do you think the others are bothered because they haven't had production experience? I think they don't realise the position of the inspection supervision. They think you can work to drawing limits all the time; but I know that things outside limits will assemble all right, it's silly to scrap them.

What do production think of inspection? It's my opinion in here that we don't enjoy much friendliness from the production supervision - the floor supervision. I think they could be more friendly towards us, as far as workmates are concerned. They see to regard inspection as people who are always trying to hamper them from making schedules. Instead of inspection trying to help them make a better class of work.

Do you think that the rate this job pays is fair compared with other jobs?

Yes, I would say it's quite fair - on the whole.

How long have you been in Aves? Fourteen months. I came as a floor

inspector.

You are the floor inspector on the R.2. section? Yes. Can you tell me in your own words what your job is and what you have to do? I'm the floor inspector of the machines. What does that involve? Approximately hourly checking. Do you have a set sample? Yes, normally three off. And a regular heat? Yes, we go round and round. What happens when you find a reject? Rectification if necessary. Components rejected for re-operation, if it's not acceptable for building. What do you do about it? In the last few weeks we've changed over to quality control. Prior to that they could leave it for 100% and it may be days before they could machine it. Now the work is rejected if it is not re-operated. Of course, the limits are such that quite a lot is acceptable. At present we get very little rejection.

In general how do you like your job? I like it up to a point. Up to what point? I find that in the inspection here - this is the only factory I've worked in - we are rather more controlled by production. I find that production are your bosses. I find that you're trying to do your best and you find that work is accepted. I've not been able to put over to the operative the need for better work. What do you like most about it? I do like the company. I do like working with people. If I should move on, which I would like to do, I would like another factory job. This is my first one. What do you dislike most about it? The only thing I dislike is the methods we have to do our work. We don't work individually. We're having to rely on the co-operation of other people and very often you don't get that. You find it difficult. Do you like it better than other jobs you have had? Yes, I would say so. What else have you done? I've been on electrical maintenance work. Have you ever thought about changing your job? Yes, I have. For what? You get monotony attached to the job and you feel : I would like a change. Would you want to stay in inspection? Yes, I think I would. I wouldn't like the sort of job whereby I do the same as an operator hammer and tongs all the time.

How do you feel about working in Aves as a firm? I certainly don't think very deeply of it. In maintenance did you work for large or small firms? Small firms. This is the first large firm you know? Yes, I've been here six years past. Considering your experience and training do you think this job makes full use of your abilities? My abilities in this type of work are actually limited, so I think, yes.

How do you get on with production? Not very well. Why not? I think it's mainly because you're with temperaments of many different people. It's very difficult to approach operatives, mainly women, men give little trouble. Is this because you are a man? Would a woman do better? No, worse. Women take things too much to heart. It's not them you're complaining of, it's the job.

Men will disagree but women perhaps won't talk to you for a couple of weeks on end. How do you get on with production supervision? Production supervision I get on with all right, but I don't say that my approaches always meet with success. That's controlled more or less by schedule - not any ill feeling towards one another.

How do your mates think this job compares with others? I don't think any of us have actually been in inspection jobs before, although they're all tradesmen. What do they feel about it? I think generally they find they enjoy inspection work as a whole. They prefer it to a machine turning off the same component day in and day out. They like a bit of responsibility. Probably why they like inspection is because it makes them inclined to be a bit lazy at times.

What do production think of inspection? I think very often it only needs one person to have an ill feeling against a person to make quite a lot of trouble against him amongst their mates. What is the general feeling? Generally reasonable. But that sort of thing can happen. Inspection here does not have enough scope, and production people realise that. They know he can't say 'That just won't run'.

Do you think that the rate this job pays is fair compared with other jobs? No. Where is the differential wrong? The responsibility that the inspector has, with the little power that he has, just comes quite a bit lower with the average, even unskilled labour. You can work away at a machine without a care in the world and earn £2 more than somebody whose always got something on his mind - is that right, is the next thing right?

How long have you been in Aves? Six years. I came as a viewer for 18 months, then a floor inspector. How did you come on to inspection? I did apply for a vacancy in maintenance, here, but they didn't have any vacancies. The money was the same and my trade was slack then. So I took it. I certainly haven't regretted changing over to inspection, it's been an added experience.

You are the floor inspector on turning? Yes. I've only just come into it. I was on assembly. Can you tell me in your own words what your job is and what you have to do? At present, patrol inspection. Going round machines - an hourly check based on statistical control which they're trying to bring into this machine shop here. But we don't use many gauges, mainly mks. etc. Do you take a set number for a sample? Yes, a certain percentage. The inspection department deals with the scrap - we have scrap reports to make out and charge various departments for scrap.

In general how do you like your job? I think it's quite interesting. What do you like most about it? I'm an armature winder to trade - although I've been here six years. I haven't been in the machine shop very long and it holds a certain amount of interest. What do you dislike most about the job? In this firm - I've always worked before where you do your own inspection - I don't think inspection gets enough backing. There should be some machinery for safeguarding an inspector. It's very easy for production to take a dislike to a particular inspector and get rid of him by one means or another either out the door or to another part of the factory. Why should they take a dislike - over disagreements? Yes, in here they don't work strictly to the drawing, this is not a Rolls-Royce engine. Do you like it better than other jobs you have had? I like it because there's more money in it. What other jobs have you had? Armature winding all my time. Why did you change to inspection? I was out of a job and was offered an inspection job and the money was good. Have you ever thought of changing your job? I have thought of changing - but I would like to stay in light industry. There's not much scope for winding in Scotland. Would you stay in inspection? I think I would like to change on to production to see how it goes and to get a bit more experience.

How do you feel about working in Aves as a firm? It's a good firm in many ways but there's other things that go to cancel that out. They're not very stable in their work. To my mind if it was properly organised, it's a first class firm. They treat their workers well, when they have them.

Considering your training and experience do you think this job makes full use of your abilities? No, armature winding is on the electrical side. More or less this is mechanical up here. How do you get on with production? I get on not too bad with them myself, there is a way of handling them. It all depends on your own nature, I think. One of the ways, if you consider their point of view and try and square it up with an inspection point of view. Do you have any arguments? Not very many. I always manage to get my point in a round about sort of way.

How do your mates think this job compares with other jobs? Most of them have been in other firms and from what I've heard I don't think they think too much of it as regards engineering standards. What do production think of inspection? They don't think very much of them - although if it wasn't for a lot of good inspection done in here, they couldn't turn out a fairly presentable article.

Do you think that the rate this job pays is fair compared with other jobs? No, definitely not. Compared with other jobs? The production workers, the setter operators, they get a good deal more. There's some jobs in here where the inspection work is every bit as hard physically as the production workers especially on the 100% inspections.

What do you think of inspectors being on bonus? I think it should be a factory bonus. How long have you been in Aves? Six years this month. I started as a viewer for one year, then a floor inspector. I was on the C.I.A. section for about three years.

You are the floor inspector on flanges? Yes. Can you tell me in your own words what your job is and what you have to do? I have to 100% check everything that passes through the section. Dimensions and concentricity are most important and metal porosity. Do you spot check? Yes, on drilling and tapping. Do you have a regular beat? Just the one section.

In general how do you like your job? In general I don't. Why not? You only have to be out there to realise. Personally I prefer the open air. I dislike the noise. What do you dislike most about the job? The point that I and most of the other inspectors dislike in this place is the lack of backbone of inspection in standing up to the production standards being lowered and raised to meet production schedules. What do you like most about it? The steady money. I'm a turner to trade and earned bonus before I came. I prefer steady money.

Do you like it better than other jobs you have had? Better than some. What others have you had? I've always worked as a turner - some jobs made good money - others up and down. Have you ever thought of changing your job? Yes. For what? Another job in inspection. More money - and the possibility of finding a job where the inspector's word is law as most inspectors believe it should be. How do you feel about working in Aves as a firm? Aves are good employers - very good. But the question of redundancy crops up too much for anyone to have any long term plans about staying here.

Considering your experience and training do you think this job makes full use of your abilities? Yes, I would say that. Would you like to have another job in inspection? Yes. How do you get on with production? It's a question of individuals, on the whole fairly well. Do you have any arguments? I haven't had any recently. But it's a question of individuals. Do you have disagreement on standards? My idea of standards is not so flexible as their ideas of standards. Any matters where I disagree I refer it to higher up and it has nothing more to do with me. I refuse to fall out with them. But we do have disagreements on standards.

How do your mates think this job compares with other jobs in the factory? The majority, I don't think, think very much of it. Why? Well, some jobs are pretty boring for one thing other jobs you have to work under pretty rummy conditions. What do production think of inspection? Production here look upon inspection as an obstacle towards attaining the week's schedule. Something that can always be got round about. Do you think the rate this job pays is fair compared with other jobs? Fair yes, compared with other inspection jobs. But I don't think it measures up to the setters rates. We're too far below the setters in my opinion.

How long have you been in Aves? 15 months, always on inspection.
How did you get on inspection? They advertised and I came down and got it.
The main reason I came from R- was there was a strike every day and you rarely got a full week's wages.

How do you stop a job? You inform the setter and he will investigate and if he thinks it's the case he will stop it. If you think that it should you inform the chargehand. If he refuses, you inform inspection supervision and they can have it out as has happened on many occasions. Over what for instance? Rota shaftgrinding. I remember one occasion. The job was a 3/10 thou limit and I considered it was running 3/10 over which gave the operator no tolerance. But the setter disagreed and said as long as he was in tolerance it was all right. I took it to the production section leader, then to the foreman and then handed it over to the inspection foreman. Incidentally, I lost my point, though I still think I was right.

You are the floor inspector on sub-assemblies? Yes, I cover the R.D.I., the lead assembly, Mark IIR and B.U.V. section. (Built up version, i.e. parts sent to Australia to be assembled there).

Can you tell me in your own words what your job is and what you have to do? Mainly to ensure that good parts come to the assembly, and that anything assembled on the sub-assembly is to requirements. And with B.U.V.'s anything that is dispatched is correct. Do you have a regular beat? Yes. How long does it take? 1 to 1½ hours. Do you take samples? I have a chart on three sections. I have a set number to look at and my rejects I mark on the chart.

In general how do you like your job? I'm very pleased with it. What do you like most about it? It's interesting from my point of view. There's always something to think about. What do you dislike most about it? Too much paper work attached to it in my opinion. What sort? For example, if I want anything to be returned to salvage, I have to do a re-op ticket, enter it on a sheet and in a book.

Do you like it better than other jobs you have had? To me it's the finest job I've ever had. What other jobs have you had? Metal polishing and press work. Why did you change to inspection? I had the opportunity to transfer to inspection in this firm. I started here on assembly. You prefer inspection to assembly work? Oh yes.

Have you ever thought of changing your job? Not really. I've only been a floor inspector for about 9 months. How do you feel about working in Ayes as a firm? To me it's the finest firm I've ever worked for. How many others have you been with? Four - all in London.

Considering your experience and training do you think this job makes full use of your abilities? Oh yes definitely. What other experience have you had? Press work, spraying. How do you get on with production? We are always a bit of a nuisance to them, naturally. How much do you have to do with them? I'm involved with production all the time. About what? Everything really, the building, all the faults. If you find a fault, what do you do? I report back to the section concerned first. Then I see how serious it is. Then I get all the bad parts off the assembly. What if the part is being assembled wrongly? I approach the chargehand and show him. Do you get any arguments? Quite a few, yes. What about? This week they are about too much grease on the bolt, it's not clinging properly. Who do you argue with? The line leader on the ringer section. Not on your section? No, I find they co-operate quite well.

W/ Cont.

How do your mates think this job compares with other jobs? Pretty fair. You always get the odd moaner, never satisfied, but on the whole pretty content. What do production think of inspection? They never like inspection because they always think we are trying to get at them all the time.

Do you think the rate your job pays is fair compared with other jobs? Oh yes, very fair. How long have you been in Ayes? 3¹/₂ years. I started as an assembler for 6 months, then a viewer, then final inspection, and a floor inspector for 9 months, always on this section.

You are the floor inspector on Final Assembly? Yes, on the four main lines.
Can you tell me in your own words what your job is and what you have to do? What I have to do is to see that the different parts are assembled correctly. If I'm not satisfied I tell the production chargehand or Foreman and I have to contact other departments if parts are coming out wrong. Do you have a regular beat? Yes. How long? It varies; fairly straightforward 1½ - 2 hours. I go round and watch each operator as he assembled his part of the product, make sure he is doing the right thing and check anything he's having trouble with. In general how do like your job? I don't mind it. I've been here nearly 7 years and I'm very happy since I've been here. What do you like most about it? You get a variety of faults - you can go round to different departments and contact the various foremen and get co-operation from them. What do you dislike most about it? The amount of writing we have to do. The last couple of months since the credit squeeze, I have to do re-op tickets every day now instead of twice a week, and a lot more time is spent in writing. Do you think it is better than other jobs you have had? No, I had a job at the beginning of the war at an ordinance factory. Doing what? On warheads of torpedoes - testing them for gravity and leaks, much more interesting.

Have you ever thought about changing your job? It's rather difficult when you're a married man. When I came out of the R.A.F. I took a job as manager of a local cinema. I stuck that for two years, then came here. The hours were too long, 9 a.m. - 11 p.m., 6 days a week. How do you feel about working in Ayes as a firm? I've been quite happy here - they've treated me quite well. Considering your experience and training do you think this job makes full use of your abilities? Yes, I think so. Twelve months ago I was made a chargehand. When the credit squeeze came off I came down to a floor Inspector. As a chargehand was the job different? You superintend the Floor Inspectors beneath you. As an inspector, you are more indirect contact with operators on the line.

How do you get on with production? Oh well, sometimes you get on all right, but you do come to cross purposes at times. Fairly well on average. As long as you point out in a decent manner what's wrong you get on fairly well. Do you have any arguments? No, not a lot. I don't think I've had an argument for months. Now I come to think of it, I had a tussle with the chargehand yesterday afternoon. It was about faulty enamel parts coming over, I saw to it and told him that a few more would have to come over. He rather lost his head over it. But it came out all right afterwards. I have more to do with the production chargehand not much to do with the others. All we do is to make sure the production people do a good job on the machine. If they make a fault we are there to do a 100% inspection.

How do your mates think this job compares with other jobs? Other chaps have been here longer - one worked in production before. I think they're quite happy. Everyone gets bored sometimes. But usually there is so much happening all the time you're kept pretty busy - not much time to get bored. On assembly you have practically every part, every bolt that comes into the factory. What does production think of inspection? A bit of a nuisance. If we find fault they say 'that can go'. But other times when they want your help they come running for it. Do you think that the rate this job pays is fair compared with others? Oh yes, very fair. In this factory they pay a higher rate than in any other round about. How long have you been in Ayes? Almost 7 years. I started as a viewer in the machine shop then a final inspector, then a floor inspector and was a chargehand for 10 months.

You are the floor inspector on final assembly? Yes, I cover the M.I. section, the Mark IVR, P.M. section, and any of my work that goes to salvage.

Can you tell me in your own words what your job is and what you have to do? We make a check on the parts coming into us to see they are to drawing and have been assembled correctly. We check for little faults that may be inside. I get my viewers to report anything unusual at once to me. If there are snags we come up against I've got to decide whose fault it is. I've got to get it back to him and convince him, e.g. they saw extra plating but I couldn't blame the plating people because I noticed the burrs which were causing it. Do you have a regular beat? Not absolutely regular. If I've got no snags it's regular, but not otherwise. How often do you go round? A complete circuit about twice in a morning. When you take samples is there a certain number or do you just take a handful? A handful, but I have a certain number I usually go through. If there are many rejects I may go through more. If there are too many I may send them back to production to sort them.

In general how do you like your job? I find it most interesting. I don't seem to find time to do what I want to do. The job I had before this, final viewing, the time did drag, but I've never known a job like this where the time goes so quick.

What do you like most about your job? I come across things that people seem to be baffled about what's the cause. I get stuck in and solve it. What do you dislike most about it? I can't think of anything really. The few things I dislike are petty. We are not having enough viewers. I don't worry now. I just do what I can. Do you like it better than other jobs you have had? I was with B- as a service mechanic, and a driver/mechanic in the army. Have you ever thought about changing your job? Not seriously. When things have gone a little bit slack, I think I'm next and think of getting out. But I haven't done anything about it.

How do you feel about working in Aves as a firm? Pretty good firm, especially when you compare it with other firms you've got around here. Considering your experience and training do you think this job makes full use of your abilities? They do at present. I know I could do the production job myself better if I could get at it. I'm used to production work on aeroplanes. I often require a standard that is higher. When I was a viewer, I used to be very fussy. I never saw eye to eye with our present foreman.

How do you get on with production? On the whole, barring our battles, all right. We get our battles - things they want to go through. But they do agree. The Superintendent told off his foreman in front of me. He told them to do as I say and if they have complaints to come to him. At the beginning there was nothing but argument. When I came the machines were adjusted wrongly and there was a lot of argument. So they said 'let's see you do better'; so I put it right for them. Now they have confidence in me and what I say. Of course, I have had to apologise once or twice where I thought I knew something but didn't. Well, I know now.

How do your mates think this job compares with other jobs? One I know likes it quite well, others not too keen, too fussy. What do production think of inspection? Not a lot. Personally, they're all right. They chip at us sometimes, but you've just got to take that.

Do you think that the rate this job pays is fair compared with other jobs? Oh yes, very fair. How long have you been in Aves? Nearly eight years. I applied for a fitter but there were no vacancies, so I started on assembly for two months, then I was on repair for five months. Then I was asked to come on inspection as I knew the job. I was a final inspector for six years and I have been a floor inspector for eleven months. I had a difference of opinion with the Superintendent Inspector, that's why I haven't got on more. He told me off by mistake, and I was so annoyed about it that I made him apologise to me in front of the Chief Inspector. Now I see that it was wrong to do that. It wasn't a very nice position to put the man into.

You are the floor inspector on the machine shop M, 21 section? Yes. I cover the Mark I external piece, shell, and bolts that go with it. Can you tell me in your own words what your job is and what you have to do? I'm responsible for seeing that each component is right at the beginning of my shift. After that I have to maintain that. If I find a job which I consider wrong, I stop it. If doubtful I use my discretion. For example, if the line is waiting it might be cheaper to let it run and scrap 50% than to hold them up. How do you stop a job? I tell the chappie 'stop' and I tell the chargehand. He may say that he will run it on his own initiative. Do you always tell the chargehand? Got to. An operator won't stop at my command. In practice he will but I've got no authority to tell him, so I go to the chargehand.

In general how do you like your job? The job as a job is O.K. Nothing exciting or interesting. Monotonous. What do you like most about it? Going home! The variety. The large variety of small bits which keep you on technicalities. What do you dislike most about it? The dead-end of this job. Where can you get inspecting things like that. Do you like it better than other jobs you have had? Oh no. What others have you had? Before I was a supervisor in T-, aircraft work; before that at B-. There there is Air Ministry inspection. Here if I say a part is no good, the Works Manager could come down and say take it. There they couldn't.

Have you ever thought about changing your job? Yes. For what sort of thing? For more interest and variety. This is the fourth redundancy we've had here. I think I'm going to be in the next one. If I had a job to go to I'd go to-morrow. On inspection? Yes. Have you always been on inspection? Yes. I always liked it. To do it under aircraft conditions is very good. How do you feel about working in Aves as a firm? The firm is not too bad at all. How does it compare with T- or B-? The standard required is higher there and therefore the intelligence is higher.

Considering your experience and training do you think this job makes full use of your abilities? No, positively not. What abilities are not being used? There is hardly a problem here that can't be solved by a boy of standard six. Three out of four inspection supervision couldn't pass the scholarship. This firm has not had an application from an experienced inspector in the last three years. Everyone they put on inspection supervision has never been an inspector before. My foreman comes from Production Engineering - you could check that with the Personnel - of the floor inspector in the last three years there has not been an experienced inspector coming in. There are now two firms in the area, T- and B-. They manage to get trained inspector and they pay less money than this.

How do you get on with production? Excellent. No quarrels at all with production. Do you have a lot to do with them? I'm at them every day. If a part is getting worse, I tip him off to get it right before anything happens. With our own supervision, I would say not so good due to indecision on their part. How do your mates think this job compares with others? They don't. The chaps I know are trained here. What does production think of inspection? They wouldn't touch it with a barge pole. Why not? They have become too specialised in a subdivision of their work. And operators? Operators are not intelligent enough to do a Floor Inspector's job.

Do you think that the rate this job pays is fair compared with others? Quite fair, good. How long have you been in Aveg? 5½ years. I came as a Floor Inspector. I've always been on the machine shop here, but in T-. I was on assembly.

You are the floor inspector on the autos? Yes. Can you tell me in your own words what your job is and what you have to do? My job is to ensure that the machines are turning out the job to the approved standard. I try to attend to each machine at least once an hour and do a percentage check. If I find trouble I've got to stick into it until I get the job right. On the whole the job is laid down by the gauges of various dimensions. The finish is more or less left to my discretion and some dimensions aren't covered by gauges, and I have to use my head. When I find wrong work I have to decide whether the job is useable or whether it can be made serviceable by further operation. I have to use a certain amount of tact and psychology with other work people - setters, operators.

In general how do you like your job? For me this is gaining experience rather than a job in the main. Experience for what? In machine production. I am a wireless/electrical mechanic by trade in the R.A.F. What do you like most about your job? The fact that you've got responsibility, that you carry around a bit of intelligence. What do you dislike most about it? The oil. Anything about the job itself? It tends to get a little monotonous till you have got new jobs coming up. Do you like it better than other jobs you have had? No. What others have you had? Auto-electric and car radio specialist. I liked that best. When was this? After the war. Why did you like it best? More of a sense of achievement. You were doing something.

Have you ever thought of changing your job? Yes. For what? I don't know, what my background would be suitable for. My background is wireless and electricity which I'm not very interested in. I took it as a means to an end. I took wireless up so I could get flying. How do you feel about working in Aves as a firm? Very fair and very considerate firm.

Considering your experience and training do you think this job makes full use of your abilities? No. What abilities are not being used? My electrical background is not being used at all. My supervisory background is not being used at all, or very little. What was that? I was a Foreman inspector on the T.V. lines in M-. When was this? All after the War. I was a Flying Officer, technical signals in the R.A.F.

How do you get on with production? Reasonably well. Do you have much to do with them? All the time. They're there to satisfy me with the job. We have some incidents where we disagree but mainly we talk our way round it. What sort? Normally it is the finish of a job or the importance of certain dimensions which the machine might not be holding. In the main it's the finish.

Can you remember the last time you stopped a job? I stopped several in the morning - dimensions wrong, finish bad, etc. What do you do? I decide whether it is sufficiently bad to stop it straight away or whether we can run for half an hour or so until the setter gets to it. Do you have many arguments? Yes. Finish is not that important on the backplate, only on a part of it. But my contention is that if it is not right on all of it, it will soon go completely. They disagree with me. But we won our point, they ground the tool. Who did you see about this, your chargehand? No. Their chargehand? No, the setter mainly.

How do your mates think this job compares with others in the factory? Not very good. The only think about it here is that the pay is good. The standard of inspection is not good compared to other places. They don't call for it. Would production prefer to be on inspection? Some would, some wouldn't. Do you think that the rate this job pays is fair compared with others? Oh no. We ought to get some more. Why? There is more worry attached to our job. A setter when he has finished this job he's finished. He just passes it to the inspector, all he's got to say is that the inspector passed it. An inspector's job is something never finished. Another point is that no man can do this job unless he's got quite a bit of experience behind him. I mean experience of handling people, dealing with people, to know whether they're taking you for a ride. How long have you been in Aves? Twelve months. I came as a Floor Inspector. Have you always been on inspection? Always. Why? Every time I went looking for a job, they said we want inspectors and your background suits you.

You are the floor inspector on the diecast foundry? Yes. Can you tell me in your own words what your job is and what you have to do? I cover the bakelite and the diecast. The diecasting is pretty simple. Just keep an eye on the ejection pins of the castings and see we don't get any slip up. If the viewers get any trouble they can come and see me. Dimensionally not a lot there. And on the bakelite? I do a round about once every hour. Make sure the temperature is right and the moulding's coming off right. The diecast machining i.e. polishing, drilling, tapping, I ensure that the holes are in the correct location with gauge work and verniers.

In general how do you like your job? I like it. What do you like most about it? I suppose it's the bit of authority you've got. If the job is not to my satisfaction I ensure that it is. What can you do? If the operator is not doing a job to my satisfaction I ensure that he does it again and keep up to the standard set by the supervision. What do you dislike most about it? You can't be too friendly with the operators. If you do they're inclined to take advantage. They hold the standard for a little while then it would drop. Do you like it better than other jobs you've had? Yes. What others have you had? Previously I was a turner, and before that a lorry driver. Did you come here as a floor inspector? Yes. Why did you change? It all started off when I had a smash during the war and they suggested I went on a government course on turning. Here there is no production turning, only toolroom turning. I hadn't had enough experience for that so I came on inspection. Have you ever thought about changing your job? When I first came here I was rather uncertain. I was a bit wary of the job. But after six months I settled down very well. How do you feel about working in Aves as a firm? I don't think I've worked in another firm as good as this.

Considering your experience and training do you think this job makes full use of your abilities? No, I don't think it does really. What abilities are not being used? On the department I'm on there is not enough precision work, tool work. How do you get on with production? Dear, dear dear. Sometimes all right, sometimes terrific rows. What about? This is the type of thing. Perhaps a mould has got a scratch. The moulding comes off with a scratch mark and you go to production and they say that they're all right and we must probably have to place a reject slip before something is done. Numbers count to production, quality counts to us.

What do your mates think of this job? I don't know. Some of them are quite contented. A lot of these boys they're not really interested in the work. But Aves pay a very good rate. I've got a viewer down there who is a tradesman. I think he's silly to be viewing here, but as he said, he gets 4d. an hour more here for viewing than for his own trade outside.

What do production think of inspection? Now we get quite a lot of co-operation. Up till two months ago it was rather different. Why did it change? Production are for production and they like to squeeze anything through to keep up their bonus. (Repeat question) I think the General Manager has put our supervision directly under him.

Do you think that the rate this job pays is fair compared with other jobs? Oh yes, I think so. How long have you been in Aves? 20 months. I came here as a floor inspector.

You are the floor inspector on the miscellaneous section? Yes. I cover capstans, grinding, automatics, various drillers and tappers, a couple of special press machines and two millers. Can you tell me in your own words what your job is and what you have to do? To go around the work and pick it up and see that it complies as near as possible to drawing and to see if the quality can be improved. If I can see a better way of doing a job I suggest it to my supervisor. Do you have a regular beat? Yes, I patrol that every three quarters of an hour at least, unless something comes up - a setter wanting me to check his first offs.

In general how do you like your job? I don't like it. Why? I think I'm cut out for something netter. I've got more qualifications than the Chief Inspector. His were honorary. I won mine. It is graft. It's just ludicrous for somebody with my qualifications to be a floor inspector. I've got O.N.C., and H.N.C. in electrical and in mechanical engineering.

What do you like most about your job? Marking out a job from a drawing. What do you dislike most about it? Bickering with production people mostly. Do you have a lot of it? Yes. About what sort of things? Production are only thinking that if a job will go it's good enough. I'm not. They are wanting to take a chance all the time. That's not right. They should get it right and take the onus off inspection. What onus? I'm responsible for all work that goes through and if it's wrong they come back to me and say 'why did you let it go?'

Do you like it better than other jobs you have had? There is nothing to do all day to be interested in - a boring job. I'd like something more technical. Have you ever thought of changing your job? I keep writing away for a better job. When I started here they promised me things, so I didn't write for a long time. Jobs in inspection? No. Why not? I'd like a job where I can use my imagination more than what I can now. What sort of job? Planning engineering, or as a lay-out engineer, or maintenance engineer.

How do you feel about working in Aves as a firm? You know the answer. Considering your experience and training do you think this job makes full use of your abilities? No certainly. What other jobs have you done? I was a planning engineer on lay-out in S-. That's more my line. But I became redundant. They took a contract at a slack time, but before they could carry it out things looked up, they didn't fulfil it and lost it.

How do you get on with production? The setters are all right. But those little bosses like the head setter or the chargehand, that's what I can't get on with. Do you have a lot to do with them? I'm always with the setters.

And the chargehand? I try to avoid him as much as possible. How do your mates think this job compares with other jobs in the factory? Most people don't like the job. Nothing interesting in it.

What does production think of inspection? If they thought a lot of it they would be on it, wouldn't they? They'd rather do production, because it's more interesting.

Do you think that the rate this job pays is fair compared with others? It's a good rate.

How long have you been in Aves? Two years. I came as a floor inspector. I was two months on the bakelite and diecasting and then on this.

You are the floor inspector on the autos and capstans? Yes, I'm covering the two jobs and everything appertaining to these two, i.e. the torsion bars and the rollers. Can you tell me in your own words what your job is and what you have to do? The rollers, they have length, diameter of bore and depth of bore. Then there are the inserts they have to be kept to size. I have to check the milling size, drilling size and concentricity. On the torsion bar, 3 capstan operations have to be checked to size diameters and lengths. Grinding the torsion bars down to the correct size and length. A release lever to be checked for length and slot. How do you control them? There are gauges for all the particular jobs except for those we check on the clock. Do you have a regular beat? I have a beat to cover. How often? It depends on what trouble I meet with. Each job is covered every hour.

In general how do you like your job? I like my job very much. It is interesting enough. I was an inspector in the early years. I was with the Ministry of Supply during the War. Since then I've been a machine shop Foreman but I was travelling too far and I thought I would just finish off and take an easier job and come nearer home. I'm not as young as I was. Where were you? S-, Machine shop Foreman for about 10 years since the war. During the war I was a Ministry of Supply travelling inspector.

What do you like most about your job? You get a certain amount of satisfaction out of feeling that you have done something to have got the job correct again. You find operators that are stuck and you can help them out of their troubles. What do you dislike most about it? I dislike when everything is running all right and I'm simply taking up gauges and everything is correct. I also dislike it when the scrap is running too high. I try to get it down. I don't like being caught when the job has gone wrong and I haven't been there in time. Do you like it better than other jobs you have had? Oh no. What would you prefer? I would prefer my last job. Different problems that you come up against every day and the battle of overcoming them does give you a lot of satisfaction. Do you prefer production to inspection? Yes, it gave me more responsibility. We had to keep up with the assembly and we often rushed, but when it's all done you do get a lot of satisfaction from pulling it off. Have you ever thought of changing your job? I'm finishing off over 60. I wouldn't have packed in my other job otherwise. How do you feel about working in Aves as a firm? Fairly good firm. They pay well and the conditions are pretty good. You're not worried a lot as in some firms. As long as you get on with your work nobody worries you.

Considering your experience and training do you think this job makes full use of your abilities? No, but my other job was getting too much.

How do you get on with production? Very good. I try to be up with production. I get the troubles from them and I try to attend to them and that's that. How much do you have to do with them? Very little. Only when we get trouble. During the last month I can't say once. Does it help you to have been a production man? Yes. You know the snags and try to anticipate those troubles. I try to get it like production want it.

How do your mates think this job compares with other jobs? It's very difficult to answer for them. They're always talking about packing it in. But they never seem to do that. What do production think of inspection? That depends on the particular part you're using. If it's giving them trouble we're not very popular. They're always inclined to think that inspection are the cause of their troubles.

Do you think that the rate your job pays is fair compared with other jobs? Yes, definitely. What do you think of inspectors being on bonus? Our bonus is governed by what goes out of the factory. You've got no say at all except to see that good work goes. What about direct bonus? I disagree. I think the standard is bound to fall. How long have you been in Aves? Nine months as a Floor inspector. I was on the base line previously. They asked me to make a change when they were getting a bit of trouble down here. There is a Aye policy, they don't let you settle down.

You are the floor inspector on shells, department 23? Yes, I cover the shells, and the compartments that go into it. Can you tell me in your own words what your job is and what you have to do? To keep a high standard of the quality of work, to keep it to what was called for by the drawing. Sometimes you can't get it quite to drawing, so you use your initiative and split the difference. But you must keep the high standard. Do you have a regular beat? On the shell line you've got to go where the trouble is. It's line work not individual, like say, autos.

In general how do you like your job? To be honest - to-day I would be glad to go home. But I'll get over it by to-morrow. This has been one of my worst days. What sort of things? Petty things, you can't get hundred percent standard on mass production. It boils me up the things they tell you. It's negligible really 40 out of 5,000. How many rejects did you have this week? 93 this week. It fluctuates.

What do you like most about the job? One job is not better than another. It is interesting having a new machine or new layout. At the moment there is nothing so that it grasps you, like. What do you dislike most about it? Sometimes you find a job that is wrong. There are times when you get a few arguments and you can't just walk away and leave it. There are times when you don't get the co-operation I would like - the animosity that I don't like at times. Can you remember a case? I have been told by a foreman to f-off his section. Then there is lack of co-operation by the chargehand. He says keep the line going when I know more scrap will be caused and tell him. Of course, different lines work in different ways. There is a great demand for shells and the chargehand has to get them through in any way he can.

Do you like it better than other jobs you have had? I was a machine tool fitter before I came here. I prefer my last job. But I'd been at it for 13½ years and I thought I'd have a change. With this job you pick up all you know on one line and then it's just the same. Have you ever thought of changing your job? If I thought I could get a job to-morrow as a machine fitter I would, but you can't pick and choose at the moment especially in this area. Inspection is too much argument. You say 'blow it' if you see a job running. You don't want to.

How do you feel about working in Aves as a firm? I think it's pretty good myself, outside the job. Considering your experience and training do you think this job makes full use of your abilities? Oh yes, you are continually drawing on your experience. You take a floor inspector off the line and you'll see stuff bad coming off the floor. But initiative plays a big part on the line. You can stop the line on a thing that doesn't matter.

How do you get on with production? It depends on who the foreman is. I've been on the line with four different foremen. I can only say one is an excellent gentleman to work with, one is just average and two, I don't think much of them. What about operators or setters? There are times when you start

making a fuss about it. If an operator is doing wrong we must tell him and warn him that you will take it further if you need to.

How do your mates think this job compares with other jobs? The floor inspector opposite me is like me. He wouldn't mind getting another job to-morrow. The only time the floor inspector is interested is when a new job comes out. What do production think of inspection? A debatable point. Sometimes they like to have you around when you're useful. We definitely save them a lot of trouble. The inspection department controls production. But there are times when they don't want to see you. Have you had any production operator who went to an inspector to ask for help? There are one or two about.

Do you think that the rate this job pays is fair compared with other jobs? Oh yes, I think that it is a fair rate.

How long have you been in Aves? Twelve months. I came as a Floor inspector. I was given a little test by Mr. T- and he gave me a trial. He likes to have floor inspectors who have engineering qualifications. Floor inspectors without qualifications don't know what can be done.

You are the floor inspector on the B.S. assembly? Yes and on the storage covers and part guard. Can you tell me in your own words what your job is and what you have to do? Well, I've got to check the things. I start from the bottom end where they blank them out, as far as the operators can go. They work for say half a day to build a stock up and then the other half day the finish. It's mostly press work, of course.

Do you have a regular beat? I try and work it from 7.30 and carry on like clock work. How long does it take? About an hour. If there is trouble we spend more time and wait there until the job is done. In general how do you like your job? There could be a lot of improvement. What sort? They've got standards here. I've only been an inspector just over 12 months. I find it here in Ayes now, if they want a load of machines through on one particular day they lower the standards - let it go. When things slacken off they raise the standard. You don't know what to do. It's the first time I've been on inspection. I was setting capstan presses and so on. Why did you come on to inspection? I applied to come in as a setter or whatever was going but there was not a vacancy except inspection so I took it. It's all experience.

What do you like most about the job? Checking the jobs. The measurement? Yes. I think if we had more of that it would be more interesting. On mass production they've got no time really, no matter what happens it's got to run. What do you dislike most about it? Well, one day they let a job go and the next day they stop it, although it's no different in the job. Do you like it better than other jobs you have had? No, I don't think so. You prefer capstan work? I think I do. It's more manual a job to do. I'm only going by working in Ayes, it may be different in other factories. Have you ever thought of changing your job? Yes, many a time. For what? A manual job, to get at it. I want to do something. I want to work. You don't call this work? I think it's too easygoing. I prefer to turn a job out than just check it.

How do you feel about working in Ayes as a firm? Pretty good. They pay well, that's one of the biggest things these days. I think that the rate is one of the biggest things. Considering your experience and training do you think this job makes full use of your abilities? Yes. Do you have any skills not being used? No. How do you get on with production? Pretty good. Wherever I've been they've co-operated pretty good. How much do you have to do with them? Oh yes, with the supervision a lot, with jobs going wrong. And with operators and setters? They're good. They help me out a lot without any fuss or bother. That makes it a lot easier, of course. Does having been on Production help? Oh yes, a lot, terrific. I can see where a job wants doing

or where a tool wants modifying because I know. You dare not say a lot because they say 'you're telling me my job'. Does your past experience help you to get on with production? Yes. A setter may be stuck and I can make a little suggestion; he might take it or not, it might help the job.

How do your mates think this job compares with others? On inspection now? Yes. I've talked to several and they say they're making a product and that's all there is to it. They're not making something that's got to fit - that's got to be perfect. There's some jobs here - you can't go by drawing if it fits it goes.

What do production think of inspection? I don't think production ever did like inspection. I think we're all a menace to them. There's many a time that the production have over-ruled inspection. If a tool is in a bad way and they can't afford to stop a job - they'll run it. How did you feel about inspection when you were on a production job? I wanted to see the back of them, of course. Do you think that the rate this job pays is fair compared with other jobs? Oh yes, no doubt about that.

How long have you been in Aves? Fourteen months. I came on the bench, and I wanted to do that. Was there for about four months. Why did you change? The Deputy Chief Inspector sent for me and asked me and I said 'yes'.

Can you tell me about your career? I've been a capstan operator in different places and then a foreman of a machine shop immediately prior to coming here. I'd been there eight years. We had a difference of opinion and I left on principle and many more besides me, too. When I came here, there was just that fear that I would not get a job, so I took what I was given.

You are the floor inspector on the T.B. section? Yes, all types of T.B. except the Mark I. Can you tell me in your own words what your job is and what you have to do? You do a patrol check of the section, check on operator and job. Mainly you decide in your own mind, will this piece part do? Will it assemble? You very rarely get them to drawing. Do you have a regular beat? Yes. How long does it take? You can't give a definite time. If it's O.K. I can get round in 20 minutes. How many times do you go round in a morning? I don't know. It is a line job so I can always check it at the end.

In general how do you like your job? I don't particularly like it. Why not? Some days when you run into trouble it's very interesting. Other times it's like a policeman; does he like his job? It is inclined to get boring. What do you dislike most about it? There are times when there is no trouble, you're not achieving anything. A really interesting sort of job would be to make something. Why are you on inspection then? It was just an odd chance I applied to Ayes after demob, and they had a vacancy for an inspector. What do you like most about the job? The thing I enjoy most is really getting down to checking the job with drawings and instruments. On a normal check you don't have any instrument work? No, a visual check. You have a pretty good idea how things are going. Do you like it better than other jobs you have had? No. I've had three other jobs. The most interesting was as a fitter/assembler, when you had to fit stuff to-gether, file it, dress it, etc.

Have you ever thought about changing your job? Yes, often. I've never decided to do it. Firstly in the coal district, unless you want to go underground, the best paid is factory work and Ayes is the best paying and, except for skilled work, inspection pay is the best rate.

How do you feel about working in Ayes as a firm? Quite a good firm, I think myself. Considering your experience and training do you think this job makes full use of your abilities? I'm capable of higher things. What sort? Take toolroom work. I think I'm capable of doing it, but I haven't served an apprenticeship so that's the end of it. But you often on inspection come across a problem that does employ you fully.

How do you get on with production? Very well with production supervision. How much do you have to do with them? I have a great deal more to do with production supervision than with my own. A floor inspector stands on his own feet in his own section. What sort of things do you see them about? If I find a job that's not up to par, I take it to them and try to get it stopped or rectified. I get very good co-operation, but that depends on the individuality of the inspector. Some people I get on well with; others I don't get on with at all.

How do your mates think this job compares with others? You get some very different ideas. Some like it. Some, like myself, would like to go on to something better, but it's not so well paid. What do production think of inspection? Depends. A sensible bloke realises that inspection is a necessary evil. Would they like to be on inspection? If things are tight, I've never known an operator to refuse a transfer onto inspection.

Do you think that the rate your job pays is fair compared with other jobs? Yes, I think so. How long have you been in Aves? Eight years. I came as a Final Inspector for two years, then have been a floor inspector for six years. What did you do before? Before the Forces I worked in a chemical lab, and then in an electrical lab. with Rotax.

You are the floor inspector on the diecast and bakelite section? Yes.

Can you tell me in your own words what your job is and what you have to do? I have to make sure that work that's produced that it's coming off as per drawing and that the usual standard is kept up to its high standard. And check first offs to be as per drawings. And check the amount of scrap that comes off the job. Do you have a regular beat? Not regular the same job is not running. I start at the same place and I may have to change my mind and go to a particular job, if we have more trouble.

In general how do you like your job? I like it all right. I'm satisfied for the moment. What do you like most about it? It's a bit more interesting than the rest of work on production. There is a certain amount of responsibility attached. The pay, of course, is more than on the line. You feel as though you are accomplishing something.

What do you dislike most about it? In the diecast it's pretty unhealthy as regards fumes, and the heat, of course. But as regards the inspection I don't think there's anything I dislike.

Do you like it better than other jobs you have had? Well, I've been in practically the same kind of work ever since I left school. I don't think I like it better than others. It's far more advanced and the money is better. But if I had a chance I'd like to go into business in one of my hobbies. What other jobs have you had? Motor mechanic, bench fitter, signature winding, all very interesting. More interesting than inspection? Yes.

Have you ever thought of changing your job? Oh yes. For what? I'm undecided. If I were going to change it would be for something better, but there isn't a great deal of choice, I'd like to get on in inspection.

How do you feel about working in Aves as a firm? All right. Better than any other firm I've worked for. I don't mean a lot of the people employed in a supervisory capacity. But the firm itself is all right. Considering your experience and training do you think this job makes full use of your abilities? I don't think I'm qualified enough to go farther than what I am at the moment anyway.

How do you get on with production? All right. We get our differences occasionally but by and large the relation is pretty good. What do you have differences about? We are on three shifts and a lot of the work has to be passed visually. Sometimes they said one shift doesn't maintain the standard that the others maintained. It does work out that we have our own way. I found out that if the job is reported to the chargehand or section leader, he gets cracking

and sees it comes out all right. Do you have a lot to do with production? With them all the time. We discuss the work, the different jobs. Very often suggestions come from operators. We get on very well with them, there is no antagonism.

How do your mates think this job compares with other jobs? I don't know. What do production think of inspection? They feel inspection are a cut above them. I think they've got that feeling. Some of them always feel they'd like to have a job like that. Naturally, of course, it is better.

Do you think that the rate this job pays is fair compared with other jobs? Yes, I do. How long have you been in Aves? Six and a half years. I came on assembly, then I was a viewer, final inspector, and floor inspector for a year. Why did you change from assembly to viewing? Assembly was a dead end and I thought there was a possibility of getting a better job and better pay on inspection and you feel as if you are accomplishing something. It isn't the same repetition work on the line all the time.

You are the floor inspector on autos? Yes, singles and multiples.

Can you tell me in your own words what your job is and what you have to do?

My job is to make sure there is no scrap being turned off the section, but it is to a high standard of work. Do you have a regular beat? Yes. How long does it take? One to one and a half hours. Do you take samples? Five or six as the case may be. My first job is to check gauges. I take six, check them and if they're all right I pass it. We have a two box system. I suggested it when I came here. It stops any scrap getting through. If I find any bad work the operator checks it through. If I find something wrong I ask the setter to stop the job and put it right. When he has done that he asks me to check it.

In general how do you like your job? I like it well enough. What do

you like most about it? It's interesting and you're learning something all the time. And it's a job that occasionally you can learn all day because you get such a wide variety of work. What do you dislike most about it? You get a couple of barneys with the foreman and production, but it's all in the job. What I don't like is when you have to get something done, and it's not done. But you rarely get it on this section. They just argue till they're blue in the face and they do it. What sort of things do you have arguments about? Standard of work, I say this class of finish is not good enough and production has got a tendency to disagree. But on this section I don't think they'll ever really disagree but you do get an occasional slight argument.

Do you like it better than other jobs you have had? I've only had

one job before - motor mechanic. Do you prefer this? Oh definitely. Both interesting, but inspection is more filled out than a motor mechanic.

Have you ever thought of changing your job? No. From inspection to

something else you mean? No. How do you feel about working in Aves as a firm? Excellent. Considering your experience and training do you think this job makes full use of your abilities? Yes. What were you before? Only a time-served motor mechanic.

How do you get on with production? All right. It's about all I can

say, all right. Do you have much to do with them? Quite a lot. Is the only time you go when there is a reject? Yes, that's the only time I go.

How do your mates think this job compares with other jobs? A mixed

feeling. You get some people who can adapt themselves to this kind of work, others who can't.

What do production think of inspection? They don't think much of inspection. They wish we weren't there. Do you think that the rate this job pays is fair compared with other jobs? Yes, definitely. How long have you been in Aves? Fifteen months. I started as a viewer for one month then became a floor inspector. Were you always on this section? No. I always have been in the machine shop, but I was over on the torsion bar section before.

You are the floor inspector on capstans? Yes. Do you have the same section on days, too? Yes. Can you tell me in your own words what your job is and what you have to do? Generally speaking you've got gauges which cover everything that's running. You are checking the operative and setting a standard for him to work to. Up to a point you're setting a standard in excess of the gauge. Like what? It's an opinion thing in many cases such as the gauge fitting into a bored hole. They set their opinion against mine. You are dealing with men who haven't much experience of engineering and their ideas are often far away from the right one. Then again nobody likes to be told something is wrong after they have made it. You've got to be careful of that.

Do you have a regular beat? It can't be strictly regular. How often do you go round in a shift? I cover more than 40 different operators, so you can't say. Anyone can be wrong. What do you do if you find one wrong? I check a number and if I find a dozen or twenty depending on how many things run per hour then I part. If I scrap off on my own, I show my chargehand a few samples. What about stopping the job? Oh yes, you do that. In this job it's mostly setting faults. I stop the operator and I get the setter.

In general how do you like your job? I think you get your moments in anything. I had a number of difficult years of work. I was an apprentice in general engineering, then a mechanic in the R.A.F., then back to my old trade. I've been here just over a year. I think it compares pretty well. You've got to look at the personal side. This company pays more than others.

What do you like most about it? To pinpoint something ... it gives you something of scope. You're deciding what is right or wrong; it isn't somebody above you who is deciding it all. What do you dislike most about it? The uncertainty when you've got to stop a job and be there to see it's put right. The uncertainty of how everything else is going. Can't you stop a job, go away and come back? I can't see when the operator goes back. My job covers an awkward area. If you get some idea of how long they're going to take, you leave it then; otherwise you've got to follow through.

Do you like this job better than other jobs you have had? Certainly better than service life. Other than that I'd put it more or less on a similar par. Have you ever thought of changing your job? Only at the beginning of this year when the situation was rather doubtful - not due to the work itself. What would you look for? I'd more or less take what comes. I took this the same way, I found it suited me so I just stayed here.

How do you feel about working in Aves as a firm? Very good, I think. How does it compare with others? Better, not only financially; the whole of it, the attitude all round. They have got a younger outlook; the supervision are mostly younger men, not 60.

Considering your experience and training do you think this job makes full use of your abilities? Well no, it's different work to what I was doing. It's a different sphere. How do you get on with production? Reasonably well, I think. That depends on the part of the factory. The press shop, for example, are very much more difficult people. Where I am you're stopping an operator, not a line of 200 operators.

Do you have any arguments? Well, I have an argument, but I don't intend to fail. If I should fail from my personal point of view, I get a higher man to take it. What sort of differences of opinion do you have? Well, the state of a bored hole is inconsistent to a degree that should be put right. I go to the setter. The setter says that I'm forcing the gauge. Most of them try to sell you a story, but if the story fails they don't worry about it, like.

How do your mates think this job compares with other jobs? You get some like myself who try to accept the ups and downs. Others are completely miserable. I wouldn't be in the job if it upset me to such an extent. I think it's more in the person than in the work, they'd be miserable anywhere. What do production think of inspection? You couldn't give a general line. Everyone tends to be bitter at times it's just the situation. Generally they've got one job to do and I've got another.

Do you think that the rate your job pays is fair compared with other jobs? Yes, with possibly one exception. Which one? I think there's too big a gap between our pay and the tool-maker's pay.

How long have you been in Aves? Just over a year. I started as a floor inspector.

You are the floor inspector on torsion bars and rollers? Yes. Can you tell me in your own words what your job is and what you have to do? Keeping a close check on quality, finish and mechanical accuracy - general quality control. Do you have a regular beat? Yes. It's divided into two sections. I find it no advantage to cover them regularly. I find it wiser to cover the trouble spots. You get to know when trouble is likely to crop up and where. You take samples? Yes, checking, finishings, sizes - that's the main thing. Do you take a set number or a handful? I stand by an operator for a short while and take a number of samples from him as he's making them. Where do you get your standards of finish from? We aim at the best finish possible - the finish we know they can obtain. Of course, with gauges they can't very well argue on that, so that simplifies the job quite a lot. For many of the components we can verify the accuracy of the gauge with a micrometer.

Do you have many arguments? Very rare. I don't think I've had as many as some do. I don't know why. If I find a job is wrong I've only got to approach the setter and tell him and he picks it up right away. It might be that I've had the experience. I've been a setter myself for many years and a toolmaker so if there is any trouble I can put my finger on it. Most of them know this and they don't argue very much. I had one of the very few arguments last night with a couple of setters. If you are using a gauge and you get something exactly at its no-go limit ± 0 it will not go in under its own weight, although you can push it in. These setters didn't know that and they argued about it.

In general how do you like your job? Very good. I find it very easy. It is very simple after what I have been doing. I was a foreman in my previous job. I came here for a matter of money. I was model shop foreman in S- with Mr. CF4.

What do you like most about it? It is a very good atmosphere here and I like the attitude of the management compared with my previous employment. They show the employee a little bit more respect than the average. A little point, your name is on your clocking card as Mr. G15. What do you dislike most about it? I don't think there is much I do dislike, I mean in comparison with other places I've been. I find all my supervisors in the job are all very reasonable and considerate. I don't consider it a holiday camp or anything like that but it's quite a cheerful place to work in.

Do you like it better than other jobs you have had? Well, yes. It's of a different nature. It's more routine here. Previously I had my own organising to do. Have you ever thought of changing your job? In the factory? I put in an application for a foreman's job at the branch factory because I'm living in that district.

But you want to stay in Aves? Oh yes, I don't think there's a better employer anywhere in the district. Apart from quite good working conditions, the pay and other considerations. I notice I get the pay increases without pressure. With my old employer, they'd be more likely to haggle and in my case, if your job was above the minimum, you were very likely not to get the increase.

Considering your experience and training do you think this job makes full use of your abilities? Me, I don't frankly. What abilities? I find my experience and training an advantage, but I've been more or less a craftsman. I've used my hands more than an inspector.

How do you get on with production? Quite well, on the whole. Do you have a lot to do with them? The usual contact with the chargehand mainly. If there is an argument of any kind, I generally get the better of it - very rarely get an argument. Does it help to have had production experience? Very definitely, you can see the other side of the picture and if there is any dodging I know how it's done because I have done it myself.

How do your mates think this job compares with other jobs? I think each has his own point of view. I think their general opinion is the same as mine from the point of view of employment. They seem very satisfied. What does production think of inspection? The usual nuisance - a necessary evil. But they have to co-operate. I think co-operation is better now than it was. I started here 12 months last February; conditions are different now. There was intensive production in those days. Production took first place at the expense of quality. Now we have the time to care about quality.

Do you think that the rate your job pays is fair compared with other jobs? Yes. How long have you been in Aves? Nearly 15 months. I came as a floor inspector and I have always been on this section.

You are the floor inspector on the presses? Yes, the shell line, the presses and welding. Can you tell me in your own words what your job is and what you have to do? To maintain a high standard, if possible, of work. How? By keeping to standards as laid down by the company and reporting to my superior if work is below that standard. Do you have a regular beat? Yes. How long does it take? One hour if everything goes all right. With this job you have to go where the trouble is. What sort of trouble? In the human element. You get a different chap locates differently. It is this part, the outward shell, that sells the machine. It's got to be (sign) .. you know (i.e. just right).

In general how do you like your job? Quite well, in fact. It is interesting in a way. What do you like most about it? It's varied and you get a chance to study all the chaps you have to get in contact with. And when you see the product in the shop. You can say that came off your line. What do you dislike most about it? Now lately, the cramped working conditions. They've put in so many machines. Anything about the actual job itself? No, I don't think so. It's well paid.

Do you like it better than other jobs you have had? I think so, otherwise I'd have left. I had a chance to go back to my previous jobs. What jobs? Well, in the motor trade I've been in all my life and in the R.A.F. too. And you prefer this? Yes, now I'm getting older. You've got a chance to put your experience to help others.

Have you ever thought of changing your job? Well, I did once a little while ago. It was just that productivity was high and inspection didn't have much of a chance here, you know. What sort of job? Engineering job, go back to the Diesels. There is a better chance for inspection now? Oh yes, you're not battering your head against a wall now. You can see a good job coming out, and if it's not you can have it rectified easier. What do you think has made this change? We seem to have more control - I don't know about the higher up. But the market's harder; you have to be good in order to sell.

How do you feel about working in Aves as a firm? Oh, quite good. It's the best firm. They look after you. They go far beyond the regulations. Considering your experience and training do you think this job makes full use of your abilities? No, I don't think so. What abilities are not being used? I was F/Sgt. in the R.A.F. and I was with M- Services Bus Company in charge of the technical side and I was then in charge of the workshops of A.Y. Transport (i.e. the Aye Transport Co.) Why did you change over to the factory? The Manager wasn't very easy to get on with so I got a change. So your technical abilities are not being used? Yes, I believe so.

How do you get on with production? Oh, very good. We're getting bags of co-operation lately. How did it used to be before? A bit on the other side, I'm afraid. In what way? If the job wasn't reading to your standard they would persist in running it. That doesn't happen now? Not now, no.

How do your mates think this job compares with other jobs? I think they like it. Especially when redundancy is coming along, they say, 'I wouldn't like to go back to so-and-so' or 'I would like to go there to work'. They wouldn't like to go back on the bench? Yes. It's interesting because they haven't had that much responsibility. What do production think of inspection? Often they're very grateful. In fact, they say 'Thank you for giving us the tip'. Do you have disagreements nowadays, or arguments? No, not really. Before you start up you put a reject slip against it and that's that. There is more fear of that than anything else.

Do you think that the rate your job pays is fair compared with other jobs? Well, yes and no. Sometimes you think it's not. Other times you're well contented. In here we're all skilled men. It's far higher than other factories pay for inspection except for Government A.I.D. you know.

How long have you been in Aves? One year in the factory, and three years with the Transport. Did you come as a floor inspector? Yes. On this section? Yes.

You are the floor inspector on miscellaneous items in the press shop?

Yes, 21 department. I cover shells,, other press parts, components for every part of the factory.

Can you tell me in your own words what your job is and what you have to

do? I'm responsible for the quality of everything that's done in there. They can't carry on with the job unless I'm fully satisfied with it. Do you have a regular beat? There is no definite time laid down to go to any job. That's up to me. If I've got a job that's a bit sticky I go to that. I can spend at that job rather than at another one. Do you take samples? The setter sets it up and calls me over for the first off. I check that to drawing. If I say 'No', they've got to see it's put right. If I give the O.K. they start away with it then. What do you do when it's running? When it's running I go round periodically and then have a look at what has been done before I've got there. If it isn't right I call the setter up and I tell them.

In general how do you like your job? It's very interesting and I like

it. What do you like most about it? A difficult point. I like it because I know that whatever I do is a responsible job and it gives a satisfaction to know you're running the job all right, that you can take the responsibility. It's always a satisfaction to be able to do that.

What do you dislike most about it? I don't know, as I've never

really thought of that. I suppose the only thing I dislike about it is when you get a troublesome operator who doesn't pay attention to what you're doing. Do you like it better than other jobs you have had? Yes, I've been in most engineering jobs. This is the most interesting. You can see so many different jobs and different people. My own trade is a fitter, but I like this better.

Have you ever thought of changing your job? Not at the moment I haven't.

How do you feel about working in Aves as a firm? I think they're a very good firm - get treated very well. Considering your experience and training do you think this job makes full use of your abilities? Oh yes.

How do you get on with production? Very good, very well. Any

disagreements? A slight bit of argument now and again, but only as to how to do a job. I've got no difficulty at all. They co-operate very well.

How much do you have to do with them? I'm working with them all day long.

More than with your own supervisors? Yes, I should say so. Is it visual inspection you do? Oh no, instrument checking, mics., verniers gauges. Some visual in so far as the metal is not getting distorted.

How do your mates think this job compares with other jobs? I don't

know I've never discussed it. I think on the whole the blokes seem to be satisfied.

You are the floor inspector on miscellaneous items in the press shop?
 Yes, 21 department. I cover shells, ..., other press parts, components for every part of the factory.

Can you tell me in your own words what your job is and what you have to do? I'm responsible for the quality of everything that's done in there. They can't carry on with the job unless I'm fully satisfied with it. Do you have a regular beat? There is no definite time laid down to go to any job. That's up to me. If I've got a job that's a bit sticky I go to that. I can spend at that job rather than at another one. Do you take samples? The setter sets it up and calls me over for the first off. I check that to drawing. If I say 'No', they've got to see it's put right. If I give the O.K. they start away with it then. What do you do when it's running? When it's running I go round periodically and then have a look at what has been done before I've got there. If it isn't right I call the setter up and I tell them.

In general how do you like your job? It's very interesting and I like it. What do you like most about it? A difficult point. I like it because I know that whatever I do is a responsible job and it gives a satisfaction to know you're running the job all right, that you can take the responsibility. It's always a satisfaction to be able to do that.

What do you dislike most about it? I don't know, as I've never really thought of that. I suppose the only thing I dislike about it is when you get a troublesome operator who doesn't pay attention to what you're doing. Do you like it better than other jobs you have had? Yes, I've been in most engineering jobs. This is the most interesting. You can see so many different jobs and different people. My own trade is a fitter, but I like this better.

Have you ever thought of changing your job? Not at the moment I haven't. How do you feel about working in Aves as a firm? I think they're a very good firm - get treated very well. Considering your experience and training do you think this job makes full use of your abilities? Oh yes.

How do you get on with production? Very good, very well. Any disagreements? A slight bit of argument now and again, but only as to how to do a job. I've got no difficulty at all. They co-operate very well. How much do you have to do with them? I'm working with them all day long. More than with your own supervisors? Yes, I should say so. Is it visual inspection you do? Oh no, instrument checking, mics., verniers gauges. Some visual in so far as the metal is not getting distorted.

How do your mates think this job compares with other jobs? I don't know I've never discussed it. I think on the whole the blokes seem to be satisfied.

What do production think of inspection? As regards my shop I think they think highly of us. They don't make a move till I give the O.K. They set up the job but production won't let them start till they have see me. You mean the chargehand? The chargehand or the foreman, whichever is about. I should say relations between them and myself are very happy. Are the same people there when you go on night shift? Yes, always the same production supervisor and the same operators.

Do you think that the rate your job pays is fair compared with other jobs? Oh yes. How long have you been in Aves? Fourteen months. I came as a floor inspector. Have you always been on this section? Yes.

You are the floor inspector in the diecast foundry? Yes, and on the bakelite. Can you tell me in your own words what your job is and what you have to do? Keep a check on all castings, there are two viewers under me. Periodically check work. Any faults we find we go to the chargehand or warn the viewers of anything likely to crop up. Are there any viewers on bakelite? One, on the pulsators.

In general how do you like your job? Sometimes it's round fairly even. Sometimes you are down, you know. What do you like most about it? It's awkward, don't know. What do you dislike most about it? These things when they start arguing. You've got to come up then to see your foreman. When he comes on the line they decide to do it. They might as well do it in the first place. What sort of things? Well, the pulsator pulley - it had very thick flash. I put them out. The production superintendent went up in the air. He went to the inspection foreman and he let it go ... Then I'm on shift work. How do you like shift work? I don't.

Do you like it better than other jobs you have had? I've always been on inspection. I came to viewing in the paint shop, then final inspection. I did ask for a change when I first started as a floor inspector because I didn't have confidence. How long have you been a floor inspector? 12 months now. Have you ever thought of changing your job? When I was a viewer, yes. What about now? I'm happy enough now.

How do you feel about working in Aves as a firm? They're all right, except for the feeling of redundancy. Have you worked for other firms? S-. On inspection? Yes. Similar to the paint shop.

Considering your experience and training do you think this job makes full use of your abilities? For the schooling that I had I should have been further but I let it slip. I was down at the local Tech.

How do you get on with production? Well, I get on fairly well. At times they call you rather rude words. You try to bargain with them in a way. Do you have a lot to do with them? You go down and sign the cards. You can't be there all the time. Sometimes some will take advantage. Some of the chargehands can put the men up to be awkward - to dump stuff behind your back. Do you have a regular beat? I try and vary it a bit. How long does it take? I go round every hour. I check what's coming out and have a look at what he has done.

How do your mates think this job compares with other jobs? On the whole they are satisfied. Sometimes they say some bad things. What about operators? Some good ones, some bad ones. Some don't care so long as they get the number out. They say quality is your job not mine. Do you think any operators would prefer to be on inspection? I've heard them say 'I wish I were an inspector' but it's just wishful thinking.

Do you think that the rate your job pays is fair compared with other jobs? Yes. What do you think of inspectors being on bonus? They're not making anything at all. It would be nice to have a bonus, but ...

How long have you been in Aves? Six years. I started as a viewer in the paint shop, then a final inspector, then a floor inspector. Before I was a viewer and an instrument repairer in the R.A.F.

