


5-1990

Irish Building Services News

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BSN News

IRISH BUILDING SERVICES NEWS

Heating Safety — 'Cowboys Rule, OK'

No, of course it's not okay. Nor for that matter is it entirely true. However, the lack of an all-industry integrated scheme providing consumer protection in respect of heating installations does leave the industry open to accusations.

Moreover, pressure on the one hand to do installation work as cheaply as possible, while at the same time ensuring all safety requirements are met, further exacerbates the situation.

The safety dimension — especially in relation to gas installation — is vitally important. For its part, Bord Gais does an excellent job in

policing the industry but the onus should not rest solely with them.

To be fair, the industry at large seemed to realise this situation over three years ago when the Heating Quality and Safety Council (HQSC) was established. It was set up as a voluntary body with representation from the IDHE, other contractor bodies, consultants, materials suppliers, fuel suppliers, the insurance industry and the Office of Consumer Affairs.

Initially, a great deal of progress was made, the result being the publication of the Technical Specification Document.

However, when the scheme was presented to contractors

nationwide seeking their commitment to abide by the rules and regulations suggested, and the payment of a registration fee endorsing that commitment, the response — or rather lack of response — was alarming.

Contractors must realise that it would be far better for the industry to orchestrate its own regulatory schemes before the Government decides to step in and impose them.

Unless the contacting sector gets behind the HQSC Scheme immediately, it will collapse.

If you want to disprove the "Cowboys Rule, OK" taunt, turn to page 7, carefully read the article and, at the very least, apply for more information on the Scheme.

If having done so you still choose not to support it, then so be it. But at least consider the issue carefully before consigning it to the scrapheap!

Bord Gais — A New Initiative

While the latest promotional effort from Bord Gais is undoubtedly a selling aid at consumer level — there's the £600 "Summer Payout" Giveaway; the £200 off an efficient radiant gas fire; the £100 off selected gas cookers; and the £300 off a gas fire and hot water heater circulator — even more important still from a trade point of view is the introduction of the new Development Training Programme for contractors.

Phase 1 has already commenced with approximately 15 contractors participating. The numbers per course are deliberately kept low, the intention being to give as much "one-to-one" tuition as possible.

Each course runs for six weeks starting with one full-day session and five half-day sessions thereafter. Included is at least one session at the contractor's own premises.

The programme was designed by Frank P Coyne & Associates who first identified — by consultation with a representative selection of contractors — the principal areas of need.

Quite simply, it is an effort to make the domestic contractor more professional in his approach to the business management needs of his firm. From a trade and technical point of view new staff are highly experienced and skilled but there is no denying the shortcomings many have when it comes to financial management.

Indeed, an added advantage of the programme now underway is that a Financial Model — designed specifically with the domestic contractor in mind — has been made available.

Obviously, it is only those who fully participate (rather than merely attend) who will benefit from the programme. However, Bord Gais has sensibly introduced a mechanism whereby participating contractors fund 50% of the course costs, the Bord picking up the other 50%.

On the general front, there is still some disquiet among contractors over the manner in which the Ballyfermot A, B and C business (now signed off) was handled. However, *BSNews* understands that with Ballyfermot D now open, the situation has improved significantly, especially in relation to complaints levelled at Dublin Corporation.

Also, those holding out hope for the introduction of Government-funded grants when the total ban comes into force in the designated areas on 1 October next should not hold their breath. The indications are that the already-stated policy of "no grants" will hold firm, despite the anticipated outcry from certain quarters.

Still Going Strong at 68!



● Pictured above is an original Glow-worm double oven cooking range which dates from 1932. When discovered in an unused kitchen area of a large Grade 1 listed building in Norfolk, England, it was found to be in perfect working order.

PUMPS CIRCULATORS

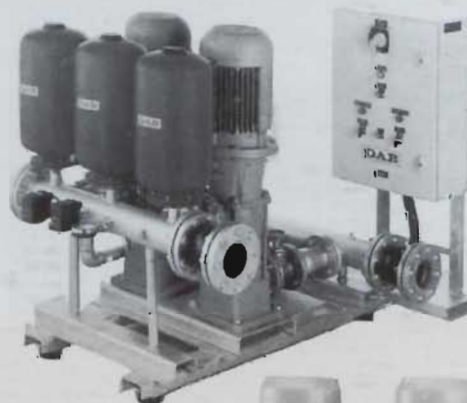
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READERSHIP DATA

Irish Building Services News (formerly *Irish H&V News*) is Ireland's only *Building Services* magazine providing coverage of the heating, ventilating, air conditioning, refrigeration, sanitaryware, plumbing, maintenance and environmental industries. It is the only publication catering exclusively for these industries and its circulation includes members of the following:

The Institute of Consulting Engineers;
The Chartered Institution of Building Services Engineers; The Institute of Domestic Heating Engineers; The Energy Managers' Association; The Institute of Energy; The Institute of Plumbing; The Energy Conservation & District Heating Association; The Mechanical Engineering & Building Services Contracting Association; The Irish Builders' Providers Association; The Association of Consulting Engineers of Ireland; Small Housebuilders' Association; Maintenance Managers' Association.

In addition, *Irish Building Services News* circulates to independent building services contractors and key executives in industry, Government, Semi-State and local authority bodies. Essentially, our circulation is virtually saturation coverage of all those with an interest and/or involvement in the industry.

Published by ARROW@TU Dublin, 1990

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NEWS

Consolidated Pumps, Italian Connection

Roy Tolan, Managing Director of Consolidated Pumps Ltd of Clondalkin was recently a guest of UK-based Interdam Pumps Ltd when they took a party of distributors to Italy to visit their Head Office in Mestrino.

The trip was organised by Brian Goss, Managing Director of Interdam, to give his guests the opportunity to see first hand the commitment that Interdam are putting into the future success of their company.

The distributors from all over the UK and the Republic of Ireland, departed from London's Heathrow airport on Sunday morning and arrived in Venice with enough time to enjoy the delights of this city by

lamplight.

On the Monday the guests were taken by coach to the aluminium and steel plant in Vicenza and then on to the motor winding machinery centre in Treviso

At all times the principal of DAB pumps, Mario Bagante, accompanied the party, answering all questions and explaining certain processes.

Tuesday was another busy day, featuring a tour of the manufacturing assembly and distribution plant in Mestrino.

With the formalities of the visit over, the trip was then completed by an afternoon of sightseeing.



● Brian Goss (in light suit), MD of Interdam Pumps Ltd, with some of his distributors awaiting their flight to Venice. Roy Tolan, MD Consolidated Pumps, is standing second in on left, front row.

Expoclima 1991

The 7th Expoclima, European exhibition for refrigeration, heating, ventilating, air-conditioning and drying — will be held from 14 to 17 May 1991 in Brussels.

This event, created on the initiative of the European Committees of Manufacturers EUROVENT and CECOMAF, intends to be the specific showcase of the trade sectors which are concerned with air-handling in all its forms.

The 1991, Expoclima will be simultaneously held together with other trade shows which will gather more than 700

exhibitors divided up among the seven halls. Included will be the following:—

- Expoclima (Refrigeration, ventilating, heating, air-conditioning)
- Aqua Expo (water techniques)
- Induselec 1 Lightelec 1 Eurotronic (trade shows for electronic et electric techniques);
- Cleaning (industrial cleaning);
- Authorities Equipments

IS 239 Award

Shires Ireland Ltd, the leading distributor of sanitaryware products and brassware fittings, have announced that COMISA — the Italian Commission for the award of the IS 239 for compression fittings

APV HallScrew 2100 Series

At a specially-arranged reception/technical seminar in Dublin recently, APV unveiled their new HallScrew 2100 Series of semi-hermetic compressors.

The occasion was hosted by Noel May of APV Ireland with the presentation proper being conducted by Tony Payne, Sales Manager, APV UK. Also in attendance was Phil Rudman, Operations Director of the UK company.

Essentially, the Hallscrew 2100 Series was developed from established screw technology, the intention being to bring the highest industrial compressor standards to commercial refrigeration and water chilling duties.

Principal features of the new Series comprise the following:—

- Low noise and vibration — Low noise levels are inherent in the design of the compressor because the compression process takes

place within an inner shroud, effectively making a double skin noise barrier.

- Removable side cover gives access for survey without disturbance to pipework or insulation. Access is only required on one side;
- High strength stars — The stars are manufactured to close tolerances from the latest technology fibre reinforced composites, which are chemically inert and dimensionally stable at all operating temperatures and pressures;
- Efficient capacity control — Capacity control is infinitely variable between 100% and 25%. Other standard design features include —
- no contact slide position indication;
- Automatic return to minimum load;
- Built in automatic oil drain;
- Star/Delta starting;
- Suction stop valve and strainer;
- Thermistors embedded in stator windings.

BSS & The French Connection

BSS (Ireland) Ltd have formally announced their appointment as sole distributors in Ireland for the industrial and commercial range of pumps and circulators as manufactured by Pompes Salmson.

Pompes Salmson is one of the largest pump manufacturers in the world, producing over one million pumps annually.

It is a sister company of the German-based Wilo Corporation, sharing the same owners.

Pompes Salmson itself is a French company, its principal production plant being located in Laval, Normandy. It is rated the most modern factory in France and is Europe's second largest pump factory.

However, Pompes Salmson

products are manufactured in over 40 countries worldwide, and are consistently used by leading European and international contractors.

BSS (Ireland) Ltd told *BSNews* that they have already had Pompes Salmson specified on a number of major projects with substantial sales resulting.

Large stocks covering a representative selection of the entire commercial and industrial Pompes Salmson portfolio are held by BSS at both its Dublin and Cork bases.

Technical advice on pump selection, etc, is available from John Brophy and John Quinn in Dublin and Michael Quinlan in Cork, all of whom have had special training in the French factory.

Staefa with SC controls

SC Controls Ltd have been appointed sole agents in Ireland for Staefa Controls. The company is run by Stanley Curran and Pat Moore and is presently in the process of moving to new and larger premises in Cookstown Enterprise Park, Tallaght.

The company will stock the full range of Staefa heating,

ventilation and air conditioning controls, including the RS 2000 Building Management System.

In addition, the SC control designs and manufactures control panels associated with environmental controls with back-up service being an essential part of the company's strategy.

NEWS

Burlington — For Planned Maintenance

The new professionalism with which the leading building services contractors are approaching the business is very much personified by Burlington Engineering Ltd's company brochure which is a full-colour, glossy publication detailing the entire range of services offered by the company.

Burlington provides a total service, 24 hours a day, 365 days of the year. Areas of activities include building services maintenance; heating and ventilation; plumbing; air conditioning; oil/gas combustion; environmental controls; energy management; mechanical and electrical services.

All service engineers are employed directly by the company and have received special training both in Ireland and in the UK.

The company has invested substantially in a fleet of fully-equipped service vehicles and uses the latest communications technology to ensure speedy and accurate response nationwide.

The entire spectrum of maintenance/service covering all industry sections is provided, ranging from computerised performance monitoring through to the operation and maintenance of complex heating and air conditioning systems and even the smallest of repair jobs.

The computerised monitoring facility is a unique Building Management System specially devised by Burlington. Control is monitored via a VDU link at Burlington's premises, not the clients where the system is installed.

If there is a failure at any part of the system — be it the boiler, air conditioning, etc — the alarm is sounded immediately at Burlington's control centre. An engineer is despatched immediately, knowing precisely what the problem is before he even arrives on site.

In this way discomfort levels never occur, the problem having been identified and solved, often before

the client even knows he has a problem.

Additionally, all maintenance contracts have full insurance cover.

Copies of the brochure — which also details the history of Burlington and explains its position within the Lynskey Group — are available from Des Buggy at the company's headquarters in Ballsbridge, Dublin 4.

Heatovent Road Show

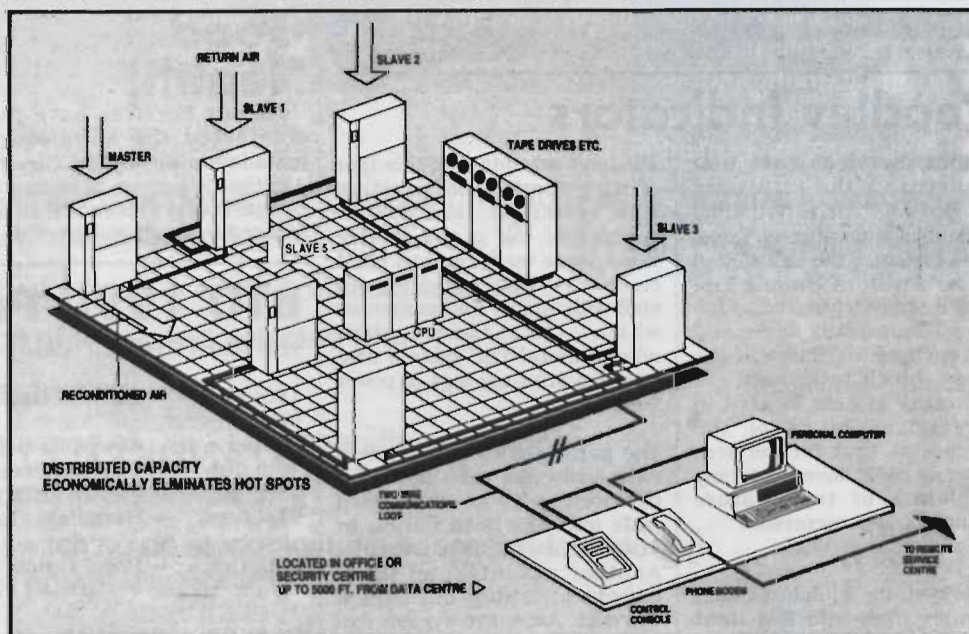


Heatovent concluded a successful 4-venue Road Show — visiting contractors, merchants and the heating trade in Waterford, Cork, Limerick and Dublin — ending with a full house in their own purpose-built showrooms in Heatovent House, Naas Road where we caught Jimmy Farrell, Board Gais; with Jim Corrigan, Hanco; Kevin Shanahan, Manager, Dublin Area, Heatovent; and Ray Colgan, Spanspeed Heating.

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NEWS

Guarantee Scheme Review

Last year was a record year for the National House Building Guarantee Scheme with 11,627 new homes being protected with guarantees — an increase of 40% on 1988. The current year is likely to be on a par with registrations in the first three months totalling 3,063, up 20.2% on the corresponding period of 1989.

This was announced by Chairman Joe Tiernan at the presentation to Patricia Tsouras and John Leech of the 100,000th NHBGS certificate guaranteeing the structure of their home at Whiteoak, Clonskeagh, Dublin built by Tudor Homes Ltd.

With the vast majority of new private homes now being guaranteed by NHBGS, the registrations have become a major barometer of the health of the house-building industry.

Nonetheless, Minister for the

Environment, Pdraig Flynn, TD said the Scheme is to be reviewed.

"The scheme has operated successfully, but we must now carry out this review so as to ensure that the scheme will continue to deliver the degree of protection that house purchasers are entitled to expect. Nothing stands still, and the best run organisations continually assess and analyse their activities and performance," Mr. Flynn said.

The Minister said that he had already been in touch with the Construction Industry Federation regarding the need for a broad review. I'd like to see two areas covered in any review:

- The question of the security of advance deposits taken by builders; and
- The scope for extending cover offered by the Scheme."



● Pictured at the presentation were (from left): Martin Browne, Director, Tudor Homes which built the 100,000th new home; The Minister for the Environment, Pdraig Flynn, TD; and Joe Tiernan, Chairman, NHBGS.

Woodley Indicators

Reconair Services have just completed the second installation of the Woodley Electronics indicator systems. In this instance, the installation was for An Bord Baine and involved temperature indication from various plant items and from each of the floors of the office block through a monitoring system located in the services office of the premises so that the services personnel could investigate any complaints of temperature variations which occurred.

In addition, the equipment itself provides high and low limit conditions and prints these out in a high-quality format, providing status condition.

The large advantage of this type of system over the standard BAS system is that overall control of the plant is still manageable by the normal plant controls — while providing the staff with quality information on which to base plant adjustments. The system also provides print-out logs of power failures.

The parameters in the system can only be changed by personnel with an authorised code and has been found, in practice, to be user friendly. Another advantage of these systems in existing buildings is the cost. An entire system can be put in place and wired, commissioned, set up and demonstrated for the normal office block for less than £5,000.

BTU Island Results

- Overall winner: Tony Gillon (H/C 12) 33 pts
- Class 1: 1st — Gerry Baker (H/C 10) 32 pts; 2nd — Brian Farrell (H/C 7) 32 pts; 3rd — Pat Dunphy (H/C 11) 30 pts;
- Class 2: 1st — John Hunter (H/C 13) 32pts; 2nd — Brendan Sheen (H/C 12) 31 pts; 3rd Ray Byrne (H/C 15) 30 pts;
- Class 3: 1st — Seán Farrell (H/C 20) 31 pts; 2nd — Kevin Shanahan (H/C 19) 29 pts; 3rd — Paddy Delaney (H/C 18) 28 pts;
- Visitors: 1st — Shea Rogers (H/C 3) 34 pts; 2nd - Stan Criag (H/C 13) 32 pts; 3rd— Oliver Reddy (H/C 10) 31 pts;
- Back Nine: 1st — Micahel Wise 18 pts; 2nd — Michael McDonagh 18 pts.

Combined Heat and Power

Combined Heat and Power technology has witnessed a revival in recent years. The Modern CHP designs make them an encouraging option to improve energy efficiency and cut carbon dioxide emission, particularly those associated with natural gas.

A new BSRIA bibliography will assist managers, businessmen, industrialists, politicians and others who recognise the necessity of using available energy efficiently, to make decisions based on the available documented knowledge. Its scope is confined to the smaller-size applications, typically up to and around 10MW. Larger industrial and district heating schemes are not within the scope of this bibliography.

The contents are selective references to authoritative works on the subject and include general discussion documents, research reports and case studies. Most of the references are from English language sources, although some representative examples from continental literature are included. For each reference an informative abstract is provided to allow the reader to choose the most pertinent texts. The full text of the documents listed are then available from the BSRIA Library Services.

The Bibliography 112/90 is available direct from Publication Sales, BSRIA, Old Bracknell Lane West, Bracknell, Berkshire RG12 4AH. Tel: 0344 426511. Fax: 0344 487575 Price St. £15.

Good Health!

Reconair Services have just completed the supply and installation of Fujitsu General Air Conditioning Systems at the pathology laboratory at the Mater Private Hospital.

These units are maintained in conditions within very close tolerances as temperature variations can effect test results.

This is another example of the ever-widening use of the split package cassette type air conditioning system.

BTU 1990 Programme

This year's BTU Golf Society outings are as follows:

- | | | |
|------------|------------------------------|------------------------|
| 18th May | — Clontarf Golf Club — | sponsor: Wilo Pumps |
| 8th June | — Newlands Golf Club — | sponsor: Davies |
| 20th July | — Dun Laoghaire Golf Club — | sponsor: B.S.S. |
| 23rd Aug. | — Forrest Little Golf Club — | sponsor: Finheat |
| 21st Sept. | — Hermitage Golf Club — | sponsor: Lister Group |
| 25th Oct. | — Royal Dublin Golf Club — | sponsor: J. J. Sampson |

Eddie Egan Memorial Trophy — The BTU matchplay competition will now be known as the Eddie Egan Memorial Trophy. Qualifying was on the first outing at the Island with 36 to qualify. Final will be held at the Forrest Little outing on 23 August.

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**FOR FURTHER INFORMATION CONTACT: JOHN BROPHY or JOHN QUINN - DUBLIN OFFICE.
MICHAEL QUINLAN - CORK OFFICE.**

ADVANCE SALES LEADS

Newmarket Information, the Dun Laoghaire based construction information company, provides advance information on new construction projects nationwide — all potential leads for contractors, sub-contractors and suppliers. The company publishes information in the weekly CIS Report which provides full project details, contact names, addresses and telephone numbers, design team details and tendering and construction schedules. The following listing is provided by CIS Report and gives a brief description of the types of projects covered. To obtain information on the service phone 01-809476/809557.

GALWAY

- Hi-Tech Tool Ltd., of Galway is planning to build a new 367 sq m factory unit at Liosban Industrial Estate on the Tuam Road. Construction on the unit is expected to begin within the next few weeks.
- Connaught Electronics, which operates a plant at Dunmore Road, Tuam for the manufacture of electronic car security systems and alarms, plans to invest £500,000 in the construction of a new factory close to the existing unit. Construction of the new 1,155 sq m, building is to get underway this summer.

WEXFORD

- A new advance industrial building is being constructed at the IDA Industrial Estate, at Enniscorthy, Co. Wexford by Allman Equities Ltd., of Glenageary in Dublin. The unit is believed to be valued at £500,000 and will be marketed by the IDA.

In a £300,000 investment Cytoplants Ltd., the operators of a plant tissue culture laboratory at Enniscorthy Industrial Estate, plan to build a new laboratory. Tenders have already been issued for the construction of the 615 sq m building and construction should commence in six or seven weeks.

- Sola ADC Lenses Ltd., which manufacture optical lenses at its plant on the Whitemills Industrial Estate, Wexford, is to expand over

the next few years. The factory will be extended by a further 6,104 sq.m. shortly and work on the extension should begin in eight to ten weeks time.

LAOIS

- Meadow Meats Ltd., of Rathdowney plan to upgrade their plant at a cost of at least £300,000. Two small extensions are to be constructed and existing buildings refurbished.

CORK

- Computer software manufacturers Logitech Ireland Ltd., plans to expand its facilities at Cork Business Technology Park at Model Farm Road. The 3,000 sq.m. extension will be similar in design to the existing plant and construction is expected to begin over the next few months.

WICKLOW

- Seibulite Manufacturing Ltd., part of the Seibu Company of Japan is to take over the former Irish Jurong plant at Kilcoole, Wicklow. The 13,676 sq.m. plant will be refurbished and altered. The company is expected to provide 210 new jobs when it begins production. Rennicks manufacturing of Mulhuddart in Dublin who manufacture under license from Seibu are handling the project. Seibu manufacture relective signs.

- Servier (Ireland) Industries Ltd., the French pharmaceutical manufacturing company based at Gorey Road, Arklow, County Wicklow is to expand the manufacturing facility at a cost of £750,000. Building work is scheduled to begin in July of this year and design work is being handled by architects Peter Legge and Partners.

- A number of foreign computer companies are believed to have expressed an interest in taking over the Nixdorf Computer plant at Boghall Road, Bray, Co. Wicklow. According to *CIS Report* the IDA has succeeded in interesting the Maxtor Corporation of San Jose, California in taking over the 300 job plant. Negotiations have been continuing over the past few weeks and if a deal is struck with Maxtor who specialise in the manufacture of computer disk drives the Boghall Road plant would have to close for about three months to be refitted.

DUBLIN

- Waterford Foods (Ireland) Ltd., who are planning to establish a £1.1 million distribution centre on the Naas Road, Dublin 12 will seek planning permission shortly for an extension to the proposal. Tenders for mechanical and electrical services work have yet to be invited but building work is scheduled to begin in June.
- Kinsealy Farms Ltd., are to go ahead with the development of a major new £5 million distributin centre at Seatown Road, Swords, Co. Dublin. The 8,200 sq.m. building will be constructed with a steel frame on concrete columns and clad. The main building contract is valued at £3 to £3.5 million while the mechanical and electrical contracts could run to £1.1 million. T.G. Neasy are the project managers on the development.
- Packard Electric Ltd., part of the General Motors Corporation who manufacture wiring systems for the automotive industry are planning to invest £3 million in new facilities at Airton Road, Tallaght. The expansion programme is expected to commence in 1990.

TIPPERARY

- Pharmaceutical manufacturers, Antigen Pharmaceuticals of Roscrea, Co. Tipperary plan to expand their plant by a further 2,500 sq.m. Building work is to begin in June and will take about 10 months to complete. Antigen employ about 150 people at Roscrea plant.
- Tipperary County Council is planning to build a new two bay fire station at Knockanrawley, Tipperary Town. The Council is hoping to have work begin on the construction of the £275,000 station in late August.

SLIGO

- Hanson Industries Ltd., recently instructed local builders Kilcawley Building and Civil Engineering to commence construction on an extension which will comprise offices and canteen facilities.

(Source, CIS REPORT)

Grilles/Louvres/Ducting
 Grilles/Louvres/Ducting
Grilles/Louvres/Ducting

**Glowtherm —
 Ireland's First
 Duct Store**

In April 1989 Glowtherm Ltd were officially appointed sole agents for Lindab Products in Ireland and with the vast range of ductwork and associated products available to them, decided to open Ireland's first duct store.

For the first six months it was difficult to determine the correct stocks to carry as the range of fittings and sizes available were endless. Now, having studied carefully the demands of

our customers over the past 12 months, we feel we have the correct stocks and the proof that our analysis is correct reflects in the fact that we are bringing in two vast containers of Lindabs products each month.

Our stocks include spiral ducting from 100 mm diameter to 300 mm diameter and matching bends, tee-pieces, reducers, saddles, joiners and blank ends. With six spiral machines working

24 hours a day in Northampton, we can offer a seven-day delivery on all sizes not available from stock.

To complete the ducting side of the operation Glowtherm Ltd finalised an agreement with Compoflex Ltd, one of the largest flexible ducting manufacturers in Europe, and can now offer from stock sizes 100mm - 450mm PVC glassflex which is glue free and conforms to the Health Authorities specifications, unlike some other flexible ducting available in the market place.

To offer a flanging system for ductwork with a difference was the next step and again De Waal Staal of Holland came into the picture with a superb system available in 20mm, 30mm and 40mm profile and associated components and support system.

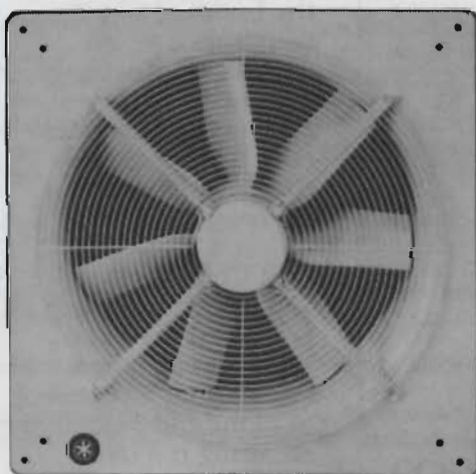
The basic profiles are with or without a mastic seal but, as and from mid-May, a 0% leakage rate will be the only profile available from stock.

In order to offer a complete service to our customers, the following items are also available from stock:- Fire dampers including circular up to 300mm diameters; access doors; volume control dampers and damper kits; blast gate dampers; mastic and in seal; canvas connector, threaded rod and connectors; Unistrut, and turning vane track.

Details from Glowtherm Ltd, Perrystown House, 194 Whitehall Road, Terenure, Dublin 12. Tel: 01-516644/516531 /522172/513595/5138 87. Fax: 01 554375.

Ziehl Abegg  Fan

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Grilles/Louvres/Ducting**

Dan Chambers — The Customised Specialists

While the concept of standard-sized grilles is still with us, the reality according to Dan Chambers is that, in most instances, the requirement invariably is for non-standard dimensions.

Hence the customised service offered by Dan Chambers Ventilation from their Dublin Industrial Estate production unit in Dublin 11.

Tony McNamara heads the production team at the factory which covers a total floor area of nearly 2,000 sq. ft. Despite having moved to the building less than two years ago, an increase in business coupled with the resultant expansion once again sees the company pressed for space.

Dan Chambers Ventilation produces all types and styles of grilles and louvres, substantial investment in plant and machinery ensuring the most exacting tolerances and quality.

Additionally, the company produces an extensive range of volume control dampers and fire control dampers, the "made-to-order" service guaranteeing a turnaround of within two days.

To date Dan Chambers Ventilation has dealt primarily with contractors and, while this supply route will continue, the sales and marketing emphasis has now been extended to include consultants and architects.

Examples of recently-completed projects include the customised louvres for the turret on the top of the Superquinn building in Dublin's Sutton Cross and a large consignment of grilles and louvres made specially for an oil refinery project in Nigeria being handled by M. F. Kent.

Latest additions to the Dan Chambers portfolio is a new range of roof units. These were specifically designed to blend more unobtrusively with the roofscape, right down to the choice of colour which is goosewing grey.

Centrifugal-powered units have always been available from the company but the new additions also include mixed flow impellar units.

Full details on the entire portfolio are available from Dan Chambers Ventilation, Unit 124, Dublin Industrial Estate, Glasnevin, Dublin 11. Tel: (01) 303222; Fax: (01) 308888.

HRB/GDS

20th April, 1990.

DIRECT GAS FIRING — AN OPEN LETTER

Dear Reader,

Certain of your readers may not be familiar with the relatively new technique of direct gas firing, and all its advantages. In the interests of helping those who know little, and correcting a few popular misconceptions, I offer the following brief summary.

Direct gas firing, on natural gas or lpg involves burning gas in an air stream taken from outside and passing the air, with the products of combustion, into the heated space.

Misconception No 1 — It is not safe to breathe the air supplied by a direct fired heater due to trace contaminants.

Correction — It's perfectly safe to breathe the air from a direct gas fired heater, provided the heater has been built to comply with British Standard BS5990. This is a very comprehensive standard, and among other things, strictly limits the level of contaminants permissible. Rather than bore you with figures, suffice it to say that a walk down an average Dublin street will expose you to far greater contamination levels due to the traffic.

The stringency of BS5990 is such that the difficulty in meeting it is properly addressed by very few manufacturers.

Misconception No 2 — Direct gas firing is inefficient because cold air from outside is constantly being heated. It is more efficient to use recirculating heaters.

Correction — Heating engineers allow a certain infiltration air change rate in buildings. This occurs normally due to opening of doors etc., and the fact that buildings are actually used, rather than sealed. In addition, there are specific ventilation requirements associated with most activities. Direct gas firing controls the ventilation rate by making sure that the air change takes place positively, through the heater.

This has several incidental advantages, including allowing slight pressurisation of a building. This makes it possible to heat large spaces, from one input point, without the need for internal ductwork. Heating a space 100m long from one end with no ductwork becomes simple. Summer ventilation is also provided, without the need for separate input or extract fans.

Direct fired systems are extremely efficient in use, and have won many awards for energy conservation. Examples exist of savings of 75% of energy costs (though, to be fair, this is exceptional, 30-35% being more normal).

Misconception No 3 — Direct gas firing causes condensation.

Correction — While it is true that one of the products of combustion is water vapour, the contribution to RH is small.

The humidity of air delivered into a building through a direct gas fired air heater is always less than the relative humidity of the fresh air being heated. Even when the water from combustion is added for example, raising 100% saturated air from the excessively cold temperature of 0°F to 70°F reduces the relative humidity to 6%.

The addition of water from the combustion process increases this relative humidity to 15%. Conversely, taking 100% saturated air at 65°F and heating it to 70°F reduces the relative humidity to 84%. The addition of the water from combustion increases this to 84.5%.

Those readers familiar with the arcane mysteries of the psychrometric chart can check this.

The fact that direct gas firing provides positive and controlled ventilation means that, in practice, condensation problems (where they exist) are cured. Indeed occupants of many swimming pools, fast food outlets and the like have been able to see out of the windows for the first time ever after the installation of direct gas firing.

Misconception No 4 — Direct gas fired air heaters are suitable only for large spaces.

Correction — Heaters come in all sizes, from 29 kw upwards. Further, while in many cases, distribution ductwork is not necessary, heaters are capable of accepting ductwork to facilitate heating of that awkward little area.

I trust that readers are now properly enlightened. It is a fact that very few people in the Republic are fully familiar with direct firing. Some practitioners have very little knowledge; and as a little knowledge is a dangerous thing, this could conceivably create problems.

Direct gas firing is safe, efficient and flexible. Readers, please deal with people who understand what they are talking about.

Yours faithfully,
for Niche Ltd, and Irish Agents Euro Gas,

Richard Birks.

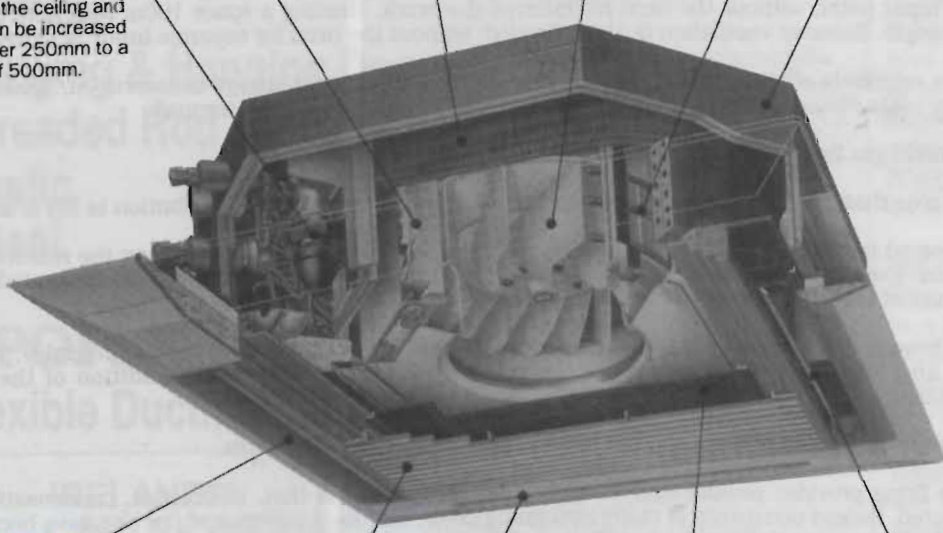
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Electrical Service Box
Each cassette has two electrical boxes, one on the outside of the chassis for field wiring during installation and the other on the inside which houses the electronic control boards. The inner box slides down on runners for access through the inlet grille.

Branch Duct/Fresh Air
Facilities for both branch ducting and fresh air inlet for on-site application.

Electric Boost Heaters
All heat pump indoor units are factory fitted with electric boost heaters which are automatically controlled via the electronic controls for optimum economy and efficiency.

Turbo Fan
Ultra low noise levels are achieved by using a newly developed fan which also results in a chassis depth of just 298mm regardless of unit output.

Low Unit Height
The unit is specially designed for a neat and tidy installation requiring only 298mm within the ceiling.

Drain Lift-up Mechanism
All units are fitted with a drain lift up mechanism to remove condensate formed during cooling. The drain outlet is 250mm above the ceiling and this can be increased a further 250mm to a total of 500mm.

Four Way Air Discharge
On site adaptability for 4-3 or 2 way air discharge means almost any application can be fulfilled.

Auto Louvre
The air outlet vanes can be switched to swing automatically up and down for uniform air distribution or set for permanent horizontal or vertical discharge.

Variable Air-Flow Outlet System
The air vents can be adjusted by means of a sliding damper to provide a gentle breeze over an extensive area or a stronger stream of air where necessary.

Inlet Grille
Decorative inlet grille protrudes just 25mm into room and opens for filter cleaning and all servicing.

Long Life Filter
Long life - low maintenance filter needs cleaning only every 2,500 hours of operation in a normal office environment.



"ADVANCED AND EVER ADVANCING"

SENSIBLY CONFIGURED OUTDOOR UNITS

Extra Fan
This newly developed unit is super quiet due to the specially designed 'extra fan' used on all heat pump models and cooling only up to size 4.

Charge-less Refrigerant Systems
This newly developed system eliminates the need for on-site refrigerant charging. Each unit is fully charged to include pipe runs up to 50m on heat pump units (40m on size 2) and 20 metres on all cooling only units resulting in lower on-site labour costs and increased reliability.

Electronic Control
The highly advanced electronic control systems house a 'self diagnostics function', 'anti-phase and single phase protection', 'low ambient fan speed control' for cooling down to -5°C outdoor temperature (heat pumps only) and a 'learning defrost control' which determines optimum defrost times from previous defrosts (heat pump only).

Front Access Maintenance
Maintenance -- all maintenance points are located behind an easy access front panel, greatly facilitating installation and servicing.

Rotary Compressors
High efficiency -- high reliability rotary compressors, including a twin cylinder rotary, are fitted to all heat pump models and up to size 4 cooling only models for optimum performance.

In-line Installation
The special design of the unit makes in-line installation of a number of units possible, resulting in major space savings.

Four-way Piping Access
Pipe connections can be made from the front, rear, right and base of the outdoor unit.



Crankcase Heaters
All units are fitted with crankcase heaters as standard.

FOR FULL INFORMATION ON PRICES AND STOCK PLEASE CONTACT:-



TEMPAR LIMITED, MITSUBISHI ELECTRIC DISTRIBUTOR
6 PEMBROKE LANE,
BALLSBRIDGE, DUBLIN 4
TELEPHONE: 683855. FAX: 683086.

Edpac, Cork

Originally launched as a licensee of Edpac USA in 1985, Edpac Ireland Ltd now owns the world rights to the Edpac name following the relatively recent demise of the American principal.

To begin with, the company acted mainly as a distributor for Edpac's Tech 80 range which is modified for European consumption.

However, it has since developed its own range — called Modulaire — which has already been specified for quite a number of prestigious contracts, both in Ireland and abroad. A typical example is the system installed in the Financial Services Centre at Dublin's Custom House Docks Development (See *BSNews*, March/April 1990).

The main driving force behind Edpac Ireland is undoubtedly Managing Director and majority shareholder Jim Tangney. Jim's background is electronic engineering, an MBA from Trinity being among his many academic qualifications.

Indeed, it is his near obsession with electronics/technology which led to the development of the Modulaire system. Innovative technological developments are a hallmark of Edpac Ireland, the recent licensing agreement whereby Dunham Bush in the USA has negotiated to purchase some of that technological know-how being a prime example of just how highly-regarded Edpac is viewed internationally.

An additional benefit is Jim Tangney's wide commercial experience, again both in the home market and overseas. More often than not those who are technologically brilliant have poor commercial judgement.



● Ann Carrigy, Editor of Building Services News

Edpac is fortunate in that Jim Tangney's commercial abilities are a complementary match for his technical expertise.

Against such a background the remarkable success to date of Edpac Ireland Ltd — which is but five years in operation — is hardly surprising.

Nor is it surprising that Jim Tangney should have chosen (a) to set up in business on his own and (b) to go down the route he did.



● Mark Watson, Edpac European Sales Manager, who is based in Paris.

Prior to Edpac Ireland Ltd., Jim worked with the IDA, his primary function being to attract foreign investors into the country. He had wide experience in a number of industries and, having been instrumental in setting up another American-based air conditioning manufacturing concern in Cork, he left the IDA to run that operation.

The step from there to forming his own company, and in the same business sector, was but a small one for him, notwithstanding of course all the financial and logistical requirements.

His American contacts were especially extensive, hence the formation of Edpac Ireland in 1985.

Five years later sees the business operating out of a 25,000 sq ft purpose-built manufacturing plant located

on the Crosshaven road just outside Carrigaline in Co. Cork.

Fixed investment to date is approximately £3 million with 36 people — with an average age of mid-20s — currently employed by the firm.

Production is undoubtedly export-oriented with nearly 90% of all output intended for foreign-based markets. However, the remaining 10% which goes to the home market is just as important.

Naturally, this percentage will increase as and when the Irish marketplace expands and grows in sophistication. Currently though, there are insufficient projects of the scale of say the Custom House Docks Development for there to be any change in this policy.

Being a development /manufacturing unit first and foremost, Edpac makes products available through an appointed network of distributors.

This holds true also for Ireland where Crossflow Air Conditioning are responsible for all the sales, installation, commissioning etc. of Edpac products throughout the entire country.

This "partnership" is especially strong in Ireland, Crossflow having been involved as distributors for Edpac USA many many years ago.

On the international front — and especially in Europe — the truth is that Edpac Ireland were, initially at least, not so lucky in this respect. The European network of distributors it inherited on the demise of Edpac in the USA proved to be uncommitted to the brand.

Unfortunately, the reason was simple, Edpac in the USA had neglected its European distributors to such an extent that the

BSNews Roving Report

trust so essential in working relationships of this nature no longer existed.

However, Jim Tangney and his management team have all but completed a re-appraisal of the entire European distributor network, implementing changes where necessary and restoring confidence.

Moreover, a new partnership concept has also been devised to further strengthen this relationship. Rather than have appointed distributors, Edpac now wants to establish joint ventures in each of the countries it trades in.

One such company has already been established in the UK. Called Klima-Therm Edpac, the move followed Klima-Therm's appointment as sole distributor for the close control and comfort products of Edpac. Edpac has a financial stake in the new company and intends to develop similar partnerships elsewhere in Europe.

Commenting at the time of the launch of Klima-Therm Edpac in the UK Jim Tangney said: "Until recently we used distributors but found it difficult to get them interested in after-sales service when there was no profit in it for the distributor.

"But a partner would be more closely involved with the business, and in ensuring the products had a good reputation."

To further strengthen European support an Edpac Ireland office has been opened in Paris. Mark Watson, European Sales Manager, will cover the EC countries from this base which is located in a suite of CTT-controlled offices.

Technical support is provided by Field Engineer Martin Butler. His brief is of a "roving" nature in that he is available to visit wherever there is a pressing need

which the local distributor cannot resolve or where extra help is required.

On an ongoing basis technicians from the various Edpac appointees throughout the world visit the Carrigaline plant for educational updates.

At the plant itself the ratio of research and administrative staff to production personnel is approximately 50/50.

All metalwork is sub-contracted out to Techniform in Waterford so that Edpac can concentrate solely on the technological input.



● *Leslie Meade, factory operative*

Where possible, main components are sourced from Ireland, examples being the electronics which come from Neltronics and the coils which are supplied by Milex. Moreover, where imported components are involved, these are sourced via the local Irish distributor if one exists.

BSNews Roving Report



● *Niall Buckley, factory operative*

Naturally, fluency in foreign languages is another requirement, something which became abundantly clear during BSNews Roving Report visit to the Carrigaline factory.

Customer Services Manager Anne Carrigey was our host for the day and she intermittently took calls from abroad, breaking in to the appropriate "tongue" as and when required.

Production machinery, quality controls, monitoring procedures, etc. are of the calibre one would expect.

Obviously, the entire operation is computer-controlled, the design and administrative offices resembling a NASA space control room.

Naturally, plans for the future are based on an expansionary philosophy, new products and new markets being the main focus of attention.

Edpac Management Team:

Jim Tangney

Donal Spillane

Anne Carrigy

Tom Stanton

Chris Stack

Robert Coughlan

Tom O'Kane

Managing Director

Financial Controller

Customer Services Manager

Product Manager

Materials Manager

Production Manager

Senior Electronics Engineer

NEW PRODUCTS/LITERATURE

DIRECT COUPLED DAMPER MOTOR

A new version of the KM Series of direct-coupled damper motors, designed specifically for single-wire or three-point control, has been introduced by Belimo Automation (UK) Ltd., called the Belimo KM 24-3, it is suitable for the operation of air dampers of up to 0.1 sq. cross-sectional area, depending on type and operating torque required.

Torque rating of the KM. 24-3 has been increased to 2.5 Nm/min, and the running time extended to 80 to 100 seconds. Ambient temperature range is from -20oc to +50oc.

Fully protected against overload, the Km.24-3 does not require the fitting of limit switches. Angle of rotation can be set mechanically at either end between 0°C and 100°C, with the motor stopping automatically when it reaches the end stop of the damper or motor.

Details from Belimo Quotmation (UK) Ltd., The Lion Centre, Hampton Road West, Feltham, Middlesex TW13 6DS. Tel. 7554411.

IS YOUR BOILER GREEN?

Pacific Exports have developed a boiler manager known as the Economy.

The Economy controls the boiler, eliminating or reducing a condition known as dry cycling or boiler hunting. The use of fuel is controlled to the extent that only enough fuel to maintain the required temperature settings is used.

Over the last six years, tests on various types of boilers have shown the saving to be in some cases as high as 35%. More usually, 20% to 30% is achieved. This results in less bills, less boiler wear and less fumes poisoning the atmosphere.

Two versions are available, one for domestic use and the other for commercial use.

Details from Pacific Exports, Business Design Centre, 52 Upper Street, London N1 0QH. TEL. 288 6062. Fax. 288 6081.



● "Economy 2" boiler control from Pacific Exports.

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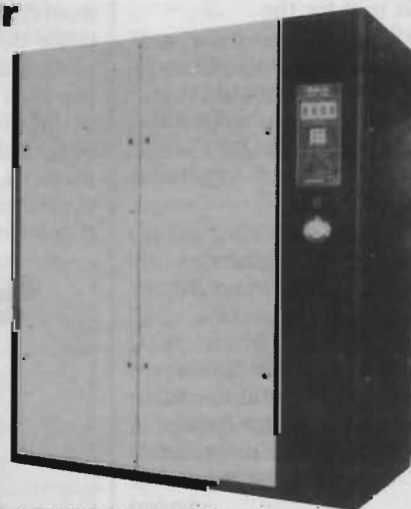


Computacool 48-120

As supplied on the new I.B.M. installation for Allied Irish Banks Limited, Computer Centre, Donnybrook.

Computaire 80-400

State of the art air conditioning systems — all functions. Operation duration and failure indications monitored and logged by P.C.B.'s — integration into Computer System Standard. As supplied to New Ireland Assurance Company Computer Room.



RECONAIR SERVICES LTD., 207 SWORDS ROAD, SANTRY, DUBLIN 9. TELEPHONE: 425200. FAX: 425880.



NEW PRODUCTS/LITERATURE

COMBAT BOILERS

Combat Engineering Ltd., now supply a range of floor-standing, cast-iron boilers intended for use in small to medium size commercial heating systems, in offices, retail outlets, clinics, nursing homes, libraries and other similar size projects.

The boilers are available in two ranges - Tema and Teda - each offering a choice of several models with different output capabilities to ensure precise matching of boiler and heating requirements in a variety of applications.

The Tema range of atmospheric gas-fired boilers comprises five models ranging in output from 31.64 kw to 73.6 kw. While the Teda boilers are available in either oil or gas-fired versions with eight models ranging in output from 24.5 kw to 83.7 kw.

Both ranges feature front control panels with

thermostat, thermometer and safety thermostat controls and are delivered fully assembled, ready for installation.

**Details from: -
Combat Engineering Ltd.,
Odcord Street,
Bilston,
West Midlands
WV14 7EG.
Tel. 0902-44425;
Telex. 0902-337925.**



● An example from the Teda range of boilers from Combat.

A hand-held measuring, data-processing and estimating system, comprising an ultrasonic distance meter combined

with a pocket-sized computer, has been introduced by DMC Equipment Ltd. It is said to be the first datalogging



● Portable measuring computer from DMC Equipment.

NEW TIG ON THE BLOCK

SIP, the international manufacturers' of welding equipment, have just launched the SIP Tig 160, capable of welding aluminium, stainless steels, alloy steels, copper and bronze in Tig mode, the unit can also utilise a wide variety of different electrodes when utilised in manual metal arc mode.

Fan cooled for maximum efficiency and high duty cycle, the Tig 160 utilises specially-developed, high-insulation varnish coated copper wound transformers. Class H insulation and thermal overload protection are also utilised in order to ensure high performance, trouble-free life.

Features include: Operation from single phase supply; Continuous electronic control 5-16-



● The new Tig 160 from SIP.

AMPS; High and low current ranges for precise settings at low power; Adjustable start current; pre-weld gas flow time control; post-weld gas flow time control; High-frequency arc ignition; AC/DC capability; Slope down facility and Remote foot control option.

For information contact SIP (Holdings) Ltd., Gelders Hall Road, Shepshed, Loughborough, Leicestershire LE12 9NH. Tel: (0509) 503141.

PORTABLE MEASURING COMPUTER

system which can measure, estimate and download information to a personal computer.

'DMC II' (Digital Measuring Computer) is designed to take and store measurements, together with any additional information or comments, and then calculate areas, volumes, heat values and many other parameters. It uses these to produce estimates for such work as heating and ventilating, construction, surveying, refurbishment and office cleaning.

All data can be processed instantaneously and results can be viewed on

the computer display or printed out on-site through a plug-in portable printer. Alternatively, the data can be downloaded later to an office computer through a standard RS232 link for storage and use in computer graphics and drawings of building layouts.

**Details from:
DMC Equipment Ltd.,
5 Woods Mews,
Park Lane,
London W1Y 3AG,
England.
Tel. 629 1100;
Fax. 499 2289.**

CENTRAL HEATING WATER TREATMENTS

Why Corrosion-Proofing Is Necessary

From the moment a central heating system is filled with plain, untreated water, the corrosion processes commence. After that come the problems, many of which may not seem to be corrosion related, writes Dan Davies, Technical Services Manager, Fernox Manufacturing Co. Ltd.

A common symptom of corrosion is the need to vent radiators regularly, due to a build-up of gas depressing the water level and so reducing heat output. The gas is either hydrogen, nitrogen or air. Hydrogen will have been formed as a by-product of the corrosion reaction, whereas nitrogen (introduced by aeration) is left after the oxygen has been consumed in the corrosion process. If air is entering the system, it indicates a serious design fault which needs to be corrected without delay.

The next most common symptom of corrosion is pump failure (and in

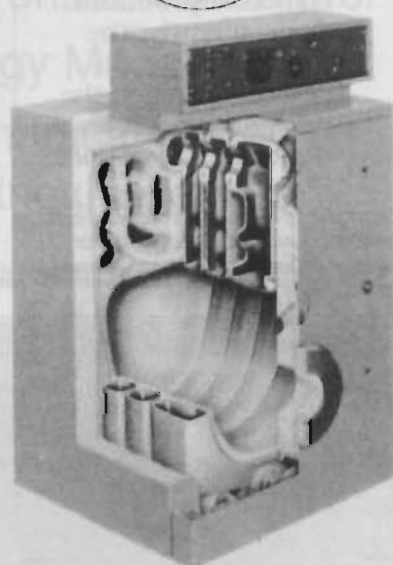
some cases successive failures). Corrosion debris in the form of black sludge, some of which is magnetisable, is the most usual culprit. Fine debris drifts into the inner water-lubricated parts of the pump, increasing the frictional forces and eventually causing overheating and seizure. All too often the pump is replaced without any investigation as to the cause of failure and, as a result, the replacement fails prematurely. Such debris can also contribute to the premature failure of thermostatic and motorised valves. The formation of lime scale on valve seatings can also be a major cause

QUADRANT ENGINEERS LIMITED



Buderus

Buderus cast-iron sectional boilers five different models. GK 105, 202, 305, 405, + 505 ranging in output from 21 kW to 465 kW higher efficiencies with better insulation and lower standing losses.



LOGANA GK 105

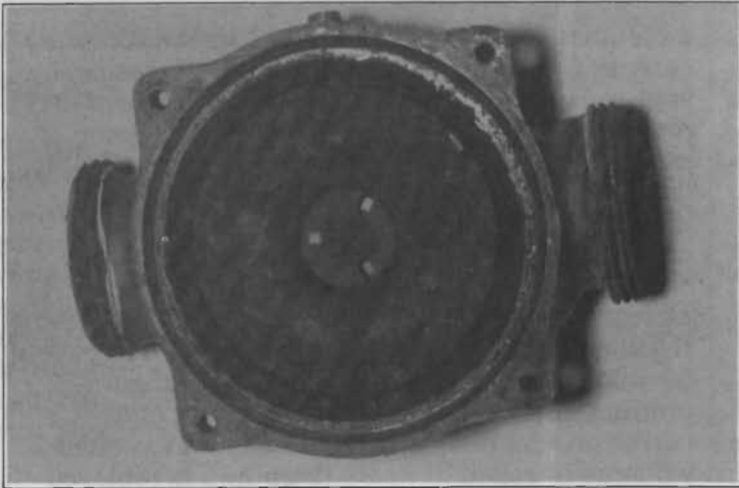
LOGANA GK 205

For details contact:-

QUADRANT ENGINEERS LTD.,

Chapelizod, Dublin 20. Telephone: 01 - 626 5711. Telex: 95709. Fax: 626 7863.

CENTRAL HEATING WATER TREATMENTS

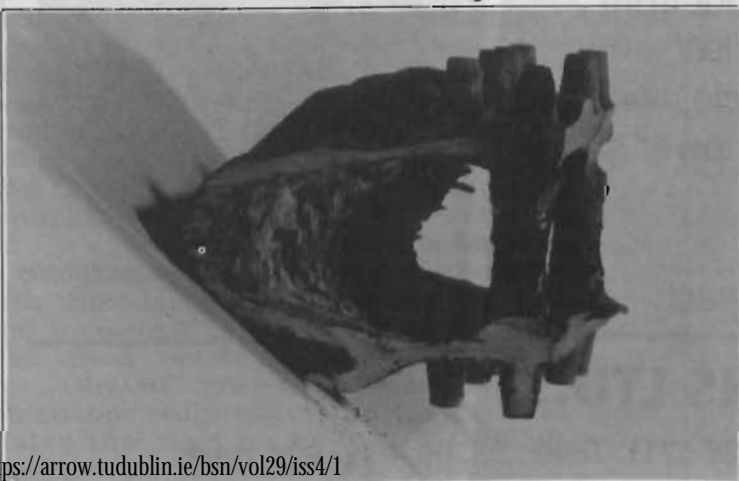


● Example of a circulator which failed as a result of black iron oxide accumulation.

of component malfunction.

The build-up of corrosion debris in areas of low flow rate leads to inefficient circulation of hot water and reduced heat output. Within the pipework, bores become restricted, thus decreasing the circulation further, while within the radiators, the normal flow pattern is interrupted and a cold area produced. Consequently, the time taken for the heating to reach the desired comfort level, if indeed it ever does,

● Example of a boiler section which over-heated and failed due to the insulating effects of lime scale and black iron oxide deposits.



is considerably extended, with a corresponding increase in fuel consumption.

The accumulation of sludge and scale inside boiler heat exchangers is the most major cause of boiler noise and fuel wastage. A deposit of as little as 0.5mm can result in a fuel efficiency loss of 5% and a resultant increase in skin temperature of 90°C. It is not uncommon for this insulating layer to cause the boiler skin to overheat and eventually to buckle and fracture. The phenomenon of boiler noise, which can be of considerable concern, is caused by the formation of steam blisters, followed by their subsequent implosion.

The final and often very distressing result of the corrosion process is the pinholing of radiators or associated pipework, with resultant water damage to carpets, floors and ceilings. Regrettably, it is often only at this stage, when it is too late, that the problem of corrosion in central heating installations is recognised or admitted.

THE CAUSES —

Oxidic corrosion is the form commonly seen as red rust. It occurs when steel comes into contact with oxygen and water. In a central heating system, oxygen is introduced with the first fill of water, which quite unavoidably, is fully aerated. As the water is heated, oxygen comes out of solution, to form little gas blisters. These adhere to the metal surfaces and are not readily removed, even with high flow rates. Radiator design also contributes to oxidic corrosion. The vent screws are rarely sited at the highest point and, as a result, it is impossible to remove all the air. Thus at the top of each radiator is an air pocket which acts as an oxygen reservoir. Furthermore, any oxygen forced from solution during the heating cycle can collect in these air pockets only to redissolve as the radiator temperature falls.

The rate of attack of oxidic corrosion increases with the rise in temperature, but peaks at 78°C. While it is recognised that oxidic corrosion will cease when all oxygen has been consumed, it can be demonstrated that minute quantities of oxygen (just one part per million) are sufficient to allow radiator corrosion to occur.

Oxidic corrosion results in the formation of two types of debris, black iron oxide (magnetite) and red iron oxide.

Magnetite gains its name from being magnetisable and is found in all untreated systems, even in well designed, vented and pressurised heating systems which are operating normally. It is the black sludge deposited in the bottom of steel radiators, and each kilo contains the equivalent of 724 g of iron metal, which has come directly from the iron components in the system.

Red iron oxide is usually only found where systems have been badly designed, badly installed or have operating faults.

CONDITIONS PROMOTING OXIDIC CORROSION —

The following are examples of circumstances which contribute to the oxidic corrosion process: -

CENTRAL HEATING WATER TREATMENTS

(1) Water losses from the system, resulting in the addition of fresh oxygenated water;

(2) The diffusion of oxygen from the open feed and expansion (F&E) tank. Diffusion of oxygen can also take place through the walls of any plastic pipe used, and through the rubber in expansion vessels used in sealed pressurised systems;

(3) The incorrect sizing or siting of the pump can cause pumping over water from the vent pipe into the F&E tank, or the suction of air down the feed pipe into the system. Excessive seesawing of the water levels in the F&E tank and

vent pipe can also accentuate the aeration problem;

(4) Porous jointing compounds on flanges on the negative side of the pump can cause air to be sucked into the system through micro-leaks. These allow air in but do not allow water leak out. Such inward leaks of air have also been observed at radiator vent screws and valves. In addition, the suction caused by the initial surge of the pump can be sufficient to overcome the static pressure head of open systems and draw in air. This effect can even be observed in pressurised systems;

(5) In a sealed system with an undersized vessel, negative pressure can develop on cooling. This can cause air to be "sniffed" in at otherwise watertight joints.

"A common symptom of corrosion is the need to vent radiators regularly".

ELECTROLYTIC CORROSION —

Electrolytic corrosion is the electrochemical process that takes place between different metals in a system, or even between the different alloy constituents and impurities within a single piece of metal. Electrolytic corrosion would therefore take place even in a system made entirely from a single metal such as stainless steel. However,

central heating systems are usually constructed from many different metals of which copper, steel, cast iron, brass and aluminium are the most common.

Electrolytic corrosion takes place even in the near absence of oxygen, and the rate of attack doubles with every 10°C increase in water temperature. Unlike oxidic corrosion, it does not reach a maximum rate of 78°C.

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FROM



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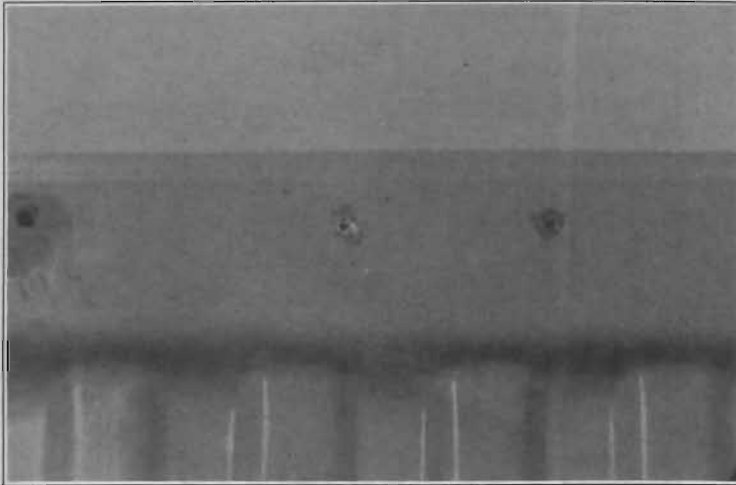
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CENTRAL HEATING WATER TREATMENTS



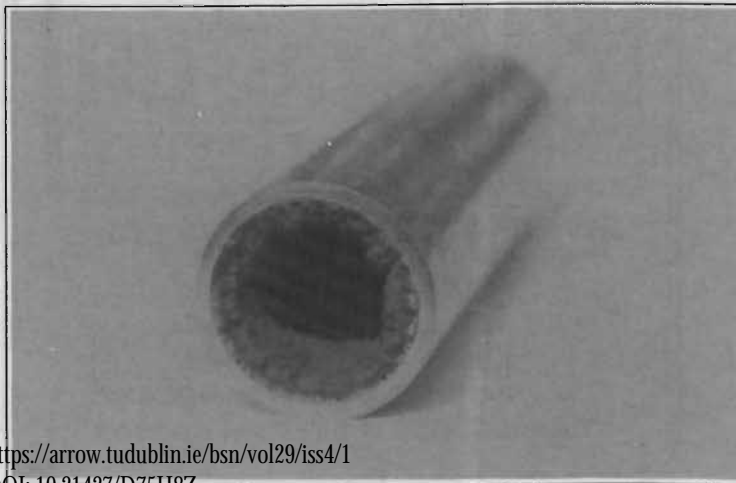
● Floating corrosive flux residues have contributed to the development of primary damage at the water level of this radiator.

CONDITIONS PROMOTING ELECTROLYTIC CORROSION — (1) Dissimilar metals in contact, e.g. copper swarf in a steel radiator;

(2) Carbon deposits on metal surfaces. Carbon arises when grease is burnt during the welding process of radiator manufacture;

(3) Metallic structure, e.g. different metals alloyed together, or impurities within the metal.

● 1.6mm lining of black iron oxide in a 15mm copper tube. Lesser deposits have caused problems in macrobore pipework.



(4) Stressed areas, e.g. deep pressed sections and bends;

(5) Crevices e.g. under non-active materials such as paint, brick dust, sand etc;

(6) Stray currents from faulty electrical equipment and induced magnetic fields from household wiring in close proximity to pipework.

OTHER CONTRIBUTORY CAUSES OF CORROSION — There are a number of other circumstances which contribute to the corrosive nature of the system water.

(1) Most potable water supplies contain chlorides and sulphates, and some contain peat acid, all of which make the water more corrosive;

(2) Corrosive sodium chloride is sometimes introduced into a system through the inappropriate use of washing up liquids, in the vain attempt to cure boiler noises. Fabric conditions, used for the same purpose, attack 'O' rings and traditional jointing compounds as well as causing damage to pumps and TRV's.

(3) The establishment of sulphide generating bacteria, which can cause perforations even in heavy gauge steels;

(4) The use and abuse of fluxes during system installation. This more than any other factor has been cited in the recent controversy as the main cause of radiator pinholing. In a very large number of cases investigated, either by ourselves or the major radiator manufacturers, early radiator failures (sometimes within a few weeks of system installation), have been attributed to corrosion caused by flux residues remaining in the system.

CORROSION PREVENTION — The Fernox solutions to prevent corrosion are very straightforward and logical.

Developed in response to the real needs, they simply tackle each problem at source. For example, Fernox BC-10 is a commissioning cleanser which is added to the very first fill of water when testing the system. This prevents any initial scale formation (particularly important with tubular boilers) and helps neutralise any corrosive flux residues before they can create pinholes. BC-10 can also be used to eliminate

"bacteria can cause perforations even in heavy gauge steels".

boiler noises from tubular boilers up to six months old.

To prevent radiator corrosion and so avoid the risks of pinholes, noisy boilers, pump seizure etc., a Fernox Corrosion-Proofing should be added to the system. Fernox produce three different types for domestic applications, each tailored to the needs of a key characteristic of the installation. They are all safe and simple to use and when applied at the correct dose will render water perfectly

CENTRAL HEATING WATER TREATMENTS

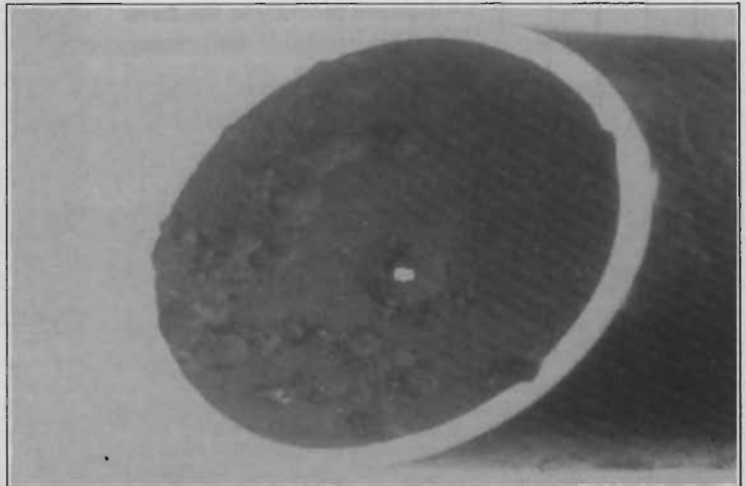
non-corrosive. They also prevent the formation of hydrogen gas inside radiators, avoiding the need for frequent venting, minimize bacterial contamination as they contain a biocide, have pump lubrication properties, and the much appreciated feature of boiler noise prevention.

For systems with steel radiators and cast iron or steel boilers, Fernox MB-1 corrosion-proofer should be used. If the system has a copper tubular boiler and/or plastic pipework, the Fernox CP-3 corrosion-proofer is the correct choice.

- Sulphate reducing bacteria have caused deep pitting and a perforation in a 3" steel tube.

There is an increasing use of aluminium in central heating systems which can occur in the form of radiators and/or condensing boilers and in these cases special protection is needed. Fernox Copal has been developed specifically to protect aluminium in addition to copper, brass, cast iron and steel.

- Hevac is the sole distributor of Fernox products in the Republic of Ireland.



"The Fernox solutions to prevent corrosion are very straightforward and logical."

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PLUMBING

Now before all you soccer supporters who worship the man get offended on his behalf, I'm only referring to his involvement recently in the **Bord Gais** great balloon release.

On Friday, 4 May, Jack attended at four venues throughout the city — the Bord's showrooms in D'Olier St; Cosy Home in Marino, the Natural Gas Centre in Crumlin; and Dundrum Gas, Dublin 14 — where he released **1,000 balloons** at each location publicising BG's latest consumer incentive.

The main thrust of the promotion is **£600 off** the cost of installing natural gas central heating if you switch before the 1 October deadline. An additional bonus scheme was devised with the balloon release whereby the first person to each of the four venues listed above bearing one of the "Summer Payout" balloons received double the offer, i.e., **£1200 off** the cost of the installation.

Also, everyone else returning a balloon to one of the centres was entitled to a free copy of Jack's "Guide To The World Cup".



The latest edition of **Dublin Shopping Centres: Statistical Digest 11** has just been published and is now available at £45 from the Centre For Retail Studies at UCD in Dublin.

While primarily aimed at retailers, developers, and letting and management agents, the **Digest** is also an invaluable aid to other industries who provide specialised services to shopping centres.

As such, building services companies will find it extremely useful. It contains a **wealth of information** providing a comprehensive profile of the top 51 shopping centres in the Greater Dublin Area.

Included is up to date information on the size, description and location of centres; the owners, developers and managers; typical rental rates; and the number and types of retail and service outlets each centre contains.



Air conditioning sales to boom? While there is no predicting whether the extraordinary weather of the last week in April and the first week in May will become the norm for the coming months, even that warm spell alone has resulted in a major boost for the air conditioning sector.

Sales enquiries doubled and trebled in some cases. Even if a small percentage of that **potential is realised**, then



● Pictured at the CIBSE Custom House Docks Project meeting in Clyde Road were (l-r): Michael McDonald, VMRA; Pat Melia, AIB; Tony Conlon, VMRA; Hugh Munro; Jim Curley, H.A. O'Neill; Kevin Cullen, VMRA; and Paul Richardson, Burke Kennedy Doyle.



● Pictured at the recent CIBSE Seminar were (l-r): Jim Curley, H. A. O'Neill; Ray Spice, Trend; John Cuthbert; Shafigue Shah, Satchwell; and Michael Buckley, Walkers.



● Also at the recent CIBSE Seminar were (l-r): John Byrne, Cyclon Controls; Eric Kinsella, H. A. O'Neill; Graham Smith, G.K. Salter; Hugh Munro; and Richard Shord, Trend.

suppliers — or at least some of them — will be doing very well.

However, as with all unexpected windfalls of this nature, the **danger** of demand outstripping supply is ever-present.

Let's hope this is not the case in the coming months.



Still with the **good news**, what of the proposed £50 million leisure and hotel complex for the 20-acre site near Kilmore, north Dublin.

It's envisaged that the scheme would create 2,700 construction jobs over the 2-year building phase and a further 1000

permanent and full-time positions once completed.

The spin-off for the building services requirement would be **phenomenal**, given that the proposals include a spectacular waterworld with 60 ft high flumes, a sandy beach and suntan facilities; dry ice skating; a 200-bed hotel; 8-screen multiplex cinema; 36-lane bowling alley; a children's funfair; restaurants; bars; and a cabaret and convention theatre.

All of these facilities will be provided around the hub of the complex which will comprise a spectacular **3,000 m atrium/piazza**.

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