

BRIGHTSIDE

**brightside heating**

**AND ENGINEERING COMPANY LIMITED**

G.P.O. BOX 118 · SHEFFIELD 1 · ENGLAND

HEATING · VENTILATING · AIR CONDITIONING · AIR TREATMENT · PROCESS PIPEWORK · THERMAL PROCESS EQUIPMENT

**Compiled by Brian Roberts  
CIBSE Heritage Group, December 2021.**

Brian Roberts joined Brightside Bristol as a Student Apprentice in 1952 and, after National Service in the RAF, transferred in late 1958 to the Brightside London Air Conditioning Branch, becoming Chief Air Conditioning Engineer, until leaving in 1966.

## introduction

BRIGHTSIDE HEATING AND ENGINEERING CO. LTD. was originally a division of The Brightside Foundry and Engineering Co. Ltd. and was formed into a separate Company in 1955.

We specialise in the design and installation of all forms of heating, air conditioning and pipework systems and have branches in the main industrial and commercial centres of the United Kingdom. Generally, each branch is an established unit with technical and operative staff providing a complete design and installation service.

We cater for all accepted methods of heating for human comfort and have extensively developed radiant heating for industrial buildings through Brightrad radiant panels and radiant strip.

More recently we have pioneered in this country high velocity heating and air conditioning systems with their special advantages for multi-storey buildings. For the home and export markets in air conditioning applications, including refrigeration, we cater for an ever increasing demand for process plant calling for specialised and exact requirements of air temperature, humidity and velocity.

Pipework for most purposes and in most manufactured forms is also a special part of our activities for which design and installation services are always available.

We have a Research and Development Laboratory which has been responsible for many major developments. The Department is fully equipped to handle heating and air conditioning problems of any nature. Much work is being done on developing new techniques and applications in this field.

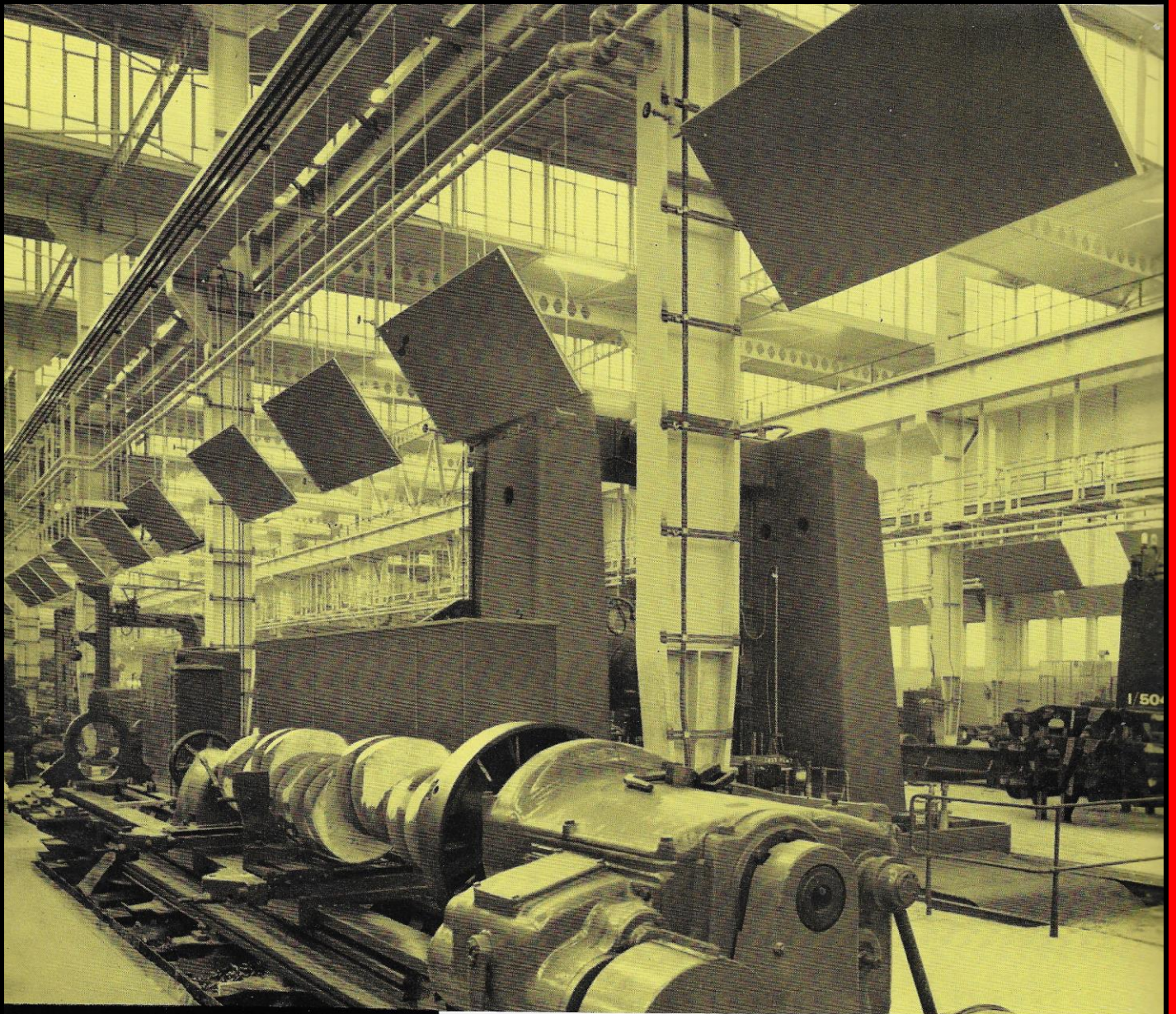
This electronic book has been compiled from the book "the Brightside Group of Companies", undated but probably published by the Company in the mid-1960s.

Brightside Foundry dates from around the mid-1850s and was a Founding Member in 1904 of what later became The Heating and Ventilating Contractors' Association.

The name Brightside comes from the Foundry location in the Brightside district of Sheffield.

The Group expanded over the years to include:  
Brightside Engineering Holdings Limited  
The Brightside Foundry and Engineering Company Limited  
Buckley and Taylor Limited (Heat Exchangers)  
Brightside Heating and Engineering Company Limited  
Brightside House Heating Limited  
Moorwood Vulcan Limited (Kitchen Equipment)  
Graham Firth Steel Products Limited  
Metal Mouldings Limited

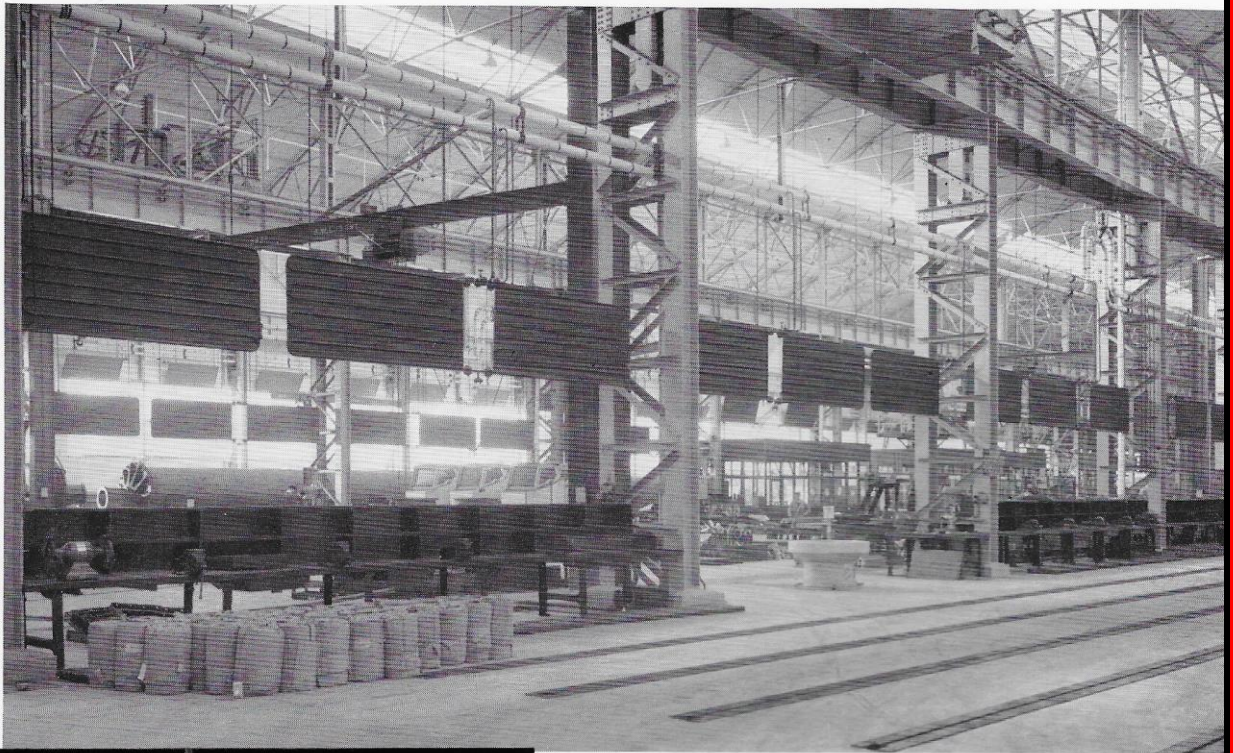




## heating

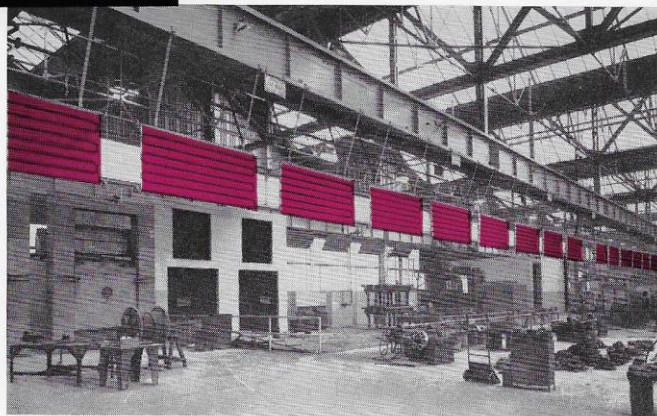
Single-sided radiant panels are used where emission is required from one side only. The illustration shows an application of this type of panel. Little maintenance is required for a Brightrad radiant heating system.





## radiant panels

These two workshops use double-sided radiant panels which are designed to emit heat equally from both sides. Steam or hot water can be used as the heating medium.





Brightrad radiant strip  
is particularly suitable  
where it is necessary  
to maintain a  
clear floor area.  
Typical installations are  
shown on this page.



**radiant strip**

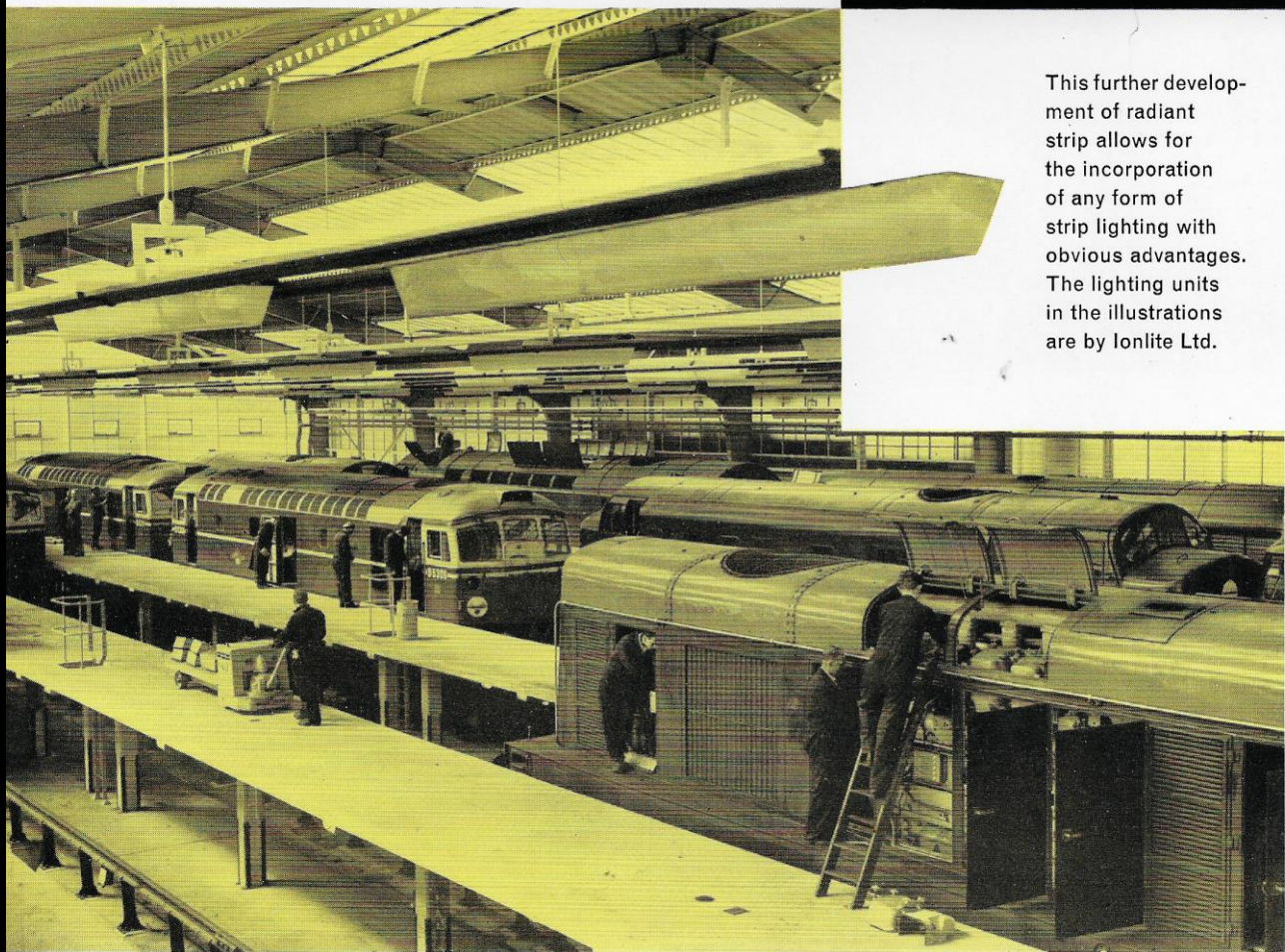






## heating and lighting strip

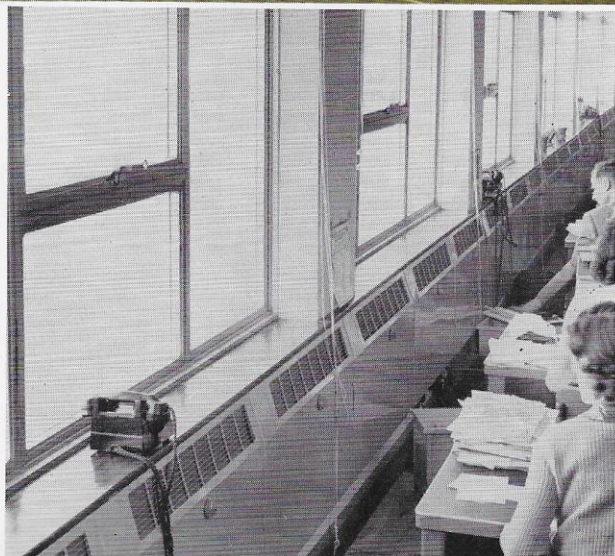
This further development of radiant strip allows for the incorporation of any form of strip lighting with obvious advantages. The lighting units in the illustrations are by Ionlite Ltd.





# convector heating

Typical convector heating installations are shown here. The convectors are concealed to give clean unbroken lines to the perimeter of the rooms.





The illustrations show invisible panel warming systems both during and after installation.



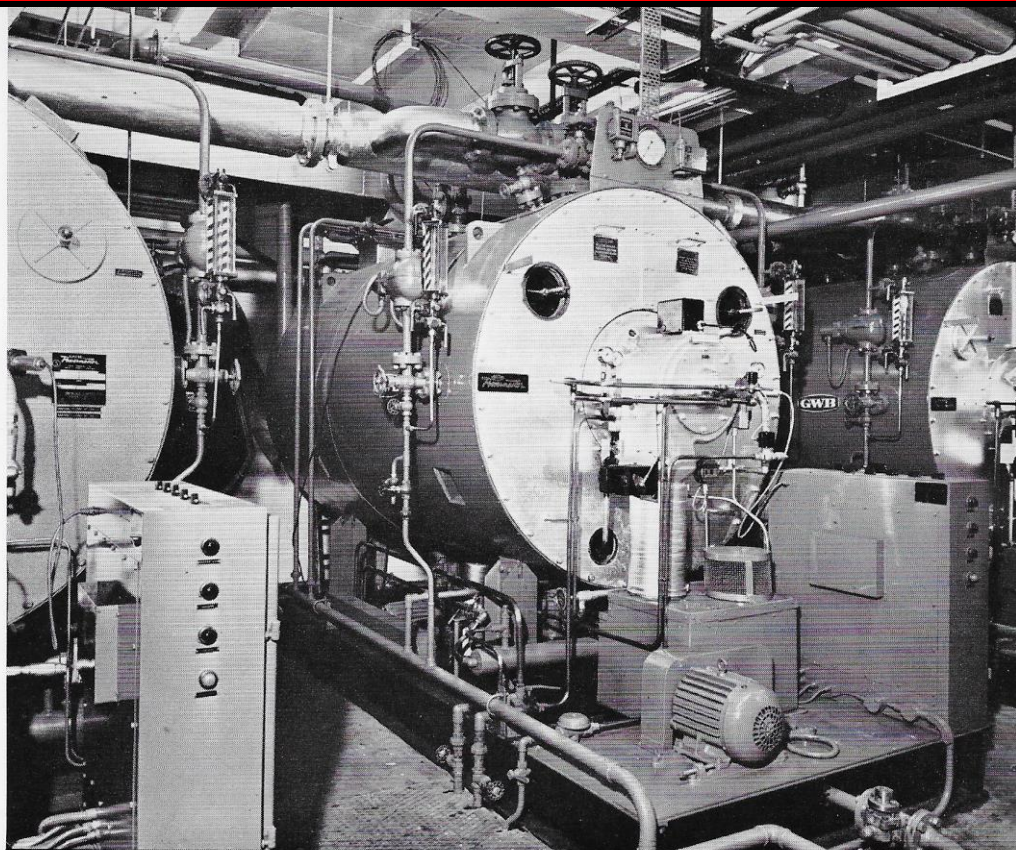
## invisible panel warming

These are typical applications of invisible panel warming to industrial and commercial buildings.

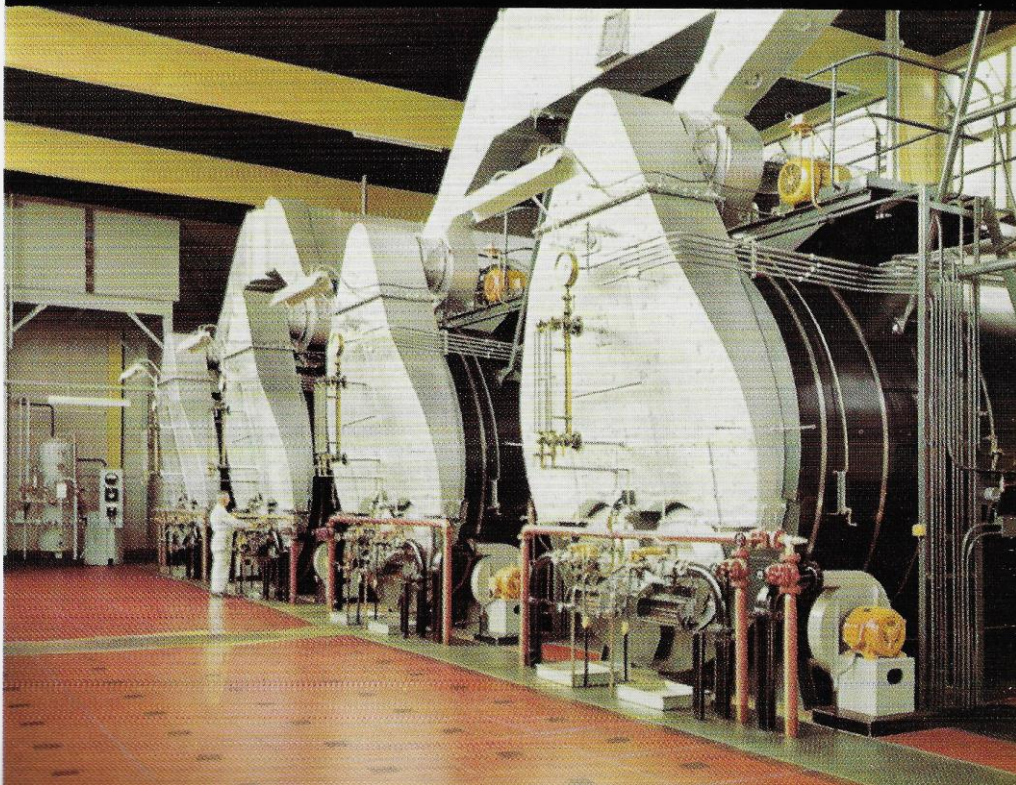




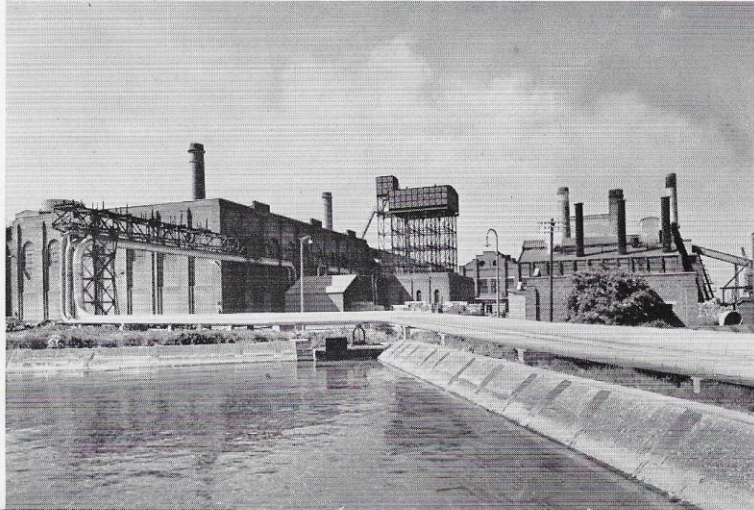
The heart of any heating system is the boiler plant and we are proud of the service we offer in this field. We undertake the complete layout, design and installation of boiler plants, including all ancillary equipment.



## boiler plant

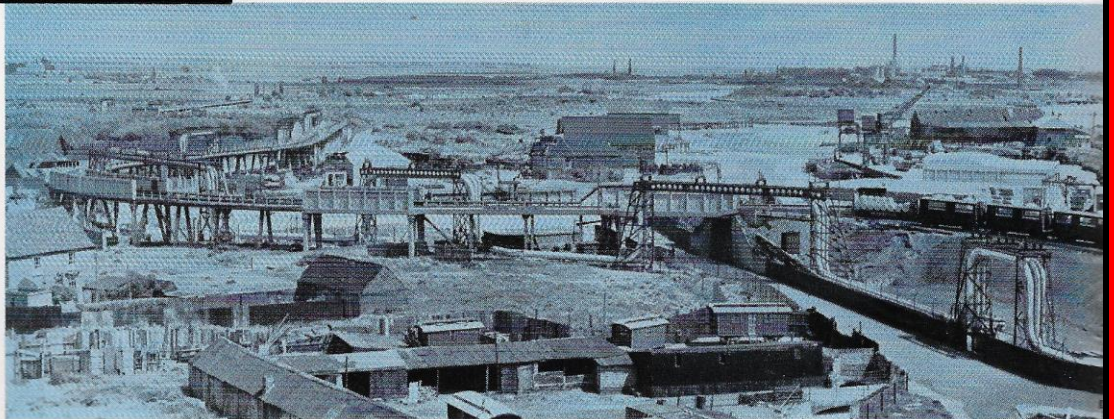




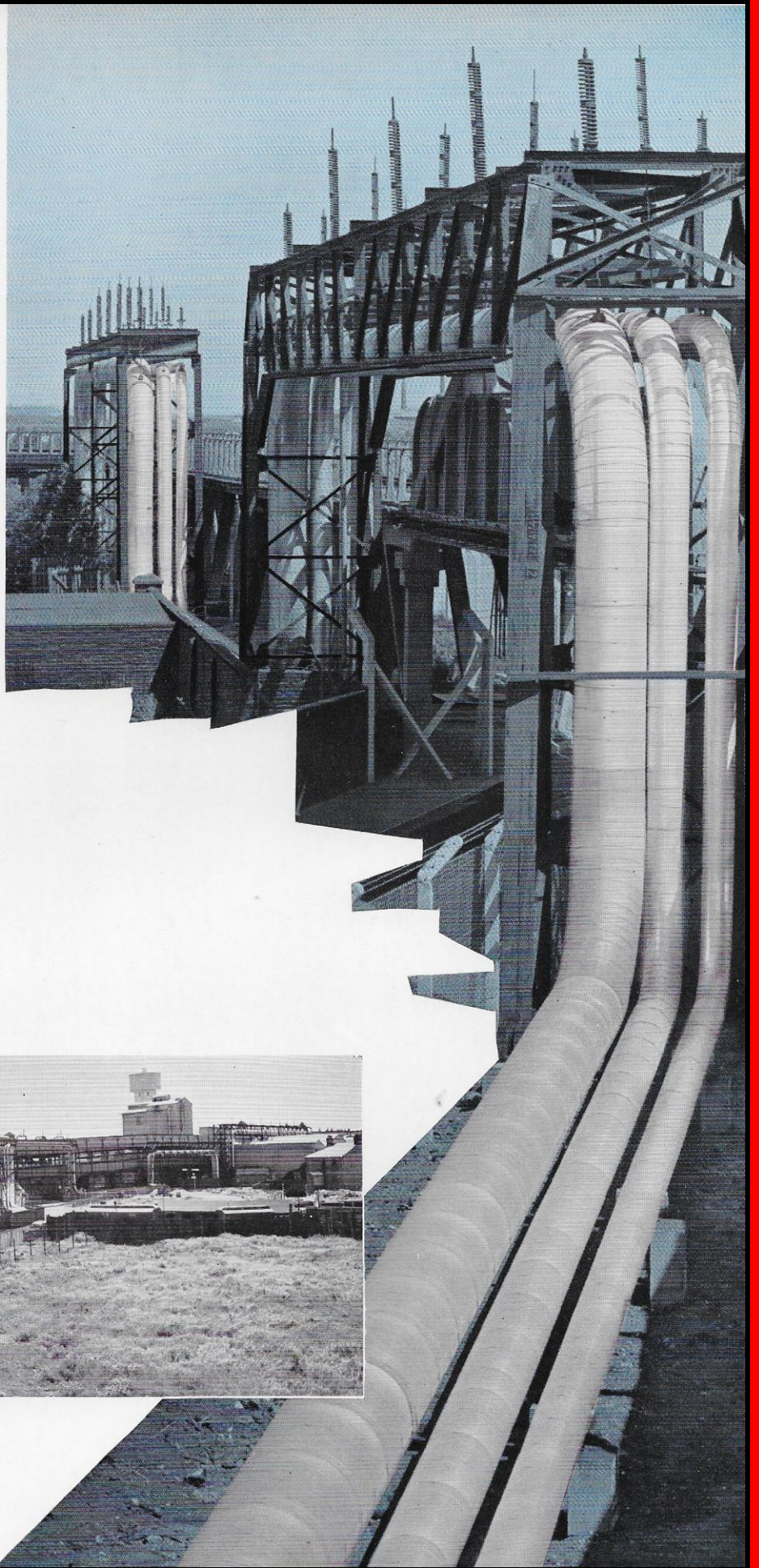


**industrial**

The illustrations on this and the opposite page show the Brightside pipework connecting the Sittingbourne and Kemsley Paper Mills which are situated about two miles apart.







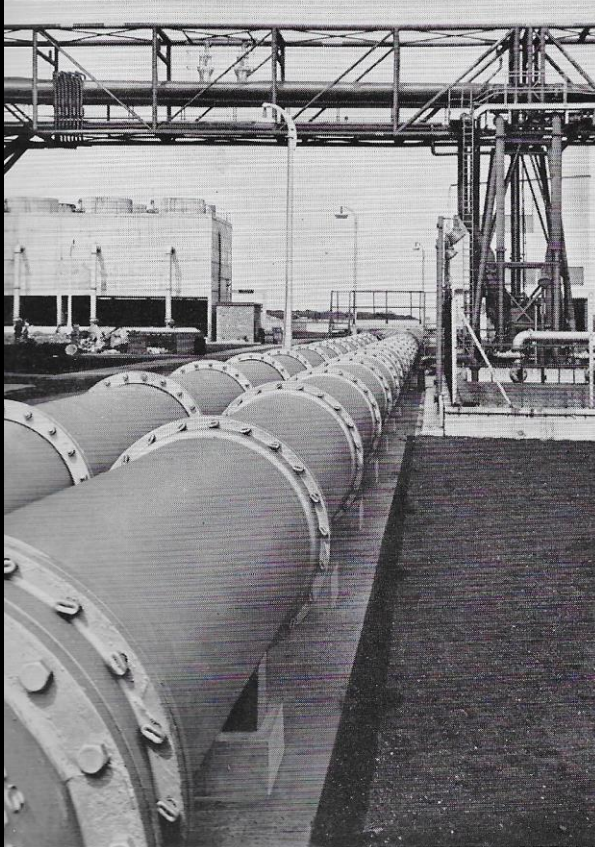
The pipelines traverse open country and cross roads and railway lines. The pipes comprise a 20 in. steam main, an 8 in. high pressure steam main and an 8 in. condensate return.







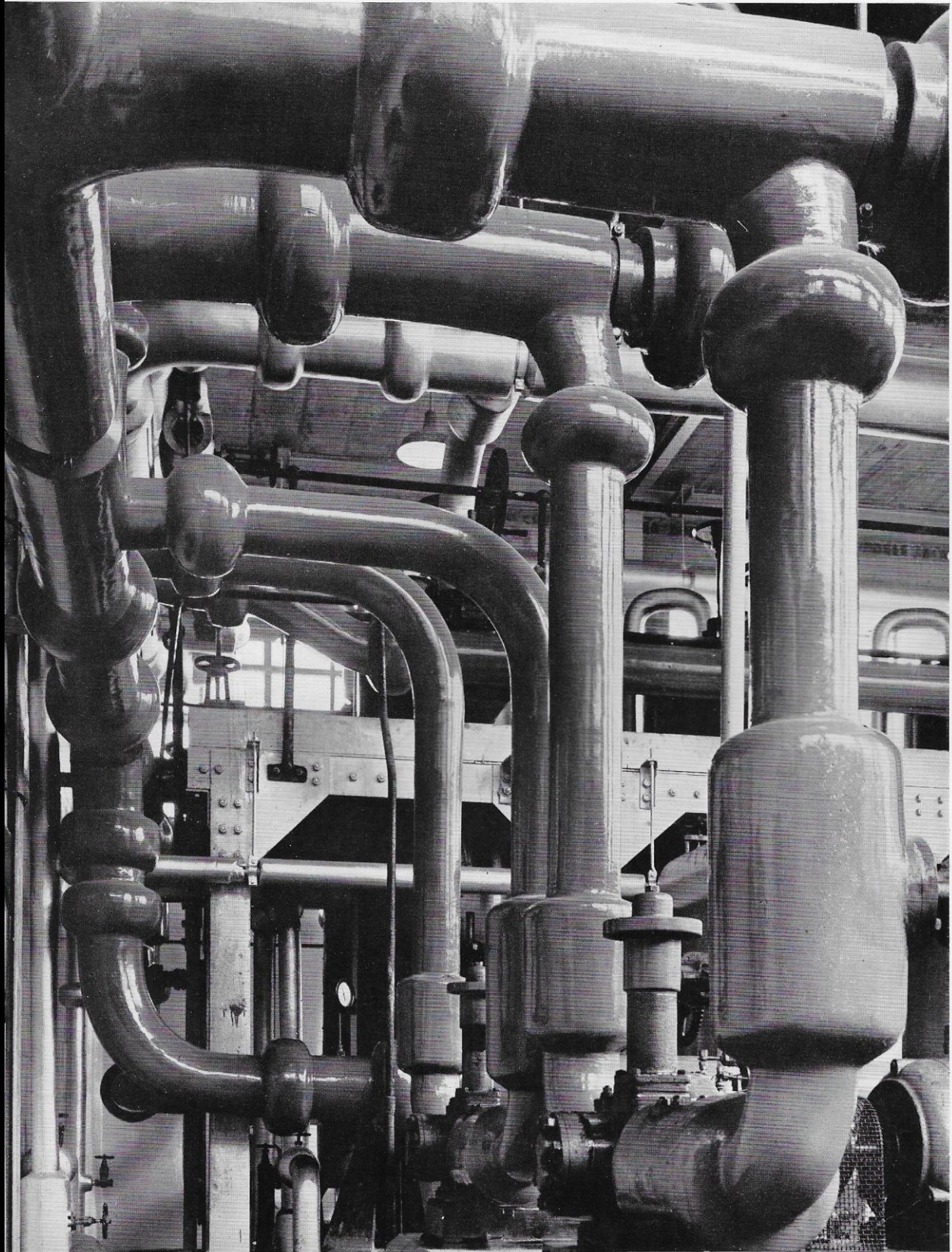
## power stations



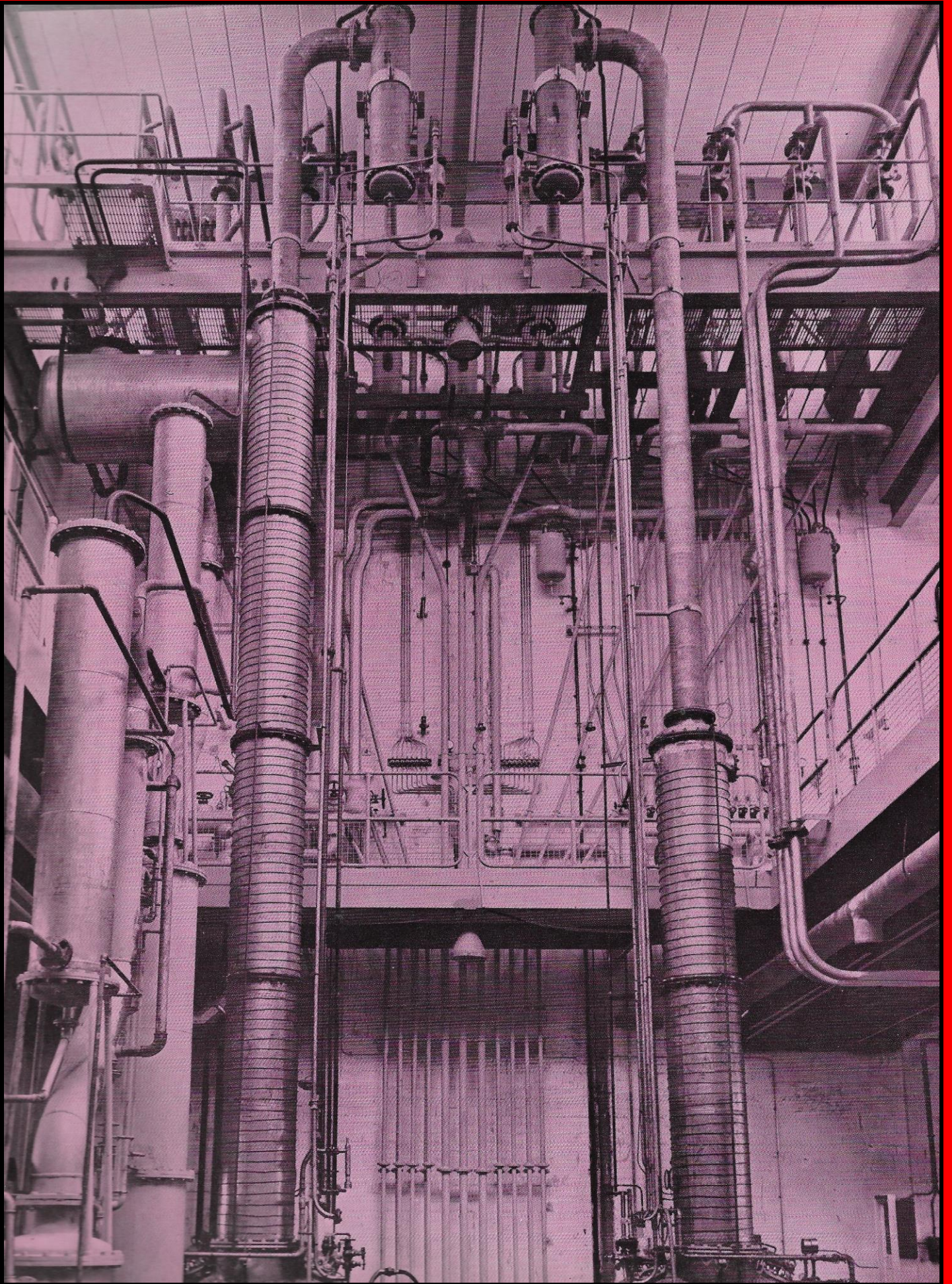
In the large industrial power station shown on this page, the pipework contract embraced pipelines for town's water supply, for river water, water to and from the de-mineralisation plant, water from condensers to cooling towers, and the fire mains and disposal lines.

The resulting clean appearance of a Brightside pipework installation, shown finished and ready for use, can be seen on the facing page.







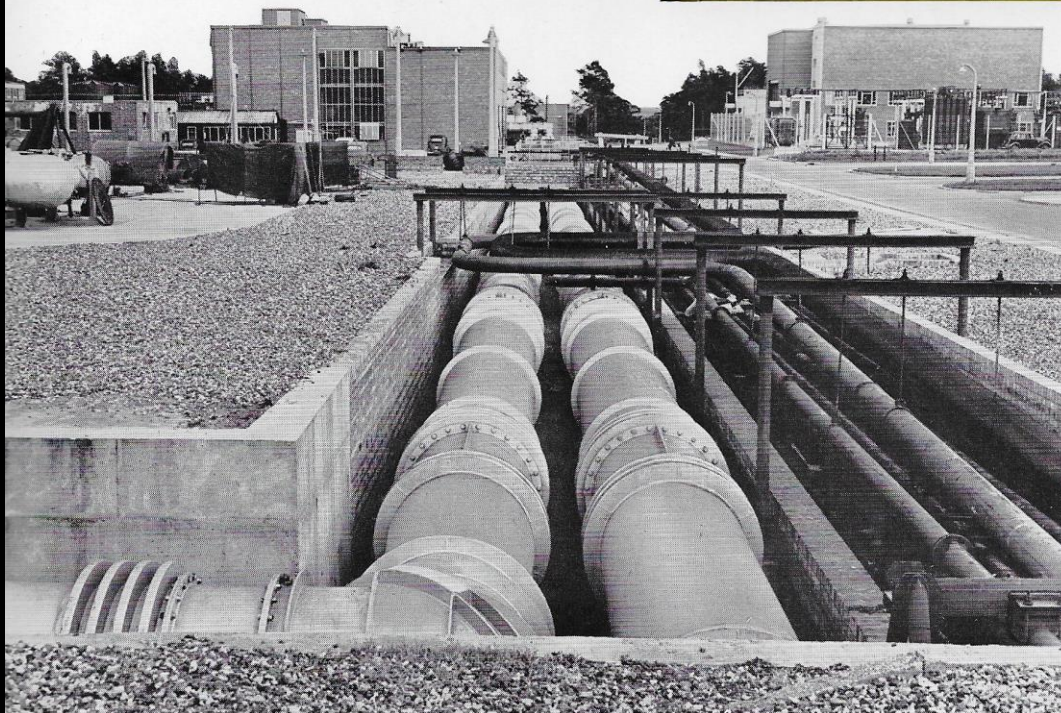
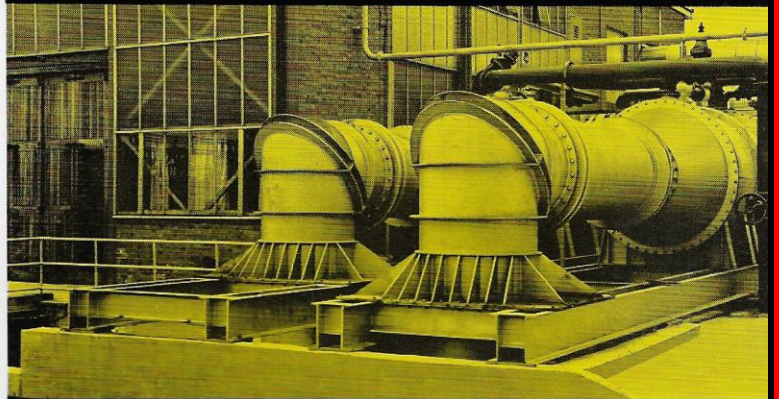




The illustrations show  
pipework installed  
in a national research  
establishment.

We were responsible for  
all the pipework services in  
the chemical works  
shown on the facing page.

## research projects

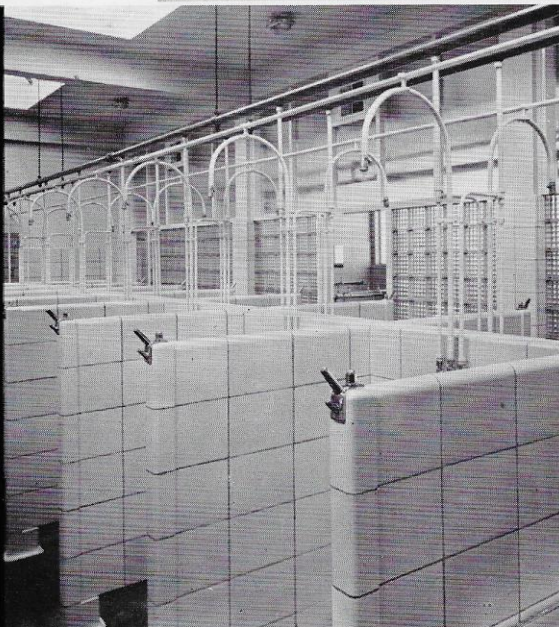




We offer a complete consultative service for the provision of ablution facilities for operatives in dirty industries.



## amenities



We undertake the complete design and installation of all services for amenity blocks, including lockers.

The illustration on the right shows a typical clothes locker installation where the operatives' clothes are kept in a dry, warm atmosphere.





## air treatment

To ensure the right atmosphere in many modern scientific and industrial processes, and to achieve the optimum for the personal well-being of large concentrations of people, complete air conditioning is essential—the only means whereby conditions of constant temperature, controlled humidity and air purity may be regulated precisely. In less exacting circumstances where warmth and efficient ventilation are the chief considerations, the plenum system of air treatment is widely favoured, combining as it does, space heating with controlled air movement. We pioneered high velocity air systems in this country and the various types of these systems offered are briefly described. Each has its own particular virtues and applications.





Full air conditioning was applied to this bank building with automatic filtration of re-circulated and fresh air.

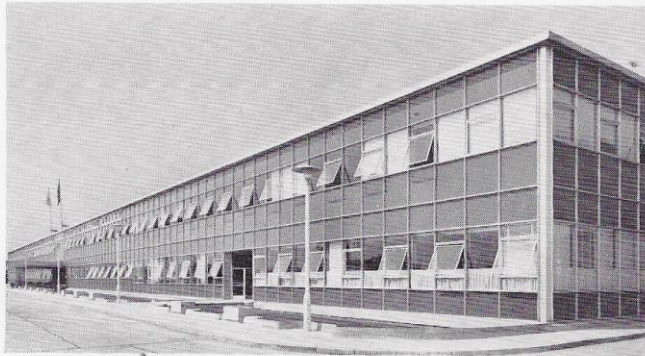
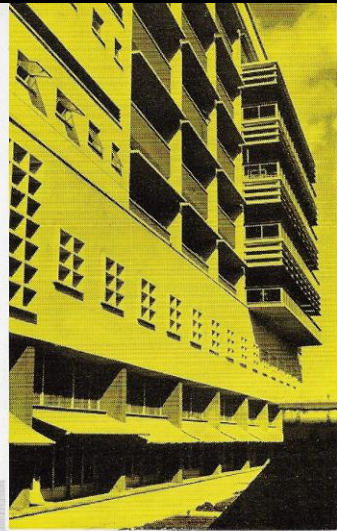


air  
conditioning  
and  
air  
treatment

Architect Owen Campbell-Jones, F.R.I.B.A., F.R.I.C.S.



This hospital in Cyprus has packaged air conditioning equipment for special wards with full air conditioning to operating theatres. Air treatment plants are installed in the sterilizing and special medical rooms.



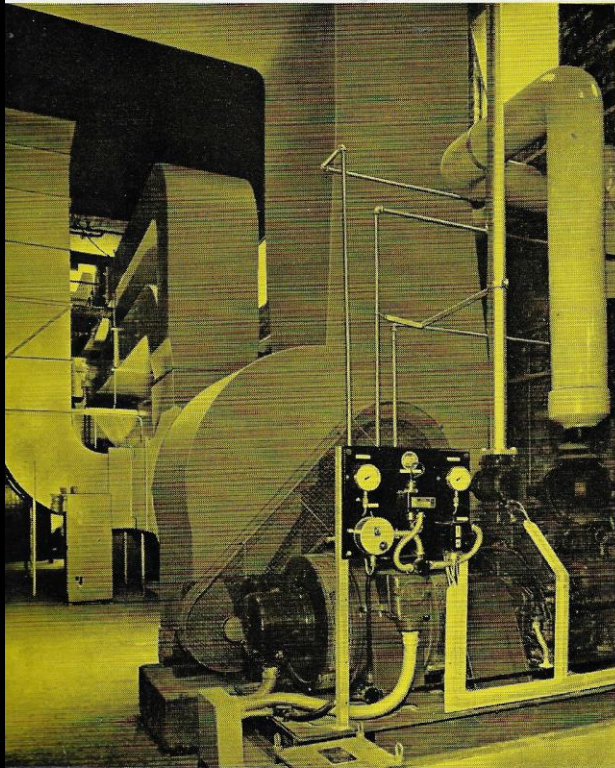
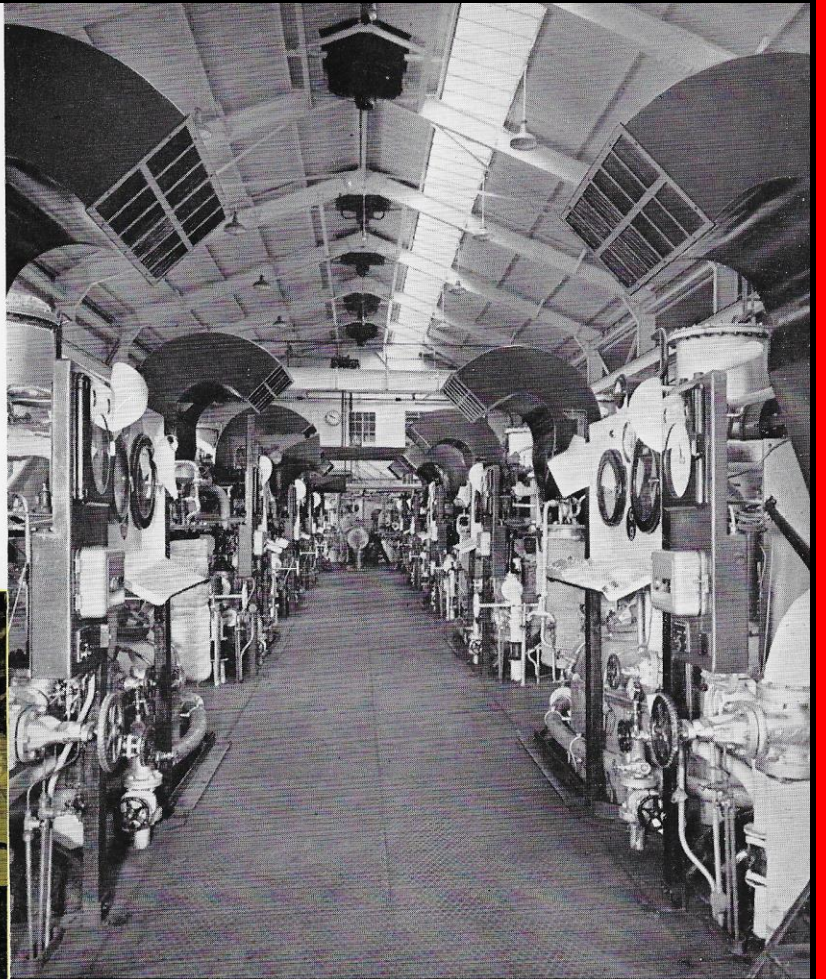
This modern office block has a plenum heating and ventilating system with complete air conditioning to a laboratory.

The modern store below has a plenum heating system to provide conditions of comfort for both customers and staff.





The food and confectionery industries call for much air conditioning and air treatment work and the illustrations on this page are typical of this work.



**industrial**

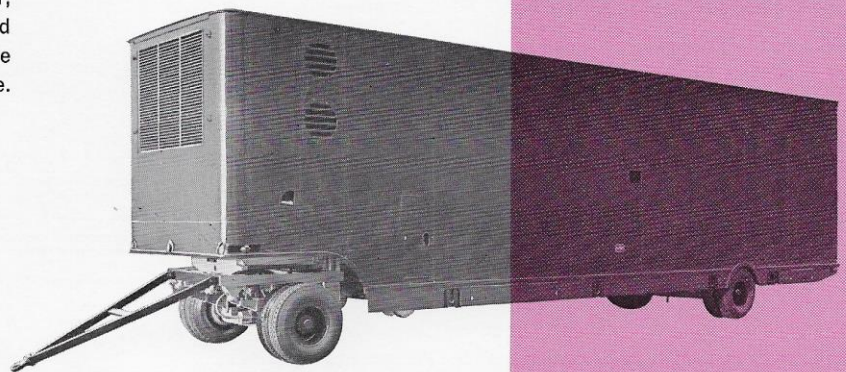
Carefully controlled conditions are essential and, of course, purity of air is of supreme importance.





This large industrial machine shop has a plenum heating and ventilating system and all the plant is accommodated above roof truss level causing no obstruction to the working area.

We have designed and installed air conditioning systems in mobile flight simulators for many famous aircraft, including the Valiant Bomber, the Britannia, Vanguard and Viscount Air Liners, the Comet IV, and the Caravelle.





In the building shown in elevation on this page, both single and dual duct high velocity air systems are employed.

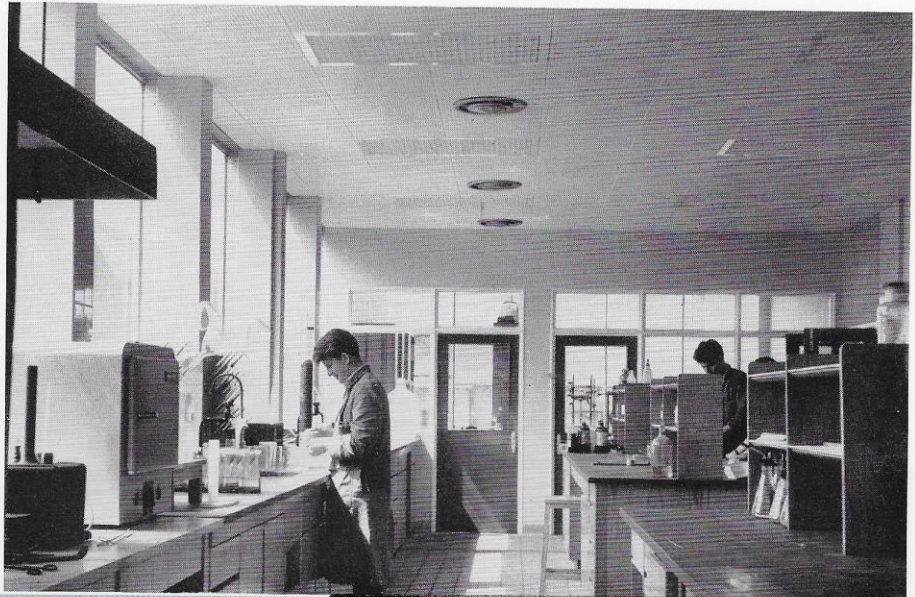
high velocity  
air systems

single duct



The administration office block of the Essex River Board, Chelmsford.  
*Architects and Consulting Engineers, E. R. Collister and Associates.*





## high velocity air systems

### dual duct

The top illustration shows a laboratory in a research building served by a dual duct high velocity air system.

*Architects*  
Morrison and Partners

A dual duct system is also installed in the fine new office block shown alongside.

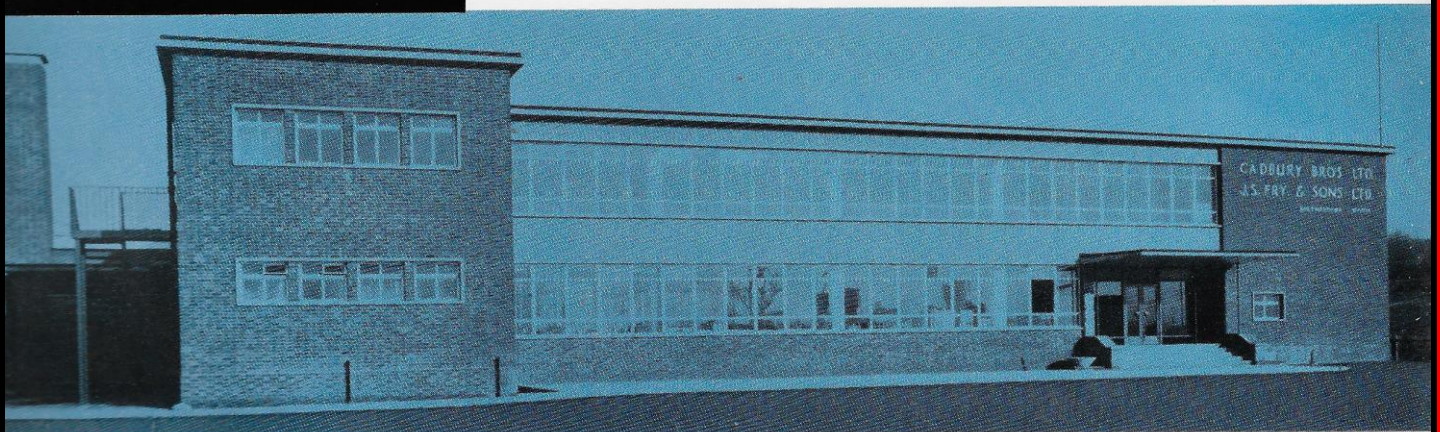
*Architects*  
Adams, Holden and Pearson  
*Consulting Engineers*  
Oscar, Faber and Partners





## **industrial high velocity system**

The industrial high velocity system is specially suited to single storey buildings such as store rooms, factories and workshops. The illustrations show a chocolate storage depot in which this system is installed.







The terminal building at Southampton Docks.



## hi-jet system

We are proud to have introduced the Hi-jet system to this country. It has many advantages when compared with either conventional services or other forms of high velocity air systems.

The elevational drawings show the first building to be installed with Hi-jet in the United Kingdom.



**branches**

**BRIGHTSIDE HEATING AND ENGINEERING  
COMPANY LIMITED**

*Head Office*

G.P.O. Box 118, Sheffield 1

*Telephone* Ecclesfield 3121

*Telegrams* Castings, Sheffield

*Branch Offices*

Belfast, Birmingham, Bradford, Bristol,  
Edinburgh, Glasgow, Liverpool, London,  
Manchester, Newcastle-upon-Tyne,  
Portsmouth, Sheffield

a member of the **BRIGHTSIDE** group of companies



# Brightside Foundry and Engineering Co

1756 A business was established.

1865 Ambrose Firth commenced business on his own account as a Master Foundryman, in a small shed by the side of the River Don - A. Firth

This site soon proved inadequate to the needs of the business, and a new foundry was established in Newhall Road - presumably Brightside.

The original foundry site was later included in the area occupied by the works of Vickers, Limited.

It was only a few years before Mr. Firth found his original works too small for him, and so he acquired what were known as the Old Newhall Running Grounds. He turned the grand stand into a pattern store and an existing hotel into offices. For some time, this larger space was sufficient to satisfy the growing needs of the business, but eventually it, too, became too small, and the Carbrook Works and the Wicker Ironworks were started. In these the making of large rail rolling mills was commenced and in time very considerably developed.

1899 The company was registered on 18 September. <sup>[1]</sup>

Subsequently incorporated the firm of Walker, Eaton and Co., which made steam engines and rolling mills, and J. C. and J. S. Ellis, which made cast-iron pipes, boilers, and radiators in Sheffield and as heating engineers, London.

1900 Acquired Clayton, Howlett and Co., London

The following businesses were later acquired and absorbed into the Brightside Foundry and Engineering Co Ltd.:

- James France Hill, heating engineers, London;
- Hunter and Middleton, London;
- John Robinson, Royds Foundry, Sheffield<sup>[2]</sup>

Horizontal two cylinder compound engine for Sheffield Forge and Rolling Mills Co of Millsands, Sheffield <sup>[3]</sup>

1914 Ironfounders, engineers, heating engineers and brick machinery manufacturers. Specialities: large castings up to 100 tons, chilled rolls, general and hydraulic engineering. Employees 600. <sup>[4]</sup>

1920 Acquired Pullan and Mann<sup>[5]</sup> of Leeds, manufacturers of brick-making machinery

1921 - see illustration of ingot mould weighing 87.5 tons<sup>[6]</sup>

Acquired Moorwoods, Limited, of Brightside, who were also specialists in large castings as well as other branches of engineering.

1923 Ambrose Firth died



1925 Mr Ambrose Firth's son, Mr Thomas H. Firth, was chairman of the company until his sudden death in 1925<sup>[7]</sup>

1926 June: The company decided, for reasons of convenience and economy, to close the Wicker Works, Sheffield and henceforth carry-on business at Newhall-road Attercliffe and Ecclesfield Works. The closing of the Wicker Works was to enable the company to offer considerable extra facilities for the production of all its manufactures at Newhall-road and Ecclesfield, where large extensions and improvements were carried out. One of the reasons influencing the firm was that of rating. The rates in Ecclesfield which is only just outside Sheffield, were lower than those in the city itself. The firm's head-office in future was now at the Attercliffe establishment.<sup>[8]</sup>

1926 November: Manufactured a casting weighing as much as 90 tons for an anvil block. It was said to be one of the largest anvils ever made.<sup>[9]</sup>

1927 May: Mr Ambrose Firth (son of Thomas H. Firth) was director of the company, and was appointed President of the Sheffield and District branch of the Institute of British Foundrymen.<sup>[10]</sup>

1947 Acquired Buckley and Taylor, makers of marine distillation equipment and heat exchangers.<sup>[11]</sup>

1956 Holding company formed: Brightside Engineering Holdings<sup>[12]</sup>; subsidiaries:

- **Brightside Foundry and Engineering Co** - rolling mill equipment
- **Brightside Heating and Engineering Co** - pipework and heating equipment
- Moorwoods Ltd - commercial catering equipment<sup>[13]</sup>
- Buckley and Taylor Ltd - heat exchangers

1961 Acquired Graham Firth Steel Products and its subsidiary Metal Mouldings of Walsall and Park Royal.<sup>[14]</sup>

1968 Davy and United Engineering Co acquired Brightside Foundry and Engineering Co.

1971 Jessel Securities acquired **Brightside Holdings** including its subsidiary Moorwood-Vulcan<sup>[15]</sup>

## REFERENCES AND FURTHER READING

**Grace's Guide to British Industrial History.**

**CIBSE Heritage Group Website: E-Books Special Subjects Four/Brightside News.**  
**[www.hevac-heritage.org](http://www.hevac-heritage.org)**