

INDUSTRY IN FOCUS

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## CHAPTER ONE

"The illiterate of the future will be the person ignorant  
of the use of the camera as well as of the pen."

Laszlo Moholy-Nagy, 1936

## INTRODUCTION

It is since 1839 that photography has been a vital means of communication and expression. Photography is at once a science and art. Both these aspects were inseparably linked throughout its rise from a replacement for skill of hand to a form of art on its own.

Industrial photography was one of the later developments of photography. Over these years it has also undergone vast changes. Today industrial photography plays a major role in the world of modern advertising.

STATING THE PROBLEM:

Is there a competitive market for industrial photography,  
and if there is, what is the future of it?

This is some of the questions that the author would like to  
answer in his script. The author would also like to give the  
industrial photographer a clear picture of how to prepare  
for such an assignment.

CHAPTER TWO

"No Photographer is as good as the simplest camera."

Edward Steichen



THE DEVELOPMENT OF THE INDUSTRIAL IMAGE:

Industrial photography is one of the more modern developments of photography. The author tried to show through means of illustrations how this type of photography changed over the years. It must be remembered that most of these pictures were taken for reasons other than industrial photography.

From the 1950's the industry was changing to normal again, after the two World Wars. As a result of this the international market started competing again. Industrial photographers like Walter Nurnberg and Maurice Broomfield became famous for their dramatic approach towards this kind of photography. Nurnberg made industrial workers look like filmstars and his pictures sold the idea of quality and care. Factories were specially lit with photographic spotlights placed to merge unwanted background detail into blackness. Small format cameras were also very popular.

Large industrial firms also started to develop their own photographic units. One of the first of these companies was the London-based Shell Photographic Unit.

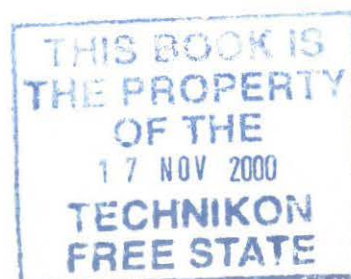


Figure: 1  
Over-Leaf  
Blacksmiths (United States)  
by Anon in 1850

Figure: 2  
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Figure: 3

Over-Leaf

Divers at Pier no. 4, Kansas City Bridge

by Anon in 1869

Figure: 4

Over-Leaf

Rope Spinning

by Peter Henry Emerson in 1887



Figure: 5  
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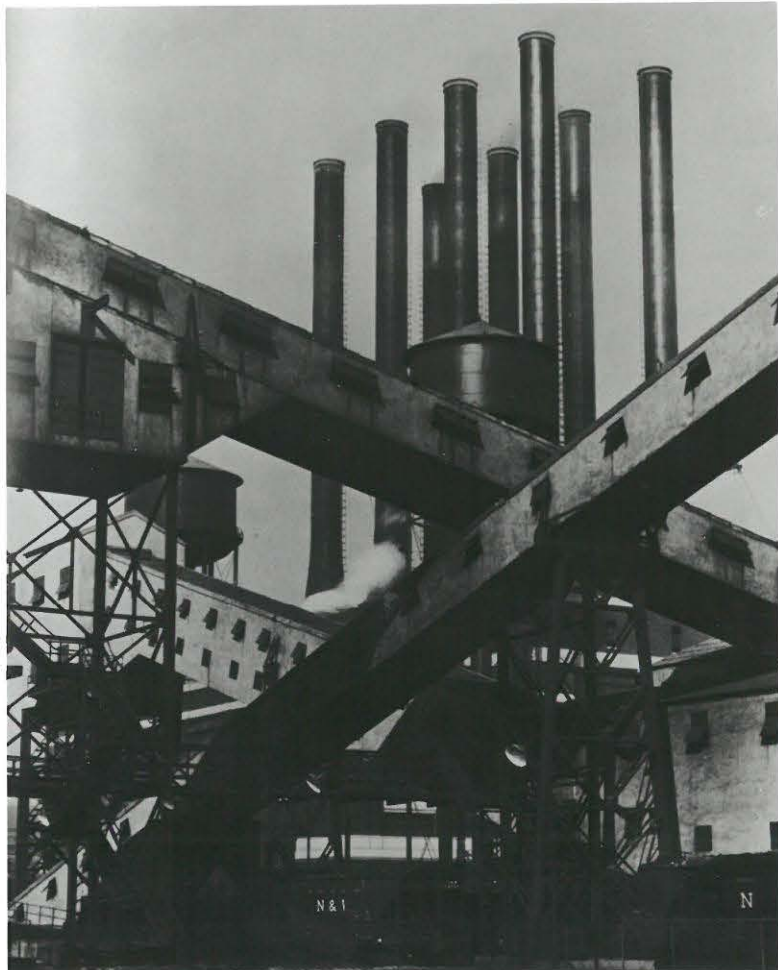


Figure: 7

Over-Leaf

Russian Tractor Factory

by Margaret Bourke-White in the 1930's

Figure: 8

Over-Leaf

Steelworkers, Empire State Building, N.Y.

by Lewis Hine in 1931





Figure: 9  
Over-Leaf  
Garage, Atlanta, Georgia  
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Figure: 10  
Over-Leaf  
The dramatic approach to Industrial Photography  
by Walter Nurmberg in 1956



# ENGINEERING



### CHAPTER THREE

"This is a specialized field, yet it embraces nearly every variety of subject and technique."

Carl Perutz

### WHAT IS INDUSTRIAL PHOTOGRAPHY:

The field of industrial photography probably encompasses more different uses of photography, and calls for a greater range of photographic techniques, than any other kind of professional photography.

Industrial photography, whether it be viewed strictly as such or as corporate photography, location photography, executive portraiture, or photo illustration, still focuses on industry. To be an industrial photographer is to provide photography for use by industries. A good deal of industrial photography takes place in the studio, as well as on location. These varied conditions that the photographer faces and the many uses for the photographic images that he or she creates challenge the imagination. However you define it, industrial photography may also involve risks and extensive travel. On the other hand a good deal of industrial photography takes place in the studio and not always on location.

Industrial photography has a purpose and this purpose is to communicate. Quite often the most effective industrial photographs are simple and straightforward, with little or no fanfare, no unusual technique, no

special effects. But sometimes that extra touch does stand them apart from the rest. The industrial photographs that stand out, that grab our attention and even win competitions are the ones that communicate. The professional industrial photographer must never lose sight of that key element.

The industrial photographer falls into one of two entirely different categories, although the work they do overlaps considerably. There are those who work directly within the industry they serve, as employees of their particular companies. Then there are those who operate on the outside as independent contractors or freelancers.

Industrial photography is a field so broad, so full of opportunity and challenge, that there is room in it for people of any disposition, with any degree of talent, and with any level of training. (Derald E. Martin, New York, 1980)

The rewards and challenges can best be summed up by Jeff Smith: "It's a very interesting business. You get to shoot a lot of different things, you get to meet a lot of nice people and develop very nice relationships with clients and with people you photograph and you get to

travel around. I think it's a very difficult way to  
make a living, but it's also a very pleasant way to make  
a living." (Industrial Photography, 1989)

### PREPARATIONS FOR THE SHOOT:

The industrial shoot is a combination of talent, technical mastery, personality and business acumen - everything you bring to it. For that matter, there is very little of yourself that you do not bring with you. Your client expects it (J. Neubart, 1989).

Preparing for the assignment goes beyond a simple concern for equipment. It combines the photographer's visual acuity and talent to previsualize the image and his skill in discerning where problems with the site or the subject may lie even before reaching the site or seeing the subject.

From the moment the photographer accepts the assignment, everything he does is predicated on his creative instinct and technical experience, topped off with a degree of common sense. Some of the work you do follows a prescribed layout. It may be an actual sketch or a verbal description that you are expected to follow. Both you and your prospective client have expectations about this assignment - and you both have to decide and agree upon what is and is not reasonable. The client



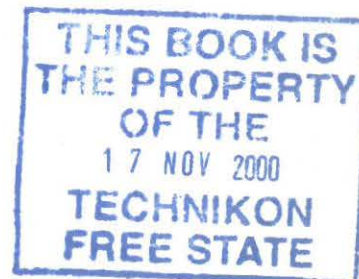
may give you a layout to work to, a site to work in and some people as models to work with, but beyond that he expects results within a reasonable amount of time. Of course, what neither you nor your client has any control over, are any unexpected events that can befall you as you reach your destination.

A good first step to help you prepare for a shoot is to scout the location. Location industrial photographers readily admit that location scouting in advance of a shoot is a highly desirable opportunity. Every location assignment has its own unique problems, but all of them has certain things in common. For one thing, you are away from home base and cannot walk into the next room for equipment that you forgot to bring. Anticipate as many of the problems as you can, and be prepared for all sorts of contingencies.

The biggest problems you can expect are that the people at the site either have no idea that you are coming or are completely unprepared when you do. (Lou Jones)  
That happens all the time. Things are never the way they say it will be on location. (Ibid)

Because the people in charge at the corporate end are so involved with day-to-day matters, not to mention planning for the future growth of the company, they pay less attention to the details that can make or break an assignment. Sometimes time is wasted at a site because the necessary permits and clearances haven't been obtained. Before leaving on any assignment, try to find someone on the scene who can be your liaison with the location problems and personal. Such a person can be especially helpful if it is necessary for you to make your own arrangements for housing, food and transportation.

One way or another, you do it, you solve the problems. You are the professional. That's why they hire you. You have to adapt to whatever the environment offers you. You have to adapt to any changes. You have to be adaptable. (J. Poppenhouse)



## THE INDUSTRIAL SITE

Industrial photography at industrial sites is an exciting challenge because no two industrial sites are the same. Some involve elaborate setups while others are more direct.

Conditions at the sites are as variable as the locations themselves. You may find yourself engulfed in ash or dust one day or sprayed with sea water the next, or you may find nothing worse than a little grim. Many locations are quite tame, but even these require a patient, watchful, and creative eye to produce a dynamic portrait of industry at work. Getting people involved makes any location assignment more difficult, but often it's a necessity. You may need models, and you may be there with an art director who oversees the shoot. The author feels that it is wise to first meet the people that you are going to work with and then scan the area for potential shooting sites.

One of the problems at industrial sites, even corporate offices, is that the place is either filthy or cluttered with everything imaginable that will work against you in a picture. Photographers often find themselves or their assistants cleaning up. Where people's offices have to

be rearranged, it helps to shoot polaroids to help restore the space to its original condition. Cleanup takes time and there may not be enough time to do it. However there are solutions like lightning and cropping.

In my scouting tour, if I find a very messy area that I want to shoot in, I'll make it the last shot of the day and ask if it can be cleaned up by then. (Jeff Smith, Industrial Photography)

The object area is first of all dependent on the type of picture required. Before he sets up his camera, the photographer must be clear about the purpose of the picture he has been asked to take. A shop floor is a fitting example to illustrate this point. Quite a number of different features may have to be emphasized. It may be the size of the factory, or the up-to-date range of machine tools, the characteristic features of the technical processes, or the workmen engaged in their responsible tasks. The purposes for which a picture is required are innumerable but the photographer must be able to compensate for that.

Many occasions call for an abstraction of the industrial subject in the photograph. Here the information content must take second place behind the purely visual poster

effect of the picture. It gives the photographer scope to pull out all the stops of creative pictorialism, if he manages to convince the experts that in this field his free interpretation should be allowed to prevail. Obvious errors of presentation are naturally unacceptable. However a competent photographer should be left a free hand, once his taste has been found reliable. After all, an industrial reportage of this kind, uninfluenced by technical experts, will retain its fresh original character, and will, in the last resort, also make a more lasting impression.

In supermarkets with high gondolas or offices with many desks, it is often an advantage to work with the camera about two feet higher than eye level. This gives added separation to those objects on the floor without producing a picture that appears strange. Daylight entering an interior space plays an important part in picture taking. From the lightning designer's point of view, it would be best to make all photographs at night, but this is often impractical. It is therefore wise to work in the shadow area of a building and just use the necessary fill in flash lightning.

When photographing the outdoor, floodlighting of buildings is best done at late dusk. During this period the colour separation between the deep blue sky and floodlighted building is quite effective. An important instrument for doing this particular shoot is a spot exposure meter.

The conditions are different for photography at night. The arrangement of the light sources causes parts of the plant to be lit up in brilliant flood lights, whilst others disappear in darkness. Unlit objects in front add a silhouette effect, whose black lines often break up the bright areas attractively. The resultant interplay of light and dark elements, of direct and indirect lighting effects makes many night pictures the impressive climax of a series of prestige illuminations. The night photograph will rarely have informative character. It will be more or less in the nature of an eye-catcher - in prospectuses or on the walls of exhibition stands. The technique of night photography is simple, if good flood lighting is available.

When photographing buildings at night additional light can be provided by any external sources. Occasionally flood lighting is provided for the architecturally

impressive administrative buildings. Otherwise a powerful spotlight from the studio must be available for illumination by a moving light. For colour pictures a short pre-exposure in twilight is much recommended, because this will produce a delicate hue in the sky, and the tones of the building fronts will be emphasized a little more.

One of the less glamorous assignments the industrial photographer can have is shooting underground. This means photographing in a damp, dark, dust-laden mine. One of the greatest problems for the photographer is the fact that no electronic flash lights could be used.

Whatever the situations are the photographer must always keep in mind the following:

The object area is first of all dependent on the type of picture required. Before he sets up his camera, the photographer must be clear about the purpose of the picture he has been asked to take.

### PHOTOGRAPHING PRODUCTS AND PROCESSES:

The products of industry, whether consumer goods or investment enterprises are widely publicized with the aid of photography. Photographs whose purpose is simply and solely to give a factual picture of the product are technically termed "product photograph" and should not be confused with advertising photographs, the purpose of which is directly to boost the sale of the product. The aim of the product photograph, on the other hand is to depict the product as advantageously as possible consistent with true representation.

The manufacturer always expects his product to look better in the product photograph than in fact it is. Moreover he can with some reason demand this because the photographer possesses facilities for an idealization which is rarely to be encountered in normal surroundings. (Joachim Giebelhausen, International Photo Technik, 4/1966)

When arriving at the industrial site, the industrial photographer may find himself photographing more than just the site or individual aspects of it. The assignment may call for him to photograph any variety of products and complex processes such as furnaces and



metal pours, welding and lasers, to name a few. There are many reasons for shooting the product at the site itself. The principal reasons are to show the product in its environment and because everything can't be moved to the studio.

On the other hand, there are certain advantages to working in the studio. Here the industrial photographer can show, without any embellishments, what the product is or does, or he can create an industrial setting with sets especially build for the occasion. Everything here is fully under the control of the photographer, and he don't have to worry about production schedules that may be interrupted by his presence at the facility.

The machine is the embodiment of functionalism. In whole or in part, construction and detail are dedicated by its purpose. Where machine photography is concerned, nobody cares, for example, whether the picture has been taken at great expense with 100,000 watts of artificial lightning, or economically by available light using a fast film. The only thing that matters is a perfect result. Everything resides in this word "perfect": absolute sharpness, correct perspective, correct

lightning and contrast as well as a background which shows separately from the object. (Karl-Heinz Bock, International Photo Technik, 4/1965)

The one item that is essential is large-format camera equipment. Many other items which are sometimes recommended are definitely not. It has often proved that much seemingly inappropriate equipment is the best for the purpose; however it is essential to have a pretty accurate knowledge of all the equipment available. (Ibid)

Industrial photographers are required to photograph any number of both large and small products, whether on location or in the studio. Interestingly enough, the purpose of the assignment may not necessarily be to promote the capabilities of the company. Or it may be to promote a product - but indirectly, by showing what the product is used for, and this too may be shown more by inference than by direct application.

Always pay attention to detail. There are little details to watch out for as well and one is that you should make sure that the logo on the product is correct. Many times a new product undergoes design changes in its logo, or the company may have recently

changed its corporate logo, a change that may not be reflected on all the packaging or products waiting to be photographed. The wrong logo and the picture will be rejected.

PHOTOGRAPHING MANAGEMENT AND LABOR:

"A true photographic representation of toilers in varied fields can be achieved only through thoughtful approach to the subject."

Ed Lettau

Like the term industrial photography, executive portraiture covers a lot of ground. As a portrait photographer, the industrial specialist must project the same confidence and develop the same rapport with his subjects that any photographer specializing in portrait photography must do. Only here the person in front of the camera is often a corporate executive taking time out of a busy schedule or it may be someone just trying to do the job he's been doing for years and wanting to get back to it. Either way, the demands upon the photographer in this situation must match the demands of the subject: Make it good and make it fast.

When the photographer is dealing with the executive he must remember that he is working with one of the persons at the top of a company. When you are photographing the executive don't waste his time asking for preferences. The top person wants to do whatever the expert (that's

the photographer) says to do in order to get the picture made. The author feels that in the process of telling your subjects what to do, and photographing them when they do it, you will have enough opportunities for conversation.

Industrial portraits can take place in a variety of locations. They may be straight head-and-shoulder or full-length portraits of an executive of a company in his office or boardroom, but they may just as easily be shot in some seemingly exotic atrium in the corporation's own building or outside it or on location, wherever the executive would like to be photographed. Office and plant personnel may not be pictured in a seemingly exotic setting, but the workplace is often a challenge just the same. Whether the picture is a formal portrait or shows a worker in the factory, the photographer must overcome similar obstacles and he must gain acceptance and co-operation. (Jack Neubart, Industrial Photography)

The appointment for a portrait shoot will most likely be the responsibility of the photographer. The requirement will come from the public relations department but they will also, usually leave it to you to set up the actual shooting. The time that it takes to set up an executive



portrait depends on a number of variables. You may first have to find the right location if one had not already been recommended. Then you may also have to find the right props to create the boardroom or office atmosphere. If it is more than one person that you are going to photograph, you must compensate for that as well. The equipment needed will also vary with the assignment.

When all this has been taken into consideration, it comes to the actual setting of the lights and camera. Umbrella reflectors for lights can be especially useful for its soft light and broad coverage. It is also important to take into consideration the garments and jewelry that the person is wearing. These small details can spoil a picture if not being treated right.

Only man infuses life into the industrial plant, the foundry, the electronic brain, the mine shaft. He therefor is a necessary part of the definition of an industrial establishment, the representation of a factory, the prominent place of members of the staff in the picture as the all-important labour force is indispensable.

### OTHER TYPES OF INDUSTRIAL PHOTOGRAPHY:

Related to industrial photography, and impinging on it , are several other fields of photography. For his purposes the author will only discuss three specialized fields, although there are many other types.

Other fields of industrial photography not described by the author is: Medical Photography, Schlieren Photography, X-Ray Photography, Metallography, Holography and Multimedia Presentations.

### Macrophotography:

Macrophotography is today an important branch of industrial photography and it's importance is continually increasing. The reason for this is the trend towards miniaturization, which is the inevitable outcome of the extraordinary refinement taking place in instruments and apparatus which is becoming more and more complicated. At the moment there is a phase of tempestuous technological development going on and the picture of industry has been transformed in a matter of a few years.

In the field of electronics in particular, miniaturization has already reached a point which but a few years ago would have been considered utopian. Complete integrated circuits can be deposited on minute ceramic plates, because of modern thin layer techniques. These plates are only a few millimeters in size. The vital impulse; for the development of micro electronics, was provided by space travel. The knowledge thus gained has had a profound influence on technical progress in every sphere.

But what is actually meant by Macrophotography? It is somewhat difficult to distinct between "close-up photography" and "macrophotography". The close-up range is dealt with by increasing camera extension. As a rule the dividing line is considered to be the same size, or 1:1 reproduction. Any picture which is smaller than the original will thus be termed a close-up photograph, and any enlarged reproduction a macrophotograph. (Hermann Eisenbeiss)

#### A Brief Introduction in Kirlian Photography

Kirlian Photography is the method of obtaining a photographic image with the use of high energy interactions between a subject and an applied electrical



field. The image captured on the film reflects the dynamic relationship between the externally generated electric field and the energy emitted from the subject. No externally applied light source is used for this technique - the light emitted as photons from the electrical interactions causes the image on the film. A high positive charge is created on an electrode, which is then covered with a piece of photographic film. The film base also acts as a spacer and dielectric. When the subject matter, which is well earthed, is placed onto the film an electrical interaction occurs which causes photon emission to affect the film. (H.M. Ebrahim, Conference on Applied Photography)

For the Kirlian image to form, a very high voltage must be generated. A conventional source of electricity is pubed by a circuit breaker through a condenser and coil transformer. The voltage that is used to form the image vary from volts between 1,500 to 200,000. The film is processed conventionally and must be handled in the dark before development.

Kirlian photography can be used in both Black and White as well as Colour mediums. It is mainly used in the world of medical research but can also be used for Material Sciences, Biology, Psychology, Psychiatry and Computer Graphics.

#### Aerial Photography:

By any and large, the consensus runs in favor of helicopters when it comes to shooting from the air. The biggest advantage is that, unlike many light aircraft, a helicopter has no wings and struts to get in the way. Moreover, on a helicopter, you can take a door off. An aircraft usually only gives you a small opening to shoot through. Helicopters also let you get closer to the ground. (Jack Neubart, Industrial Photography, Page 28)

On the other hand, light aircraft do have one advantage: They are often cheaper to rent.

Shooting from the air also has its own types of problems. One of these technical problems is vibration. This can be a problem if you are leaning against the sides of the craft. The photographer must

therefor try to avoid it. Another problem is when the camera is buffed by the wind. It would therefor be wise to try and use the highest shutter speed possible.

A final safety note is that the passengers must be limited to the photographer and his assistant. If the client goes along, slow fly-bys are the safer alternative. (Robert Rathe)

#### CHAPTER FOUR

"Simplicity is the prime requisite. The equipment of Alfred Steiglitz or Edward Weston represented less in cost and variety than many an amateur can 'barely get along with'."

Ansel Adams

### DEMANDS OF THE INDUSTRY:

The technological advances of today, offer great opportunities for photographers working in the industry. Industrial clients - whether technologists, salesmen or even members of the management make exacting demands on the photographer. These demands are usually determined by the standards of their competitors. Picture material must be of excellent quality to reveal the maximum of detail. They must also permit perfect giant enlargements.

The impression of the pictures must be monumental, progressive, and confidence-inspiring. However, the demands are even more far-reaching than this. Because today's audience associates the art in an industrial photograph with the technical progress of the company, creativity is a mandatory part of the progress. Yet, technical methods exist and equipment is available which ensure realization in almost any situation.

Photographic techniques have adapted themselves to the needs of industry. The photographer has become mobile and operates largely without impeding the processes of production. He also have to make use of large-format cameras with very refined devices for rapid operation.

Since the photographer is daily confronted by new situations he must be able to adapt his equipment and working methods to the conditions facing him, so that he can reduce his expenses and afford as much as possible. The author feels that a lot of research is needed into this specific area, before going professional.

As in pop art, an object is divorced from its normal context and associated with another quite different context. Finally, a new form arises from the marriage.  
(Professional Photographer, June 1971, Page 47)

### MAKING CAREER CHOICES

Industrial and commercial photography is a tough, fierce and competitive game and trying to get into it from scratch certainly isn't easy. The beginner in this field may already have a thorough working knowledge of the business of photography and may very well be an adept technician with the camera and lightning. The best way to enter this field is to work side by side with an experienced industrial photographer, as an assistant.

If you do try for a job with a company you will have to convince the people in charge that you are not just a keen amateur casting an envious glance on the glamorous world of photography. When joining such a professional organization you will benefit every step of the way. Any trainee will be expected to become as competent as the other photographers in the outfit eventually - after all, the company or studio is making an investment in the future by paying your wages.

The assistant is an important member of a photographic team. Actually the assistant and photographer are a photographic team. Infrequently perhaps, but the assistant can prove himself to the point where he becomes

a member of the team in every respect, joining the photographer he had been working for in the capacity of full partner. (Jack Neubart, Industrial Photography, Page 110)

It's a fact that the in-house photographer, despite his talent and dedication to the job, does not always gain the recognition that the freelancer does. Yet, there are advantages to being an in-house photographer. These advantages are a steady paycheck, paid holidays, coverage for sick days and medical benefits.

One of the most challenging and potentially most rewarding fields, is the field of freelance corporate/industrial photography. The freelance photographers are able to operate as independent photographers. Unlike the in-house photographer, the freelancer is free to accept or refuse a job. The freelance photographer can also spend more time on a shoot because he can choose the amount of shoots that he wants to do every day. The freelance photographer must also be a businessman in his dealing with clients.

Either way the photographer must be prepared to work hard before he will reach the glamour that this type of photography seems to promise. The photographer must be



able to sell himself as well as his photographs to the market. That's the only way you as a photographer will be able to survive.

### SETTING UP YOUR STUDIO:

The studio should be large enough to handle anything you will ever need to shoot in it, equipped to support not less than three setups at one time. There must also be enough different kinds of lights including a controllable northlight window. (Professional Industrial Photography, D.E. Martin, Page 87)

The basic requirements when setting up a studio are:

- It must be clean, in an area you can keep free from dust.
- It must not be close to heavy equipment that will cause vibration in the shooting area.
- You must be able to exclude exterior light, even if it means painting over the windows.
- You must be able to cut off the ceiling fluorescents.

Although modern studios vary greatly in design and size according to the type of work undertaken, the basic equipment is the same in most of them. Lights can be held in overhead runners which is released by cable or infra-red from the ground.

In most professional studios flash lightning has replaced tungsten, but in some studios they are still used to judge the effect before the final photograph is taken. It is also important to provide each piece of equipment with its own fuse. This will ensure that one failure does not inactivate the whole studio.

Sizes of the objects you will be shooting should be considered. Keep in mind the need for space to arrange the lights, room to back the camera off to a reasonable distance and still walk around it, and last but not least, a door that is big enough to admit those larger subjects.

Once the building is completed, it is very difficult if not impossible to correct any errors or omissions. The effort required to create a photographic unit that is properly laid out, convenient and pleasant to work in, will provide the photographer with the best possible environment in which to do his work.

## EQUIPMENT AND ACCESSORIES

It is not always the equipment that makes the photographer but the way in which he handles and controls it. There are a lot of details involving equipment that must be attended to before the photographer leaves on an assignment. Choosing the right gear is no easy matter.

Every photographer has a favorite camera, but he must select one that is most suitable for each particular assignment.

When working in a studio, the size and weight of the camera isn't a serious problem. The camera is used on a tripod and all the accessories and lenses are nearby. Film could also be loaded in the darkroom. Thus, the view camera is not ruled out, and may be the best choice.

The added advantages of smaller size and weight in the field have made the four by five format the standard view camera in the industry. It has almost replaced the eight by ten format camera because of the advantages mentioned above.

The 35 millimeter camera was not accepted in the industry until the last couple of years brought us sharper film and lenses. With the new developments, the images produced by the 35 millimeter can compete with the larger format cameras. The small size, high speed, and flexibility are making it a very useful tool for even the most critical professional.

Beyond 35 millimeter there are the six by six centimeter and six by seven centimeter formats. These are classified as medium-format cameras. The workhorse camera for today's industrial photographer is the medium-format camera using roll film and interchangeable magazine backs.

Don't pick a camera for the image you think it creates when seen but for the image it creates unseen. Choose it because it fits your shooting style and the diversity of subjects you expect to shoot. (Industrial Photography, 1989, Page 75)

Essentially, the pro looks for proven reliability, a true system camera that will accept every major accessory including a Polaroid back, and a solid foundation of customer support. These are points that cannot be compromised by price. The investment in

essential equipment need not be overwhelming, but that investment should be in the best equipment you can afford. And always think towards expanding your system. Reinvest profits into your location outfit and into your studio as well. (Ibid)

## CHAPTER FOUR

## A DISCUSSION OF THE AUTHOR'S WORK AND STILL IMAGES

In this chapter the author will discuss his approach to industrial photography, as well as including a short discription of his work.

The reason why he chose industrial photography as his specialist field is because it is one of the more exciting fields of photography. He got the oppertunity, not to only travel to a lot off different companies, but also to meet a lot of different people. In his work, he tried to cover a broad field of industrial photography. This streches from men at work to industrial studio advertising.

One of the biggest problems that he encountered was to get permission to photograph the working of different factories. He sometimes had to go through a series of channels before he got permission to take photographs. Another problem of the same kind was that the people working at the plant was not expecting him or forgot that he was coming. It is therefor important to make sure that the managers as well as the people at the plant knows when the photographer is coming. Other



problems that he encountered were lightning problems and the co-operation of the workers at the various locations.

Lightning was sometimes a problem, when there were either not enough space or no plugs around. He solved this problem by using portable metz flashes. The people were not always very eager to be photographed. They were also, not always suited for the specific picture. With a bit of explaining, from his side, he usually got them to be more relaxed and helpfull.



PLATE 1 :



PLATE 2 :



PLATE 3 :

THIS BOOK IS  
THE PROPERTY  
OF THE  
17 NOV 2000  
TECHNIKON  
FREE STATE

TECHNIKON  
OVS/OFS  
1993 -02- 22  
PRIVAATSAK X20539  
PRIVATE BAG  
BLOEMFONTEIN

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PLATE 4 :



PLATE 5 :



PLATE 6 :

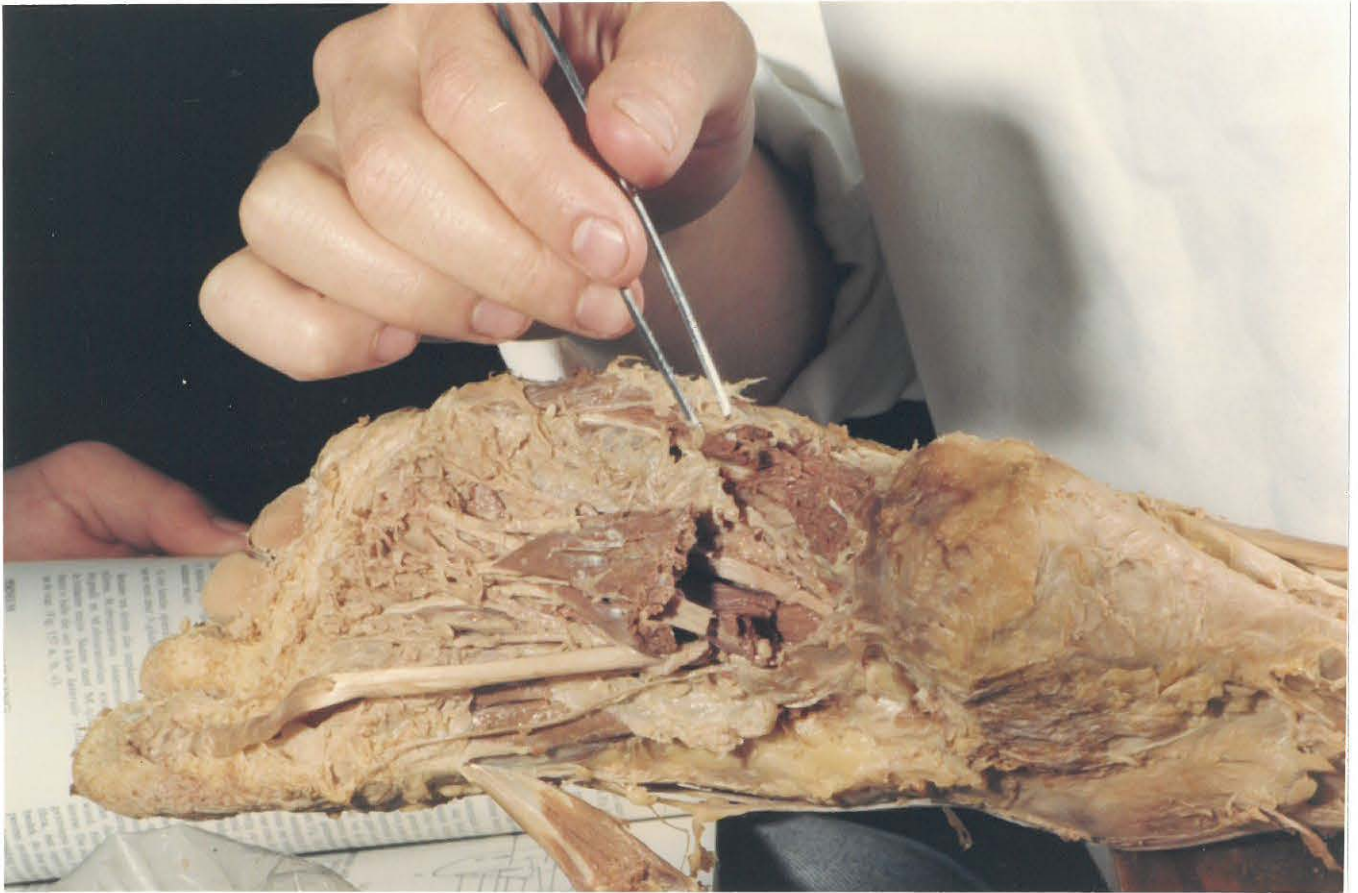


PLATE 7 :



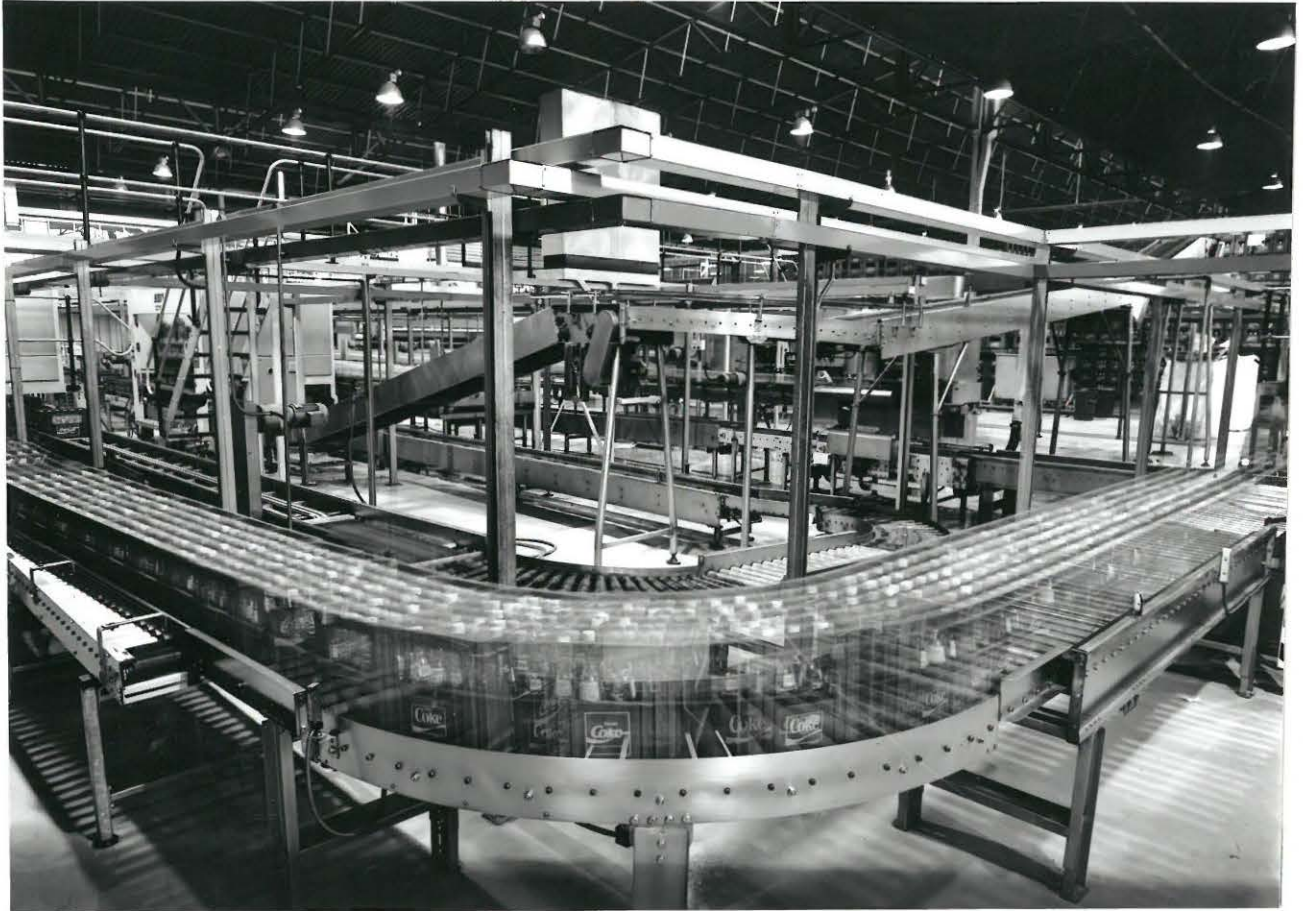


PLATE 8 :



PLATE 9 :

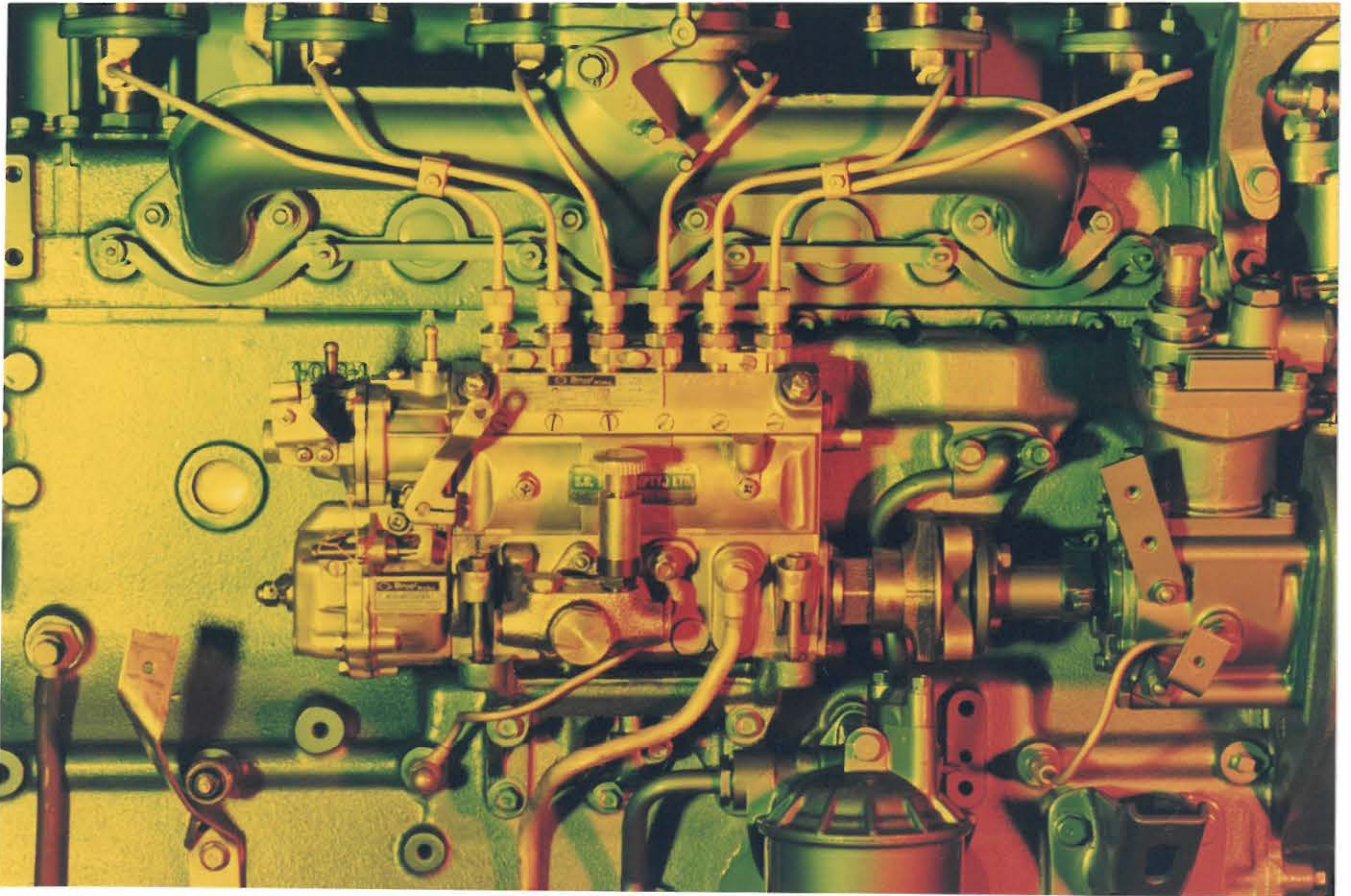


PLATE 10 :

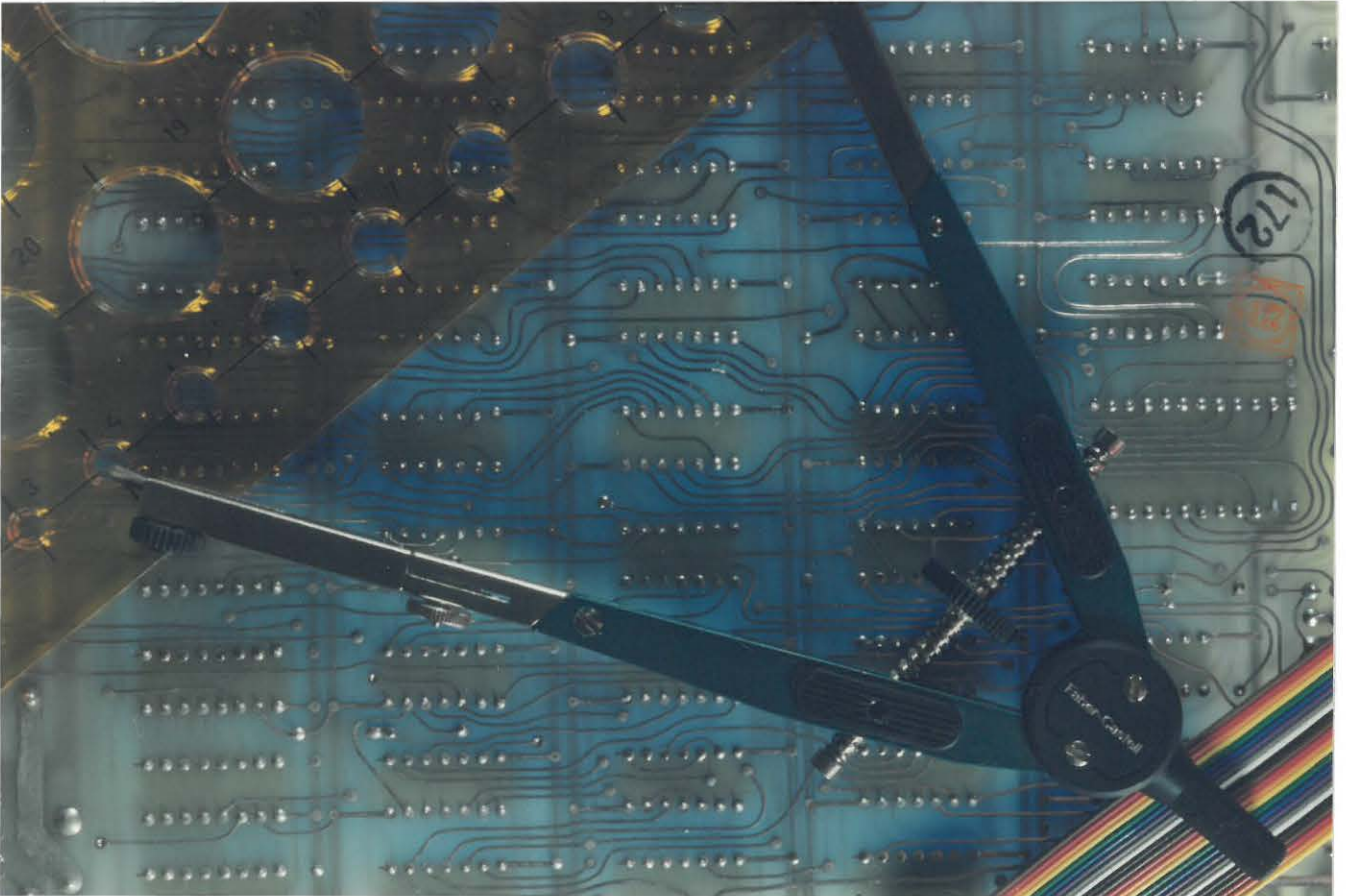


PLATE 11 :

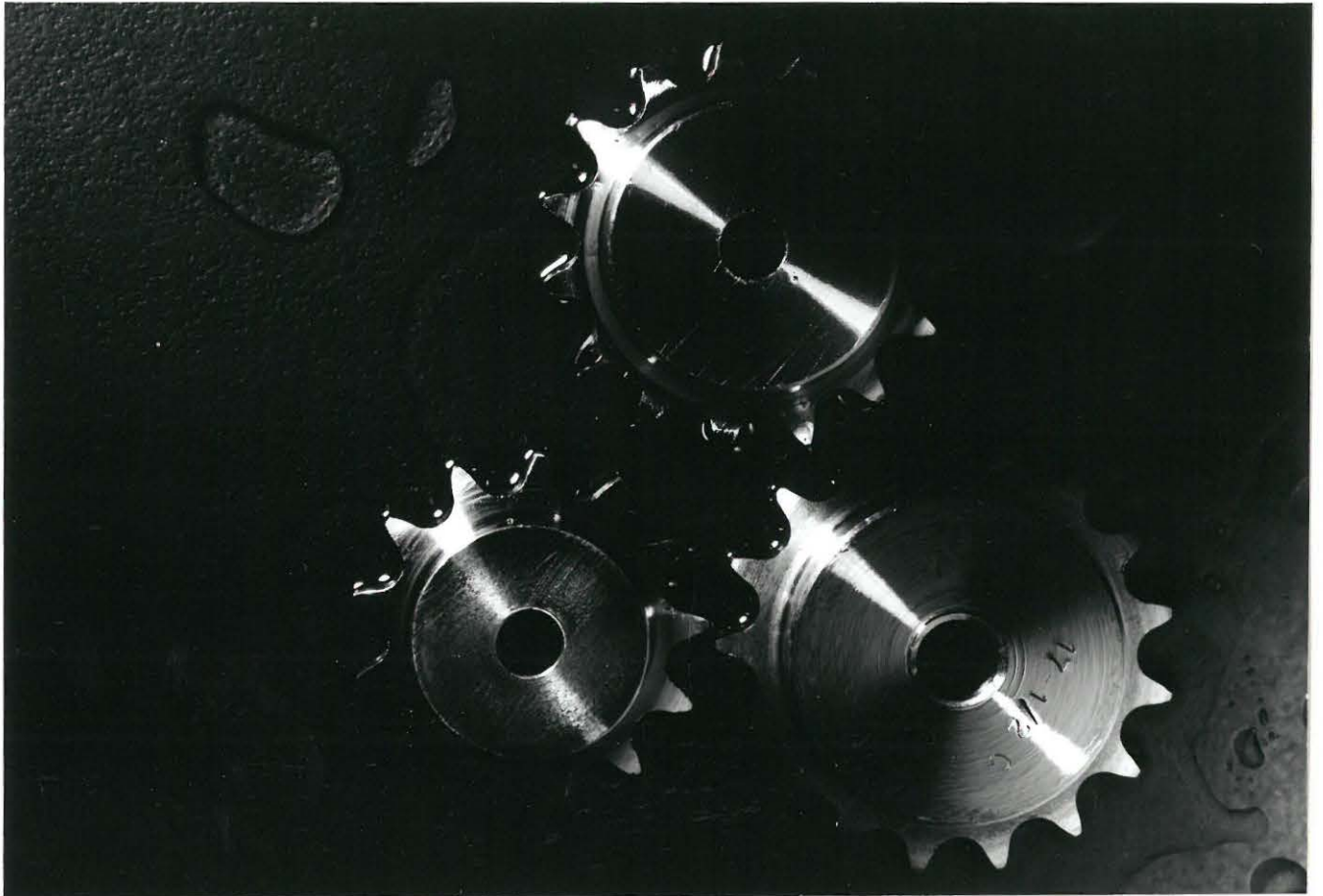


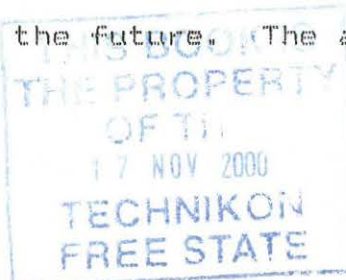
PLATE 12 :

## CONCLUSION

Industrial photography is a comparatively new field, and it is still expanding into companies that earlier were slow to accept its value. A lot of the old industries have been less quick to recognize the value of photography to their operations. The more modern and better developed aerospace and electronics industries, on the other hand, took an early lead in establishing capable and highly functional photographic departments as basic units of their companies. These photographic units also grow in their ability to help the company show a profit.

Today photography is becoming an integral part of the manufacturing process that it once only recorded. Every time industrial photography is used in a new way, the future of the industrial photographer becomes brighter and his career more secure. With the development of the industry, the photographic work also becomes more challenging.

The question to be asked is if there are going to be enough jobs in this field, in the future. The answer will be very probably yes.



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