Spring 1971

Wright ahead

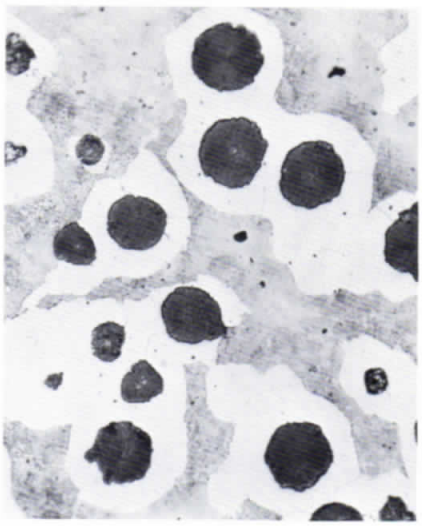
the Head Wrightson magazine

FRONT COVER

A Metallographic Art Gallery

You could be excused for thinking that the photograph on the front cover is a view of the great pyramids from a height of 5000 feet. It is in fact, one of the infinite variety of kaleidoscopic patterns which can be seen through the microscopes of the Metallographic Section of the Research and Development Division.
The area covered by the photograph is actually pin-point size of a sample of alloy steel magnified 1000 times. The 'pyramids' are indentations made on the steel surface by the diamond point of a micro-hardness tester. Much information about the past history (or future performance) of a metal can be obtained from an examination of its internal structure, and this forms the basis of the work carried out by the Metallographic Section.
It is a constant source of wonder that an outwardly unattractive lump of rusty 'clog iron' conceals beneath its surface such exotic designs that would make Picasso green with envy.

Flake graphite cast iron produced for many years at HW Iron Foundries. Magnification : ×1000

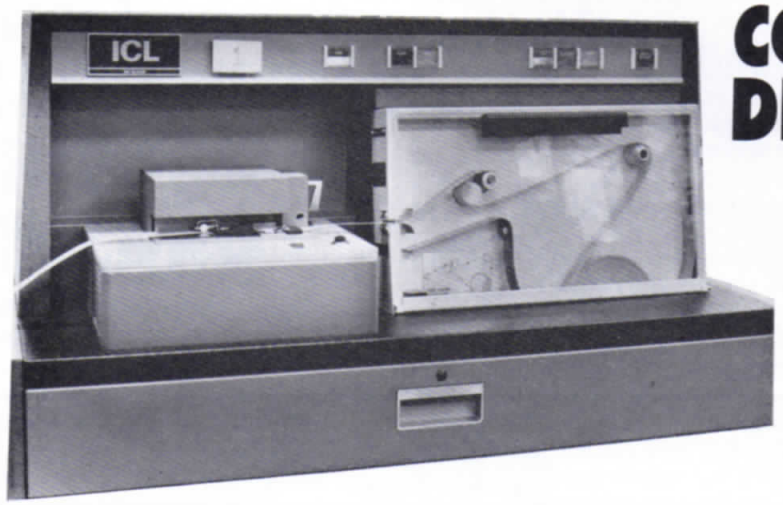


Spheroidal graphite cast iron, a new type of iron which has properties comparable to those of steel. Magnification : ×600
This type of iron will shortly go into production in a new electric furnace at HW Iron Foundries.

APPOINT-MENTS

Mr JH Doran MA, Group Personnel Manager, has been appointed a Director of Head Wrightson (Management) Ltd.

Mr J Ferguson MA, Assistant Contracts Manager, Head Wrightson & Co Ltd, has been appointed Commercial Director, Head Wrightson Process Engineering Ltd.



COMPUTER DEPARTMENT

The Summer 1969 issue of 'Wright Ahead' announced the arrival of our 1901A computer. Since then the projected development of computer systems throughout the Group has gone ahead at a rapid pace. Many employees may not yet be aware that the computer is instrumental in many functions of the Company.

Present operations

Some of the major computer-based systems now in operation are :

HW Group
payroll, purchases, sales and wages analysis

HW Stampings
production of hammer schedules and the basic elements of a company control system

HW Steel Foundries
work in progress and production schedules systems

HW Machine
DO salaries analysis, work in progress summaries, and man/machine performance statistics

HW Process Engineering
salaries analysis, design and estimating for cooling towers

HW Teesdale
salaries analysis, stores issues and work in progress systems, heat exchanger design and estimating, flotation and handling of dock gates

There is in addition a considerable amount of effort expended on technical problems associated with particular contracts in Teesdale and HWPEL.

Decimalisation

The problems of converting all our routines and stored information from £ s d to £p was a continuing process for eight months up to 'D' day. By starting early we were able to allow for dual currency operation on all new work and write conversion programs for existing work, so that a successful changeover would take place on 'D' day with a minimum disruption of our normal timetable.
Some idea of the volume of changes involved can be imagined when it is remembered that we have 5000 suppliers, 3000 customers, 4750 employees. All these require recording, analysing and storing of (£ s d) currency information, which had to be presented in £p from 15 February 1971.
To keep our workpeople informed, and to gain experience ourselves, we began producing payslips in decimal format three months in advance. Only slight changes were necessary to this procedure on 'D' day, in order that we conformed exactly and were able to produce Income Tax returns in the approved manner.

Increased demand

The demand for time on the 1901A rose steadily throughout 1970 so that the utilisation went up from 140 hr/mth to 240 hr/mth within that year. In September 1970 we started formal 1½ shift working on computer operation, and before

Paper tape reader.

mid-1971 the machine will be operated over double 8-hour shifts.

Electricity cuts

The series of power cuts occurring during late 1970 went largely unnoticed on the Thornaby and other industrial sites. Yarm however had its share of cuts and it was not possible to keep the computer operational, so that work immediately ran late. It was decided to run the 1901A through the night when the incidence of power cuts was expected to be low, but there was also the problem of data preparation.
The punched card machines, being electrically powered, were non-operational during the cuts ; night work for the girl operators was not a very practical proposition. A move of the machines to Thornaby was being considered when Mr W Hutchinson managed to acquire a rather battered and ancient diesel-powered 4 kW alternator. An electrician quickly arranged a switched connection from the mains to the alternator for the room circuits local to the punch machines. For the duration of the power workers go-slow, immediately a power failure occurred, the old diesel engine was hand started so that the punch staff could continue their work. This arrangement coupled with night operation of the 1901A proved adequate to cover the crisis period. It was not possible to locate a mobile power supply stable enough to run the computer.

Current facilities

Early in 1970 all the computer services for the Group were re-arranged to be managed centrally from Yarm. Because of the existing investment in paper-tape producing equipment at Thornaby the 1901A was provided with a paper-tape reader capable of reading punched tape at 300 characters per second. Thornaby thus has a direct service from our central computer, in addition to that provided by the Data Link equipment. The source of the Data Link service has recently been changed to the Atlas 1 computer at London University.
For nearly two years now, the Company has employed time-sharing computers installed in remote bureaux by means of typewriter terminals located in Computer Department and R&D Division. These terminals give a direct dial-in computer service over ordinary PO telephone lines. They are available for use by all staff with appropriate problems on a do-it-yourself basis.
The computer facilities now available within the Company are adequate in nature to cater for most types of work and delivery requirements although external services tend to be expensive and must be used selectively.

On the lighter side, it has long been an obsession with some staff working in computer fields to produce pictures using computer-controlled plotters or line printers. Not surprisingly the subject of the picture has often been the nude female form. Recently the computer periodical 'newdata' ran a competition for the best computer-produced nude. As far as is known, no entry was submitted by Head Wrightson but since most entrants wished to remain anonymous, we shall never know.

facility	type of job	turn round
1901A	small to medium computing high input/output	4-24 hours
data link	medium to large computing moderate input/output	4 hours
time sharing terminals	small to large computing low input/output	immediate

HW SINTER PLANT FOR BRAZIL

photo :
General Americo da Silva of CSN signs the sinter plant contract with Mr WH Adams, managing director HWPEL. Standing left is Mr FM Daly, First Secretary (Commercial) at the British Embassy in Rio de Janeiro, who toured HW works on a recent visit to this country, centre is Mr James Ferguson, recently appointed commercial director of HWPEL, and right Sr EF Rocha, President of MAQUIP our agents in Brazil.

South America continues to be a highly successful 'market place' for HWPEL in the mining and metallurgical processing field. Since signing the £12 million SOMISA blast furnace contract in Argentina last August, they have beaten international competition once again for an important new sinter plant contract in Brazil. Worth about £2 million, it was placed by Companhia Siderurgica Nacional (CSN), Brazil's largest steel company, and is part of a general plan to double Brazil's steel output by 1975. It will involve PEL in designing and building a 12 ft wide sintering machine, a rotary sinter cooler and various ancillary equipment. The plant will be installed at Brazil's biggest steelworks complex at Volta Redonda, near Brazil's former capital Rio de Janeiro.
For the uninitiated, sintering is a process which prepares iron ore for the blast furnace. In earlier times high grade iron ore was freely available and could be fed directly into the furnace, but today's iron makers are obliged to make use of lower grades—hence the need for ore preparation. First of all the ore must be crushed, screened and mixed to provide the best possible feed to the sinter strand. The strand itself is a long travelling grate on which the ore is heated to a high temperature, thus removing many of the impurities and producing a texture more suitable for the ironmaking furnace.
Waste gases arising from the sinter strand can be cleaned in a variety of ways, including electrostatic precipitation and cyclone methods. After screening, the ores are cooled in a rotary air cooler to make handling easier. Then, following final screening to remove undesirable fine sinter, they are fed into storage bunkers ready for use in the blast furnace.
Sinter plants of various types and sizes have been built by HW for a number of British iron and steelworks and for clients in Spain, France and Canada. The CSN plant will rank with some of the largest, since its hearth area of 1,785 square feet will provide a daily output of 3,250 tons of sinter. The rotary cooler will be 60 feet in diameter, large enough to cool 5,000 tons per day. Associated with the machine will be a suction fan capable of handling 680,000 cubic feet of waste gas every minute. It will be one of the biggest sinter fans ever built in the UK.
To ensure that the plant produces top quality sinter continuously, many of the processes will be controlled automatically, and there will be provision in the design for computer control in the future.
One of the main contributing factors to our success in Brazil was CSN's recent visit to Teesside, reported in our Winter '70 issue, when Colonel A Penna and Senor ML Hasek toured HW works and talked to management. Our visitors received a favourable impression of the group's capabilities, and negotiations for the contract were soon under way on both sides of the Atlantic.

FIRST GALVANISING LINE FOR FINLAND

Site erection of Finland's first continuous galvanising line for steel strip has started at Hameenlinna, the country's twelfth largest city, about 40 miles north of Helsinki. When complete it will form part of a new cold strip mill plant being developed by Rautaruukki Oy, the principal Finnish iron and steelmaking organisation. HW Machine Company signed the £1,375,000 contract in the summer of 1969 and since then have been busy with the design, manufacture and supply of the many complex parts which make up the line. With deliveries of components well advanced, they are now supervising installation on site, which is being carried out by the Finns themselves.

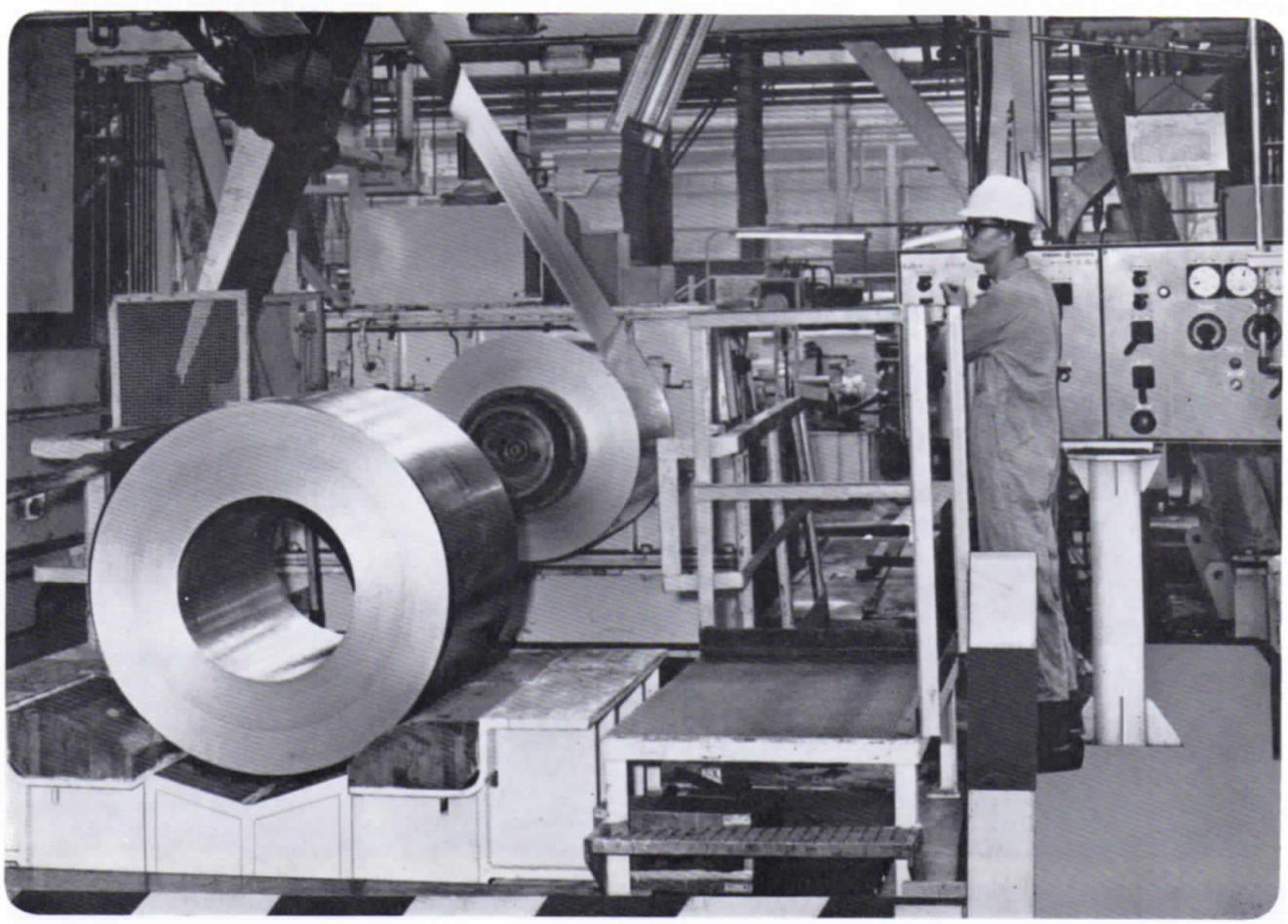
Finland is well known to tourists as a land of huge forests interspersed with many thousands of lakes. Since trees cover about 70% of the country it is not surprising that forestry accounts for two-thirds of the foreign trade, but other Finnish industries are well developed too. Iron and steel production received a sizeable boost when Rautaruukki Oy was formed in 1960 and its large integrated iron and steel works was built at Raahe, a port on the north-western coast in the Gulf of Bothnia about 400 miles north of Helsinki. There the blast furnace plant now produces 650,000 metric tonnes of iron per year, mainly from iron ore mined in northern Finland. A basic oxygen steelmaking and continuous casting plant produces 750,000 metric tonnes of steel each year, of which 300,000 tonnes is made into heavy plates in the rolling mill. Head Wrightson's contribution to the Raahe enterprise was to supply three heavy plate levellers to the hot plate mill.

The new plant at Hameenlinna will receive hot rolled steel strip from the mills at Raahe. After cold rolling and pickling, some of the strip will pass to the galvanising line, on which high quality galvanised strip will be produced, for use in a variety of applications, mainly in the building trade, but also for products such as agricultural implements, car body panels and office furniture.

The galvanising line, which is expected to be in production towards the end of 1971, incorporates a relatively new kind of strip finishing machinery in the continuous stretcher leveller, which controls the flatness of the strip to very fine limits. This sophisticated machine has been developed by HWM in conjunction with R&D Division.

Hameenlinna is an attractive city close to some of Finland's most popular inland tourist areas. Perhaps its main claim to fame is as the birth-place of the great Finnish composer Sibelius, but it is also an expanding industrial area, and will soon be the location of a new facet of Finnish industrial enterprise when production of cold rolled and galvanised steel strip starts up in the new Rautaruukki plant.

Head Wrightson hot dip continuous galvanising line installed at Vanderbijl Park Works of ISCOR South Africa



FIVE FACES OF NUCLEAR POWER

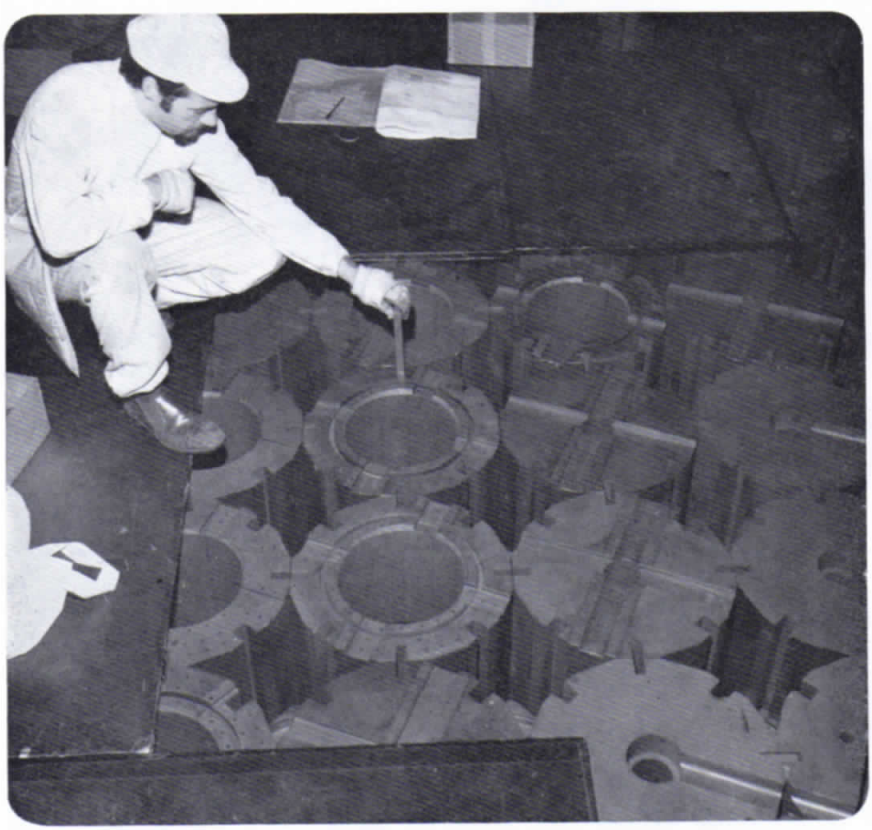
Head Wrightson are making five distinct contributions to the growing nuclear power industry in Britain. Three nuclear power station contracts are in progress, in the nuclear drawing office, in the special HWT fabricating shops at Thornaby and on sites in Somerset, Durham and Ayrshire ; a fourth contract associated with an important new prototype reactor in Northern Scotland is drawing to a close ; and the nuclear department are currently working on projects for more of the nuclear power stations of the future. The two largest contracts result from our association with The Nuclear Power Group Limited, one of the two British nuclear consortia, and consists of large contributions to the Hinkley B and Hunterston B power stations, which will be supplying the national grid with vast quantities of electricity in the near future. The third contract involves Head Wrightson in manufacture for the local Hartlepool power station being built by the other British nuclear consortium, British Nuclear Design and Construction Limited, and the fourth in heat exchanger manufacture for the prototype fast reactor at Dounreay in Scotland—a project managed by The Nuclear Power Group Limited on behalf of the United Kingdom Atomic Energy Authority.

1 Core Complete at Hinkley B

The Somerset location of Hinkley Point B nuclear power station has been the scene of intense activity for HW erection department over the past months. The massive task of core construction for the first reactor (Reactor 4) is now complete, with 2,500 tons of graphite installed, and similar work will soon start on reactor 3. Both of the 2,000 ton boiler shield wall structures prefabricated in the HWT shops are in place.
Most of the guide tubes for the first reactor have been completed and have left Teesdale works for insulation. They will be installed later in the reactor core. The remainder are in an advanced stage of manufacture.

2 Progress on Hunterston Core Components

Hunterston B power station in Ayrshire, Scotland is similar to Hinkley B, and HW's contribution is much the same. Core construction for the first reactor (Reactor 3 in this case) has just started, and work on this part of the project is proceeding fairly quickly. The boiler shield wall structures are in place, and site installation of the CO2 storage plant, designed by HWPEL, began recently.
In the clean conditions shop manufacture of the stainless steel guide tubes for the fuel stringers, control rods etc has been in progress for some time. These are spirally welded tubes and centrispun castings, all fabricated to extremely close tolerances and subjected to rigorous tests. Altogether HWT will be making 818 tubes of various types and sizes for Hunterston B.



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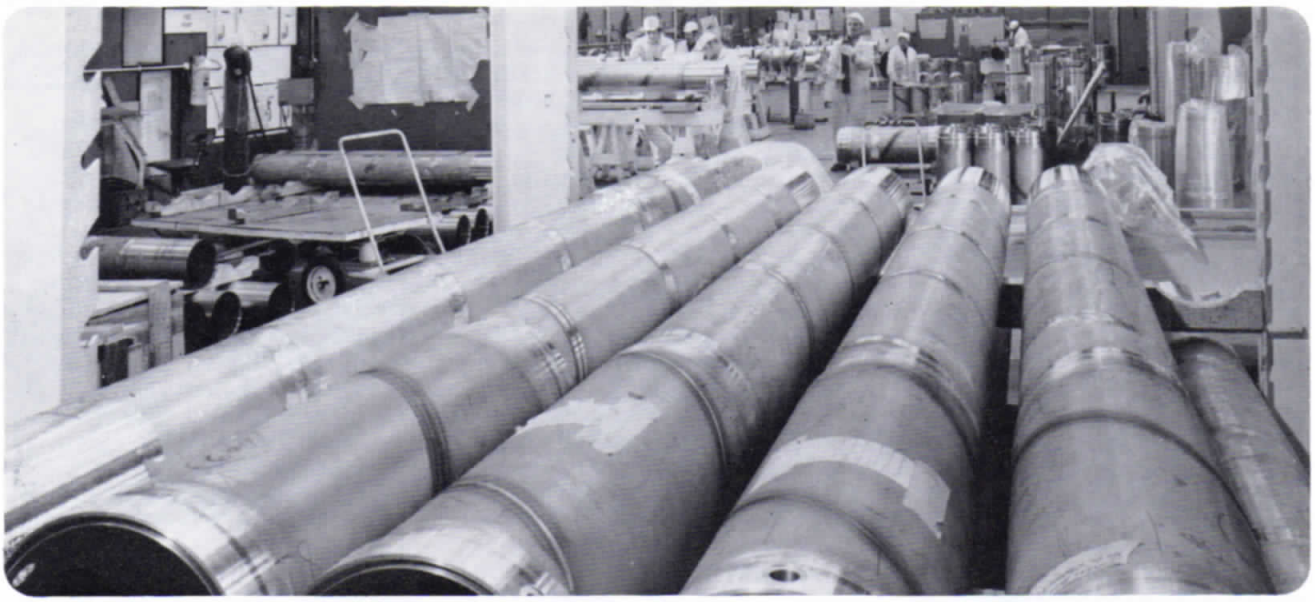
Hinkley B
Ken Lee, Assistant Site Engineer, fits a graphite key into the graphite bricks during the core construction at Hinkley B. Ken is an ex-apprentice from the HW Training School.

page 5 top
Hunterston B
Guide tube manufacture in the clean conditions shops at HW Teesdale.

page 5 bottom
Hartlepool
Some of the Hartlepool support plates set out in the HWT shops. These are upside down so that further drilling work can be carried out inside.

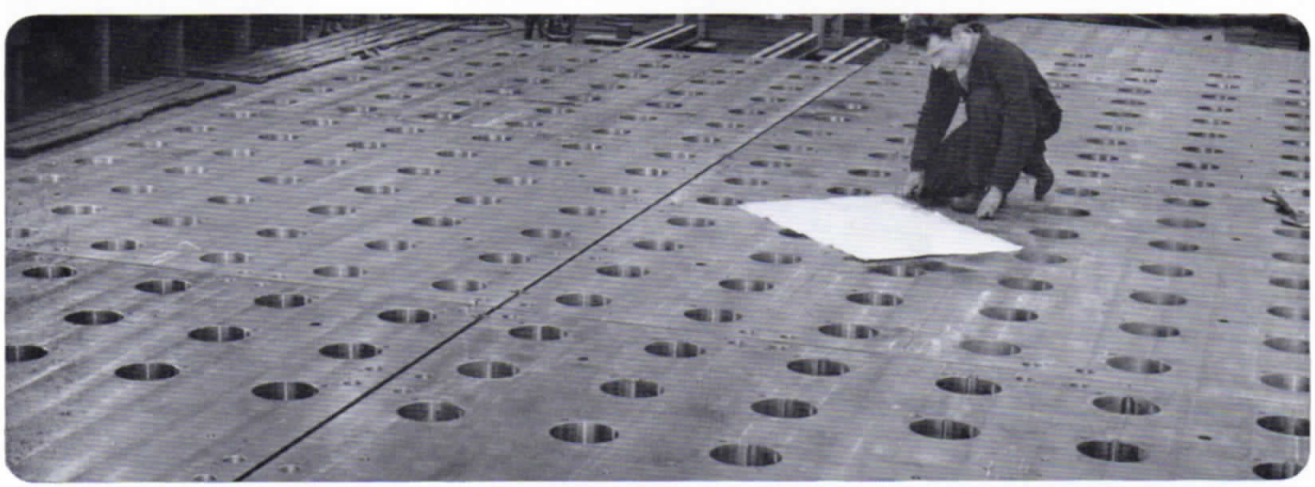


3 Hartlepool Support Plates Take Shape

Hartlepool's new 1,250 Megawatts nuclear power station is being built by British Nuclear Design and Construction, TNPG's competitor in the UK, but HWT were nonetheless able to win a share of the contract as a result of their know-how and experience in this field. The order, placed by GEC Reactor Equipment Ltd., one of the partners in BNDC, is for the moderator support structures. It is made up of a total of 32 support plates, 16 for each reactor core. The largest plates weigh up to $8\frac{1}{2}$ tons and these are believed to be the largest support plates ever to be produced. The specifications demand that these plates, which measure up to 10' 6" x 9' x $5\frac{1}{2}$" must be machined all over to very fine tolerances of thickness and flatness and holes must be bored to an accuracy of ·005". These exacting conditions of manufacture have called for a great deal of know-how and skill, in the tool-room and on the shop floor.
Once the machining has been done a 'trial build' will be carried out representing the assembly which will eventually be done on site.

4 Dounreay Heat Exchangers for Installation

At Dounreay in Northern Scotland installation work has begun on the six intermediate heat exchangers which HWT have manufactured for the new Prototype Fast Reactor. These intricate assemblies were manufactured in the clean conditions shops at Teesdale. To meet stringent inspection demands it was necessary to develop advanced techniques to weld the tubes to the tube plates. Each heat exchanger has been taken to site in three parts. There it will be reassembled and inserted into the reactor vessel, where it will transfer heat from the core sodium into the secondary sodium circuit which passes to the steam generators and generates steam for the power turbines.
Erection department are now busy with the task of installation, and hope to complete their part of the work by the end of 1971.



5 Planning for the Future

Quite apart from their involvement in contracts for fully-fledged nuclear power stations such as Hinkley, Hunterston and Hartlepool, HWT take an interest in a wider spectrum of nuclear power activity. The Dounreay PFR project is a good example of Head Wrightson's work for the power stations of the future : new commercial fast reactors should be supplying electrical power by the late 1970's as a direct outcome of this project, and HWT expect to manufacture many of the components.

Many nuclear power projects are still only "under consideration" when they come to the attention of HWT, but from the earliest stages the nuclear drawing office is engaged in design and planning. Later the emphasis switches to the manufacture of component parts for the various types of reactor—the new advanced gas cooled reactors (AGR's), high temperature reactors (HTR's) using helium as a coolant, and steam generating heavy water reactors (SGHWR's).

Head Wrightson have interests in two new SGHWR projects, at Jervis Bay in Australia, where the contract is about to be placed, and at Stakeness in Northern Scotland, now at the tendering stage. The Stakeness project, which will provide an extra 1250 megawatts of power to the North of Scotland Hydro-electric Board, could be ordered at the end of the present year.

Clean Conditions

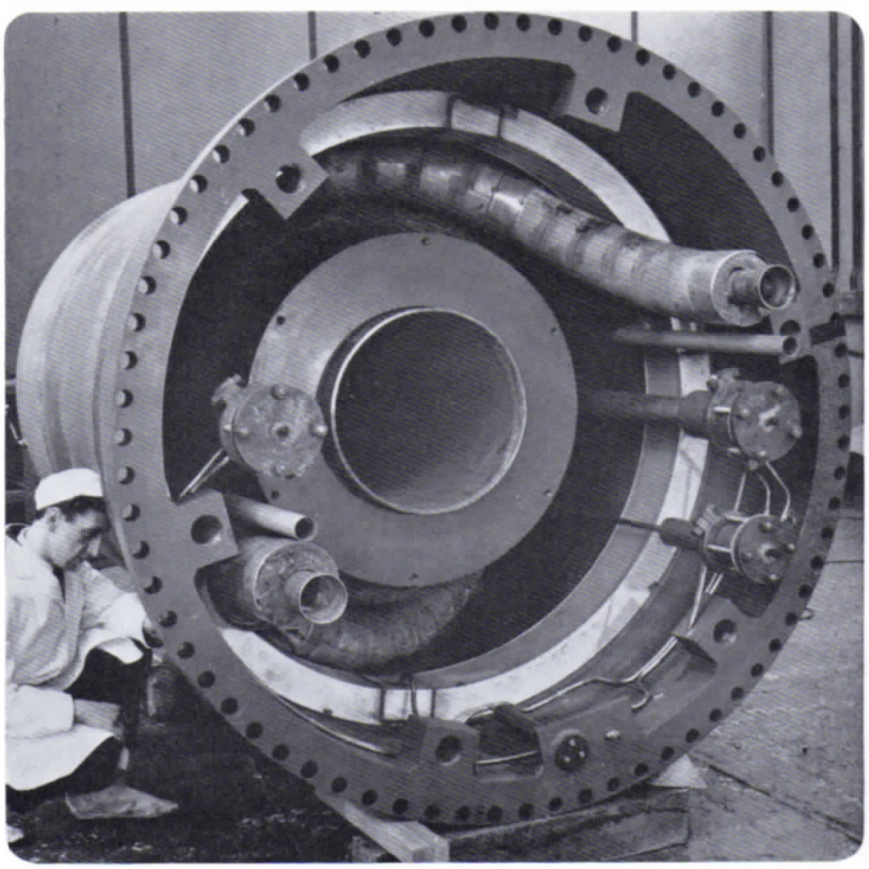
Manufacture in clean conditions is vital for many nuclear components. Working personnel and visitors to HWT's clean conditions shops find themselves in an atmosphere which in some ways has more in common with a hospital ward than an engineering works. Everyone wears white overalls, hat and gloves and must change into a pair of special shoes. Dust and other impurities are constantly cleaned away using vacuum cleaners, to ensure the least possible contamination on components being manufactured in these clean conditions facilities.

HW Nuclear Achievements

Head Wrightson's nuclear power activities started in the early 1950's and since then the group has been involved in various stages of design, manufacture and installation of six research reactors, major components of four nuclear power stations now in operation, and three in the course of construction, and other specialist work for the UKAEA.

When the two current TNPG projects are complete, HW will have made significant contributions to the production of electricity in Great Britain by means of nuclear power—a total of 4,000 Megawatts or a little more than enough to light simultaneously a 60-watt electric light bulb for every single person in England, Wales, Scotland and Northern Ireland.

In addition, a great deal of work has been carried out abroad, including contributions to a nuclear power station for Italy, and the supply and building of research reactors in Denmark, West Germany and Australia.



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Dounreay
View inside the partially complete roof shell block, which forms the upper part of the heat exchanger assembly. The inside of the plug will be filled with cast iron shot for shielding purposes.

below
Design work in progress in the HWT Nuclear design office

RUBBISH TO RADIATORS

Some call it refuse, others call it garbage, but to most people it's simply rubbish—an unpleasant by-product of every-day functions like eating and drinking which we gladly donate to the local council each week.

We are living in a throw-away society and to most people rubbish has more nuisance value than commercial value, but 6,500 prospective householders in

HWPEL will be the main contractor for the Nottingham project. They will be responsible for designing and supplying the incineration system itself and the special boilers which will convert heat from the burning refuse to steam. Although the incinerators used are of German origin, the boilers have been designed at Thornaby by HWPEL. Pipes will convey the huge volumes of steam to Nottingham's proposed

heating needs of the new 'town'. The system will be 60% 'refuse fired' and 40% coal fired.

The 23 tons per hour plant will be the fourth PEL have tackled under their licence agreement with Josef Martin of Munich. The others are at Exeter (operational), Birmingham (nearing completion) and Coventry (on the drawing board). The Coventry incinerator plant project, includes similar steam raising

FROM THE FAMILY ALBUM

The ladies in our photograph are certainly high in today's fashion with their midi length coats—but this snapshot was taken twenty years ago, 22 August 1951 to be precise, Festival of Britain year.
Although the photograph is not particularly old, it will no doubt give a few moments of happy reflection to many of our employees and retired personnel.
The occasion was a day trip by over a hundred HW employees to the iron and steelworks of John Summers at Shotton near Chester where HW were building a new blast furnace plant.
Almost the entire staff of McKee Division, as the present HWPEL was then known, together with

TO THE EDITOR

In the article 'From the Family Album' in the Winter 1970 Wright Ahead, I was astonished and delighted to see a picture of my late father, Jonathan William Maxwell, included in the celebration party at Montevideo. (He is fifth from the right, sitting next to Mr Harvey, whose daughter wrote the article).
I have never seen the picture before, nor do I know Mrs Beckerlegge or remember having heard of her father, Mr Harvey.

But reading the article, I feel that the lives of her family and mine were linked together over a period of years while they were employed on contracts for Head Wrightson.
So many of the place names are familiar, for instance, the Llanbradach railway bridge.
During its construction my grandfather (Edward Maxwell), grandmother and part of the family went to live in Wales. In the next year, 1904, my father was in Elgin on the River Spey railway bridge contract, and became engaged to my mother then.
In 1906 my father and mother were married, and with my grandparents, lived in Kensington while the roof structure was being built at Waterloo Station. Then my parents went to Montevideo, returning to England in late August 1909 and in October of that year, we (my sister and I) were born and mother died four days later. At this time my father was working on the Immingham Dock Gates contract, and he was there when we were born.
We were brought up by my father's parents at Eaglescliffe, and as children heard of the many trips abroad my grandfather made for Head Wrightson, including to Ceylon and the Malay Straits.
Another contract that comes to mind is Herne Bay pier. Again the family, or part of it, was uprooted and went to live in Herne Bay. I don't know which year this was.
Unfortunately I have no-one left of my father's generation to verify any of the above details, only my childhood memories.
When the postal strike is over, I shall send a copy of the Winter Wright Ahead to my twin sister who lives with her family in Salisbury, Rhodesia. She will be very interested too.

Mrs JD Griffiths
HW Machine Co Ltd

The main concourse of Waterloo station London showing part of the roof structure

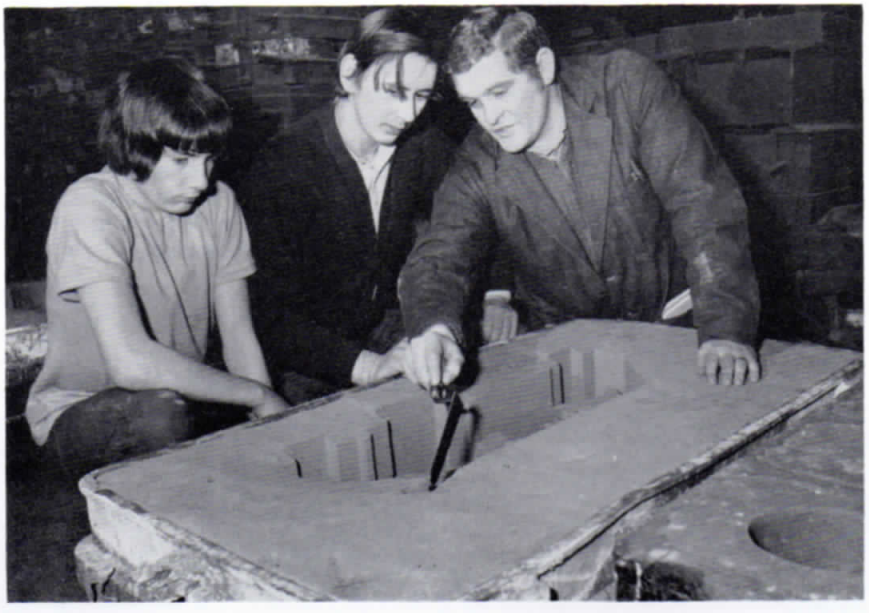
representatives from other HW divisions and companies involved with this iron-making project, travelled by bus on the 150 mile journey to Shotton. The dawn start from various pick-up points on Teesside must surely have shaken the trippers, no less on their drowsy return home some twenty hours later. Following lunch at Chester, the party journeyed to Shotton where they were met by Mr Reeth Gray, Director of John Summers. They toured the blast furnace site which was being built on a vast area of reclaimed waste land. The furnace structure was well advanced and keen interest was shown by the party *as it was their job*, made in the works of HW. The visit also included a tour of the hot strip mill where blooms were converted into steel coil in a matter of minutes. After the visit to the steelworks, the party returned to Chester for tea and eventually the long trek home. Tired and weary perhaps—but mighty proud of *their* blast furnace.

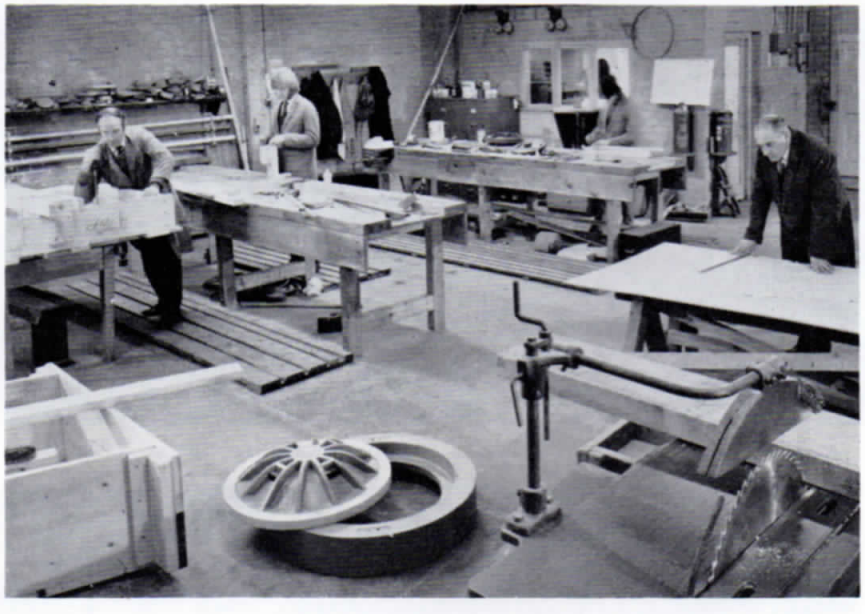
STOCKTON STEEL

The Stockton Steel Foundry, today part of the Head Wrightson steel casting production capacity, has a story and indeed a character of its own. Those who have worked there through the years know how true is the last statement.

Steel casting at Light Pipe Hall Road began in 1906, when the Stockton Steel Foundry Co Ltd, was set up by Messrs P Bagley, who became Managing Director, and J G Lockwood, the first Chairman. From modest beginnings the foundry developed successfully until the early 1920's, when the general paucity of trade affected the Company adversely, and it eventually had to cease operations. Head Wrightson bought the foundry in 1927 and restarted production. It operated as a separate subsidiary within the HW Group until 1947, when the company was merged organisationally with the Thornaby steel foundry, and together they were renamed Head Wrightson Steel Foundries Limited. Further expansion at Stockton took place in 1965, when the land and buildings of the adjacent works of Stockton Chemical and Riley Boilers were acquired and the small plot on the moor site across the street was vacated.

In 1927 the foundry was producing 20-28 tons of carbon steel castings per week from its cupolas and its distinctive convertors, which were a well-known phenomenon in Stockton with their shower of what the neighbours called 'golden rain'. Crucible floor furnaces were introduced for manganese steel, which has been characteristic of



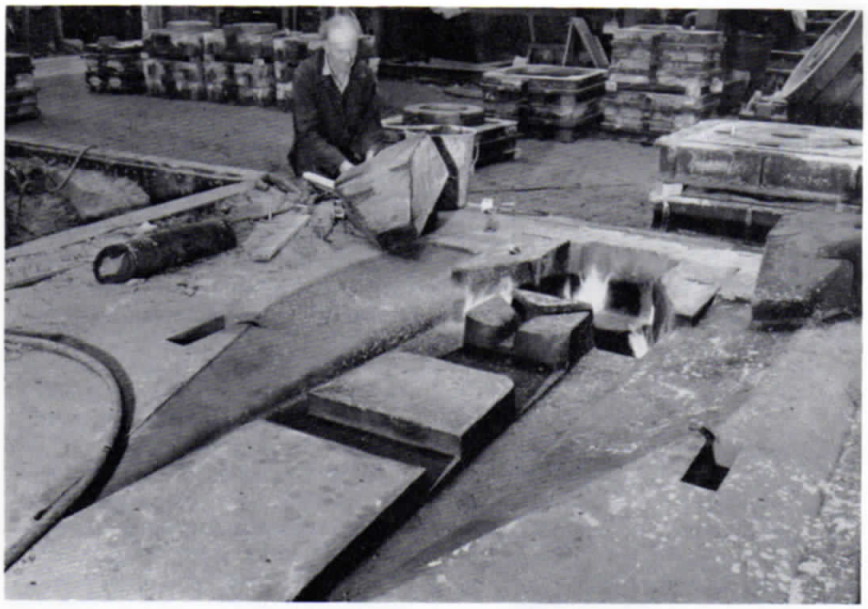


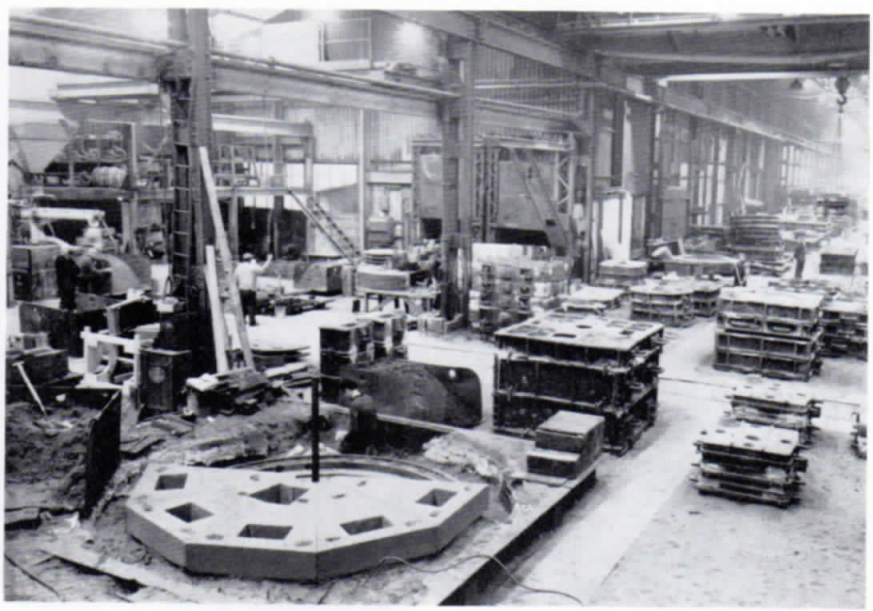
top: Mr E Peacock instructing apprentice moulder/coremakers

centre: pattern shop

bottom: moulding bay

'Stockton Steel' ever since. All heads and runners were in those days cut off laboriously by means of band saws.
Today, 'Stockton Steel' is a fully modernised steel foundry served by two basic electric arc furnaces, melting, under expert control, some 6,000 tons of liquid steel per annum on a single shift system and delivering 3,000 tons of high quality carbon and manganese steel castings in a variety of shapes and sizes weighing from a few pounds to eight tons.
Highly skilled personnel produce moulds and cores by hand or by machine according to the size, complexity and numbers required. Many of the cores and moulds are produced in the CO^2 sand process and furane resin air-set sand is in regular use for cores. By these the use of drying stoves has been eliminated. The sand itself is mixed in automatic continuous mixers. Other facilities include a pattern shop and a methods department and a modern dressing yard with arc-air cutting. Crack detection as well as visual inspection and X-ray equipment are in regular use.
Castings from the foundry go to the marine, mining, quarry, shipbuilding, ore crushing, and other industries at home and abroad. In addition, it supplies specialist castings to the HW Group.
At present there are employed at the Stockton foundry 130 production employees plus five maintenance men, seven production and four office staff. These numbers are only slightly higher than they were at their early peak pre-1927, but advances in steel casting techniques employed have enabled the foundry greatly to increase the quality, output, and range of its products over the years.
Group emphasis, as is well known, is placed on the training and education of the moulder/coremaker apprentices and foundry technicians as well as on modern methods and equipment. The continued prosperity and technological advancement of the two steel foundries in Head Wrightson continue to attract major attention in the group development.





top: Mr J Wilson 'closing' a mould for a 20,000lb ships anchor

centre: casting bay

bottom: Mr CJ Elliott works manager with Mr E Railton dressing yard foreman, discussing a casting for export to Sweden

THE BISHOP'S FERRY

by Tom Sowler
(a lecturer at Stockton Technical College and a local historian of repute).

I enjoyed the article on 'The Stockton Bridge' in a recent issue of 'Wright Ahead' and I add these comments on my own researches. The Bishop's Ferry, described in some records as the Horse Ferry, was referred to in The Stockton Bridge article, and I wonder if it is known how closely Head Wrightson is now associated with that ferry.

The first mention of the ferry is in 'Boldon Buke 1183', when we are told that 'the passage of the water pays 20d' and that 'one oxgang of land which the Bishop holds on the other side of the Teyse opposite the Hall pays IVs.' The Hall referred to is of course the Manor House of Stockton, which, after raids by the Scots, was fortified and later became Stockton Castle. The Bishop of Durham thus held fifteen acres (one oxgang) of land on the Yorkshire side of the river a little upstream from Castlegate. This plot would be held, and leased, as a landing place for the ferry. The Great Rolls show that by 1306 the rent had shot up from 20d to 2/6d. I believe the Borough of Stockton to have been formed during the reign of Richard I towards the end of Bishop Pudsey's lifetime. The ferry would have assumed increasing importance after the planting of the new borough, and hence the rise in rent.

Past Ferrymen

In 1350 Radulph de Herdwick held the ferry for three years, but by 1355 he was listed as 'ferryman for life' and paid 10/- for the lease.
To simplify bookkeeping the Bishops of Durham leased out all properties and services within their jurisdiction, originally for a stipulated number of years, or 'for life'. Statistically it developed that a life was equivalent to seven years, and the maximum term that a man could obtain was 'for three lives or twenty-one years'. Income from the ferry was due to the principal leaseholder and not to the Bishop. Frequently a man took up a number of leases and these would be bracketed together in one agreement. Thus we find that by 1380, in Bishop Hatfield's Survey, 'the passage of the water with the little boat' was leased for 53/4d, the other services not being named at that time.
Very few leaseholders are known in this early period, those that are being : 1392 Will de Stokton (sic), 1400 Rich Osburne, 1428 John Belyngham. From the time of Elizabeth I to the present time, with one exception, the rights to the ferry are well documented and clearly set forth. Principal leaseholders were : 1589 Ralph Bunting, 1615 Thomas Lambert, 1635 Francis Cresset, gent, 1661 John Lambert, 1671 Thomas Moxon of Leeds, 1691 Wm. Pennyman of Normanby, 1704 Moses Ashenden, 1720 Charles Ashenden, 1734 James Ashenden. 1765 Thomas Elton, 1790 to end of lease John William Commerell. During most of that time the lease included not only the ferry but also 'the shops under the Tollbooth' and also 'the Comon (sic) Bakehouse' and 'the new close in the West Row.' Thus when the old stone bridge was constructed in 1768 the £90 payable by the Commissioners of the Bridge would actually be received by Thos. Elton as lessee and not by the Bishop himself. This is made clear by correspondence which exists at Durham.
With the building of the bridge there was no longer a need for the ferry though the £90 still had to be paid annually. The Mayor and Aldermen of Stockton finally inherited the rights from the Commissioners of the Bridge. By 1852 when Stockton Borough and Township were united, and leaseholding for three lives was discontinued by Act of Parliament Stockton Corporation owned not only the ferry but also had the operating rights on the water.

Stockton-on-Tees in 1832—showing a race meeting in progress on the site of Head Wrightson's Thornaby works, shortly before the works were started

Stockton shipyards

In the 1850s a new development occurred, the coming of the iron shipyards at South Stockton opposite Thistle Green and the Quayside (not to be confused with the Corporation Quay). These shipyards remained in existence until the 1920s, Richardson, Ducks

and Craig, Taylors being on the Thornaby side, and Ropners on the Stockton side.
A great proportion of the skilled men for those yards lived in the central area of Stockton (now demolished) and the journey on foot by the Victoria Bridge to the northern end of Trafalgar Street was tedious. Thus the Corporation moved the ferry downstream from the foot of Castlegate to the Quayside by the Shiplaunch Inn, close to Ropners, and it plied across the river to the small site which still contains a boat and steps at the end of Trafalgar Street.
By the time of the First World War two ferries were in being from slightly different points to carry men over the water 'the easternmost steps to Kelley, the westernmost to Miller'. These steps were on land purchased by Craig, Taylor from Harrison Bros. Under Deed of Covenant the land became the property of Stockton Corporation. The Corporation now owned the landing places on both banks of the river, the rights of ferry and landing stages being leased or rented to Messrs. Kelley and Miller. In 1920 Charles Miller sold out his rights to the Ropner Shipbuilding and Repair Co and this second ferry ultimately passed into the hands of James Kelley who now controlled both and had exclusive rights of ferry on the river.
People today are surprised at the size of the ferry in its heyday. When Charles Miller sold out, his 'chattels' included ten ferry boats, the largest being 27′ x 9′ 7″ (this of course did not include the Kelley fleet).
James Kelley as sole tenant in 1920 had to 'properly work and manage the said ferry as to insure the constant supply of boats for the use of passengers using the said ferry . . . .'
The normal complement of the largest of the Kelley ferryboats was sixty men, but the maximum number actually carried in one crossing was one hundred and eight. The sight of one of those overcrowded boats carrying my uncle over the water to Richardson, Ducks still haunts my boyhood memories. The maximum number of man-crossings in a single day was approximately eleven hundred, and so to cope with this volume of traffic the two shipyards had to stagger their dinner hours, for no canteen facilities existed. The price per crossing was ½d, and a weekly 'season' ticket payable Saturday dinner time was 6d. (NB five and a half day week was worked then = twenty-two crossings).
By the end of the 1920s, the shipyards had passed out of existence and the ferry once more declined. In 1950 the last of the ferrymen, James Kelley, conveyed his ferry rights back to Stockton Corporation, and they in turn conveyed them to Head Wrightson. The Company is therefore the present holder of this ancient crossing.
One clause in the Act for the Building of the Bridge (1762) states that the 'Ferry is to be used if the bridge becomes dangerous'. It is an interesting speculation that, if the load pictured on p. 9 of the Summer 1970 'Wright Ahead' as it crossed the bridge, had brought down that bridge all 'hands' at the Teesdale Works would have had to man the boats to ferry landlubbers like myself across the Tees at ½d. a time.

Postscript by the editor : Kelley of the river

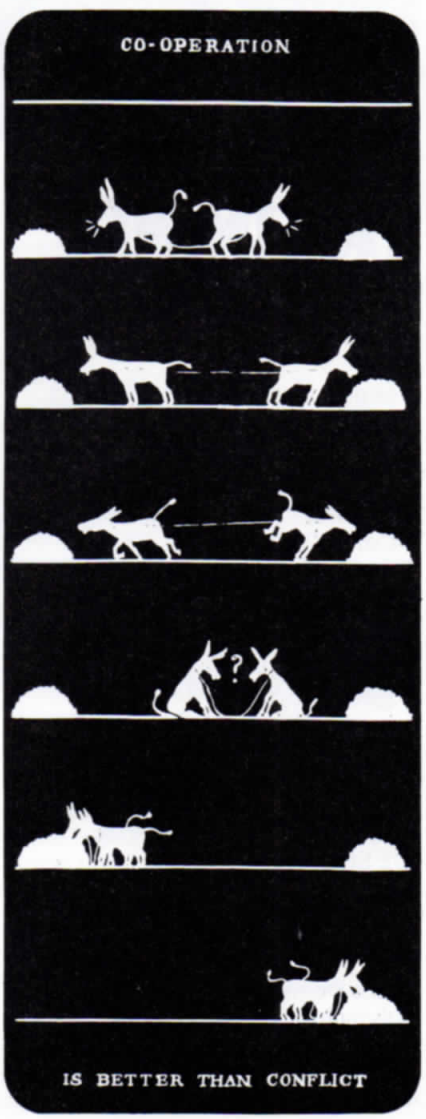
James Kelley, referred to above as 'the last of the ferrymen', is a well-known HW employee of long standing, still to be found on the river side helping erection department with practically any matter connected with the river. He has lived and worked on the Tees for most of his life.
Born in a little house perched on the river side beside the old Shiplaunch Inn, he carried on the ferry boat tradition which had been in his family for three generations. Jim made his experience available to the various shipyards which prospered on the river in earlier days, but income from the ferry service waned during the great depression between the wars, and Jim came to work for us. However, he was still very much involved in the life of the river, and his unique knowledge proved invaluable during the last war when HW-built landing craft were launched into the Tees in large numbers. More recently, Jim assisted in the launching of the huge boilers for Bradwell and Dungeness nuclear power stations.
Kelley's boats have served the people and the industry of the Tees for many years, and some are still in use today. One of his best known 'side lines' has been rescuing people from drowning and there are said to be quite a number who owe their lives to 'Kelley of the River'.

POSTAL EFFICIENCY

A letter was recently received from Tehran addressed as follows :

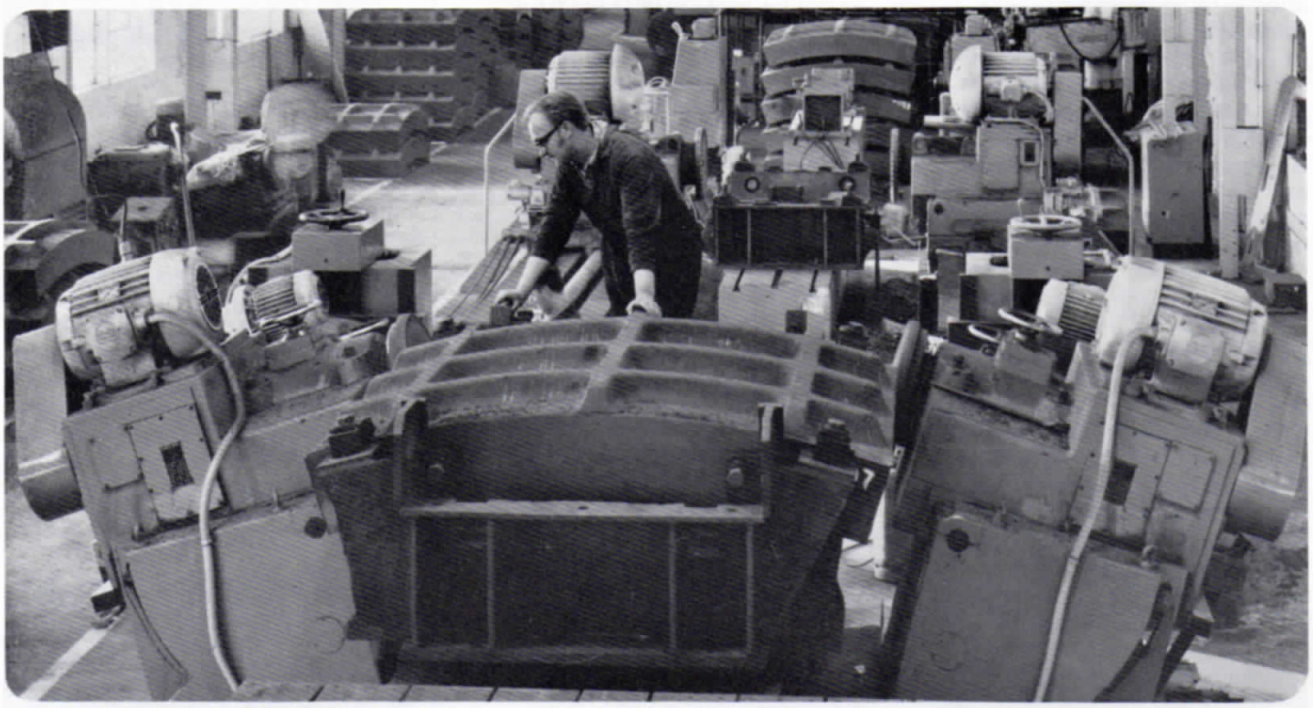
Head Wrightson
Thournabey
Speckton
Peeside
Countydown
England

Nearly every day our postal sorters come across many amusing addresses to HW, but this one is certainly a classic. Surprisingly there was no delay in the letter reaching us, for which all praise to the British postal service.



HW IRON FOUNDRIES

A general view of the new machine shop at HW Iron Foundries showing machining operations in progress on tubbing segments for the Cleveland Potash Mine at Boulby, North Yorkshire.



TRAINING NEWS

Congratulations to the following HW sponsored students on their qualification successes :

J Armstrong HWT
HND Mechanical engineering
J Conroy HWPEL
BSc Electrical engineering
DN Halliday HWT
BSc Economics
D Maddison HWT
BSc Mechanical engineering
V Oliver HWT
BSc Civil & Structural engineering
T Scaife HWPEL
BSc Mechanical engineering
DP Scott HWT Invergordon
BSc Mechanical engineering
WE Short HWM
MSc Production engineering
B Tate HW Stampings
HND Mechanical engineering

At the Degree Ceremony at Teesside Polytechnic on Friday 26 February, Terence Scaife, age 23, was awarded a first class honours degree in Mechanical Engineering, the only first class honours degree in this section.
As a result of his performance, Terence won the Dorman Long Silver Medal, awarded annually to the best engineering student attending the Polytechnic, either full or part time.

Congratulations to the following HWT trainees who have successfully completed their first module training, validated by an Engineering Industry Training Board inspection :

F General Welding and Cutting
A Bulmer AP Cox T Ford
E Spacey GM Spedding D Trippett

H2 Turning 1
RW Bradley C Crawford
S Cunningham JT Pears

D1 Thick Plate Working 1
P Ford R Pattinson KE Thompson

National Foundry Apprentice Competition 1971

Three of our foundry apprentices, P Hamill, AWJ Cairns, and AA Din, recently visited Sheffield to take part in the preliminary rounds of the above competition.
Arthur Cairns successfully reached the last eight in this national event and in March he entered the final week-long test covering theory and practice at the Midland Foundry Craft Training Centre, West Bromwich. Last year, he was third in the steel moulding section of the local IBF competition. Arthur, who is 19, is a trainee moulder core maker in our Thornaby Steel Foundry. His hobbies are music and art and his active interests are fishing, canoeing, hiking and camping.

Language lab

The Management Development Centre at Yarm has now acquired a tape recorder and headphones, together with language tapes for instruction in Spanish, German and French. With the permission of the Group Training Manager these may be used at the Management Development Centre by HW employees and by special arrangement the tapes may also be used during the lunch hour or after work hours.

RETIRE-MENTS

above: Mr W Gill, Mr F Brown

top: Mr E Thomas, Mr W Rowe

bottom: Mr RH Davies, Mr JE Chesser

We wish each of the following personnel a long and happy retirement :

HW Iron Foundries
EC Baker *48 years' service*
E Kilvington *14 years' service*
W Newbold *48 years' service*

The HW Machine Co
J Cowieson *20 years' service*
RH Davies *34 years' service*
CWS Jackson *22 years' service*
WN Wedgewood *18 years' service*

HW Stampings
W Gill *48 years' service*
E Thomas *30 years' service*

HW Steel Foundries
EV Roche *48 years' service*

HW Teesdale
A Bowey *15 years' service*
L Brown *31 years' service*
AW Day *25 years' service*
WE Hancox *15 years' service*
W Heron *50 years' service*
N Hobbs *14 years' service*
TH Nevison *31 years' service*
BA Poyner *20 years' service*
PR Rodham *22 years' service*
JW Sowerby *50 years' service*
JW Wells *45 years' service*

L Brown, HWT Stockton Works
A smoker was held on Friday, 29 January, at the Lobster Pot, Redcar, in honour of Mr L Brown who retired after 31 years' service with the Company.
The evening was a tremendous success. 'Lols' friends and workmates arrived by special bus and during the celebrations presented him with a portable radio. The presentation was made by Mr Trevor Briggs.
The evening ended outside 'Lols' house with 50 voices singing 'For he's a jolly good fellow' hic.

JW Sowerby, HWT
To mark Bill Sowerby's retirement after 50 years' service with the Company Mr RW Wright, Engineering Manager & Director, HWT, presented Bill with a glass domed 400 day Rotary pendulum clock on behalf of all Bill's friends and colleagues.

W Gill, HW Stampings
See photo above
Mr F Brown, Director & General Manager, HW Stampings, presents a retirement gift to Mr W Gill on behalf of all his colleagues at Seaton. Mr Gill completed 48 years' service with HW, 22 of them with Stampings.

E Thomas, HW Stampings
See photo above
A smiling group of workmates of Mr E Thomas gathered round for the presentation ceremony made by Mr W Rowe, maintenance foreman, to Mr E Thomas on his retirement after 30 years' service with the Company.

RH Davies, HWM
Three presentations were made to Mr RH ('Bob') Davies on 29 January, who retired after 34 years' service, 16 of which he served as Technical Services Manager.

Mr NC Lake presented 'Bob' with a stainless steel tea service on behalf of the HWM Staff Benevolent and Social Fund.

Mr T O'Connor presented an album of records from members of the Management Dining Room and an illuminated book of signatures.

The photograph at top of page shows Mr JE Chesser presenting a stereo record player on behalf of old and new friends.

SPORT & SOCIAL

1971 Interdepartmental Competitions

Football, bowls and cricket, interdepartmental competitions will again be held at Teesdale Park during the next few months. So watch the works notice boards for information on the various events and make certain your departmental team is entered and the players are in good trim.

The darts competitions, which last year attracted a large number of entries, will this year be played during the winter months. It is hoped that a ladies darts competition will be included in the event, so why not start practising now girls. Incidentally, there is no reason why ladies shouldn't join in the bowls competitions either.

HW Cricket Section

Outdoor cricket practice will commence on Saturday 10 April and thereafter every Wednesday evening. All members and interested personnel are welcome.

HW Golf Section

The season opens with the 'Spring Stableford' competition on Saturday 3 April at Dinsdale Golf Club.
A welcome is extended to all HW golfers, particularly those who have not in the past been able to enter our competitions for business reasons, or commitments with their own club. The hope is that some new stars will emerge to 'change the scenery' at the prize giving day which will be on Saturday 2 October also at Dinsdale Golf Club. This is the date fixed for the 'Bob Sturges Trophy' competition and the annual stroke play competition.
The club knock-out competition will start in May to be concluded before the Bob Sturges Trophy day. Invitations and entrance forms for the various competitions will be circulated in due course.
The 'Rabbits' in our midst should not be afraid to enter our 'friendly' club competitions—they will find our experienced golfers most patient and helpful—that is if you ignore the odd reference to Robin Hood, Ali Baba and others of that ilk.

The president of the Senior Staff Guild, Mr Leslie Bell, surrounded by some of the guild members at their annual dinner in February

Senior Staff Guild Annual Dinner

The sixteenth annual dinner was held in the Queen's Hotel, Stockton on Wednesday 3 February, when some sixty members of the Guild enjoyed an excellent evening of wining and dining followed by entertainment provided by Mr Alan Taylor of R & D and Mr John Dowd.

Guild Membership

The Guild Secretary, Mr Roy Brown HWT Wages Dept will be pleased to receive applications or answer any enquiries regarding Guild membership which is open to male employees over the age of 21 years engaged on work in the company in a senior or supervisory capacity.

HWIF Staff Social

Some 64 members of HWIF works and office staff attended a most enjoyable social evening on the 30 January at the Marton Hotel and Country Club. An excellent meal followed by dancing was organised by Mr Jack Willis (Transport) and Mrs Marie Robson (canteen). The question now asked is 'when is the next one' which confirms the success of the event.

HWM Staff Benevolent & Social Fund

The committee recently organised three very popular events. The first being the Annual Staff Dinner and Dance which was again held at The Marton Hotel and Country Club when 200 members and friends had a very enjoyable evening.
About 80 members children attended the Christmas party, held at Grove Hill Community Centre, to share in the games, film show and carol singing not forgetting meeting the guest of honour, Santa Claus, who arrived complete with a sack full of presents, enough for everyone.
This year a Discotheque was arranged in an adjoining room to the party for the older children, and proved to be quite a successful experiment.
The third function took place on the 5 February when 25 members had a most refreshing evening during a visit to Cameron's Brewery at Hartlepool.

photo top right :
HWM children's Christmas party
Miss Helen Atkinson meets the guest of honour

Works Band Summer Concert Dates

9 May	7.30pm	mixed bands and the Apollo Male Voice Choir at the Middlesbrough Town Hall
22 May 5 June 26 June 24 July	2.30pm	to be played for Teesside Council, locations not available at the time of going to press
10 July	2 pm	Ropner Home garden party
15 August	3pm	Guisborough Park

MARRIAGES-BEST WISHES

Mr & Mrs Townsend

HW Machine Co
Mr J Townsend to Judith Snaith *DO*

HW Stampings
Mr B Bates to Ana Faint *wages*
Mr E Taylor to Susan Heron *typist*
Mr D Walker to Georgina Rawlings *sales*

1971 AMATEUR SNAPSHOT COMPETITION

Preliminary announcement

Following the success of last year's event The Senior Staff Guild, in association with 'Wright Ahead', are sponsoring another amateur snapshot competition.
Each employee may submit a total of four entries, which this year will be split into two groups as follows :

Group one
black and white or colour prints

Group two
transparencies

Prizes in each group
1st £3
2nd £2
3rd £1

The subject
people and pleasure
The panel of selectors will be looking for pictures portraying the enjoyment of life.

Closing date 1 October 1971

Full details will be given in the next issue of 'Wright Ahead' as to how, where and when to submit your entries—meanwhile be snap-happy this Spring and Summer.

Head Wrightson & Co Ltd

Yarm
Yorkshire
England
TS15 9DA

Telephone: Eaglescliffe (0642) 781010
Telex: 58-606
Cables: Teesdale Stockton-on-Tees

Published by Head Wrightson & Co Ltd
Layout by Gray Design Associates Yorkshire and London
Printed in England by Consort Press Ltd