Information L·E·A·K

HMD SEAL/LESS PUMPS LTD

COMMEMORATIVE SOUVENIR ISSUE

85 *INNOVATIVE YEARS*

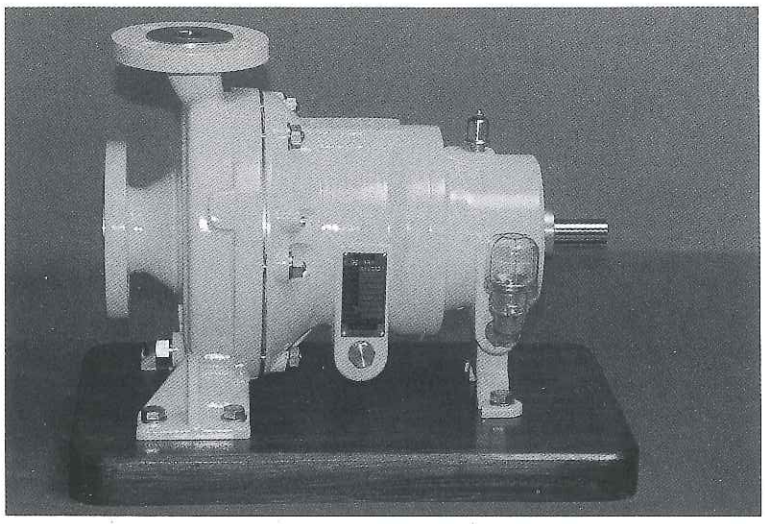
THE FOUNDATION OF AN INDUSTRY

The 19th July 1907 heralded the beginning of a new era in engineering in the British pump industry. When Geoffrey Howard was born no-one realised the impact that he and his older brother Charles would have on the British engineering fraternity.

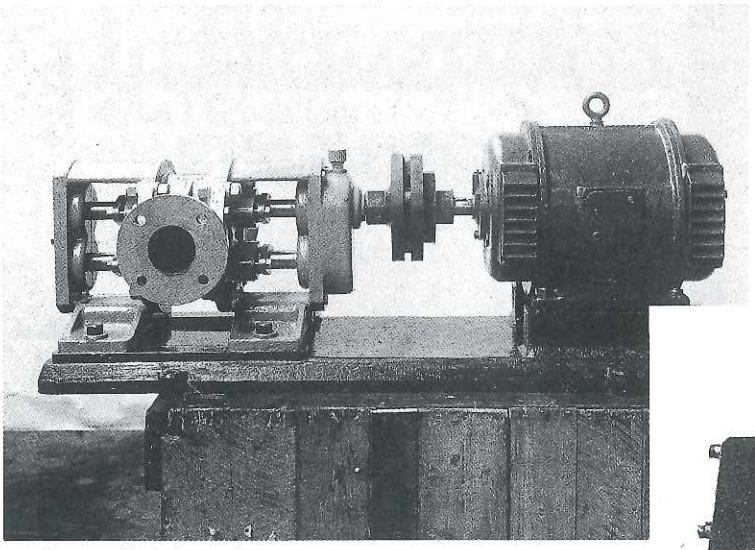
So, it is with great pleasure that we bring to you this Information Leak which outlines the achievements of the Howard family.

Here at HMD we celebrated 'Mr Geoffreys' birthday in grand style, by inviting the family 'en masse' for a celebration of his life and works.

Perhaps it is prudent to travel back to the 1930's when the two Howard brothers, fresh from college, entered their fathers' company which was, at that time, designing and manufacturing pneumatic tools and equipment for use mainly in the rail industry.

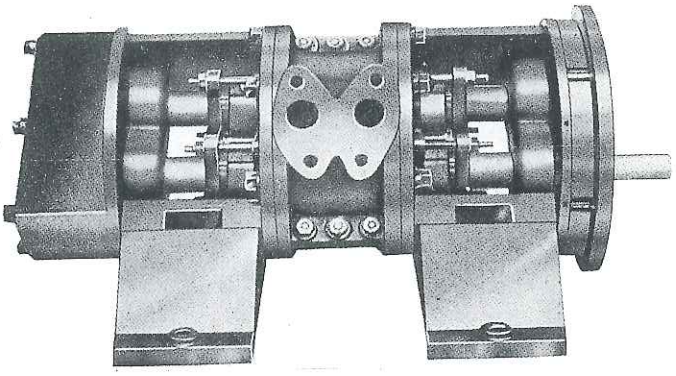


The latest seal/less design
- The GS range -

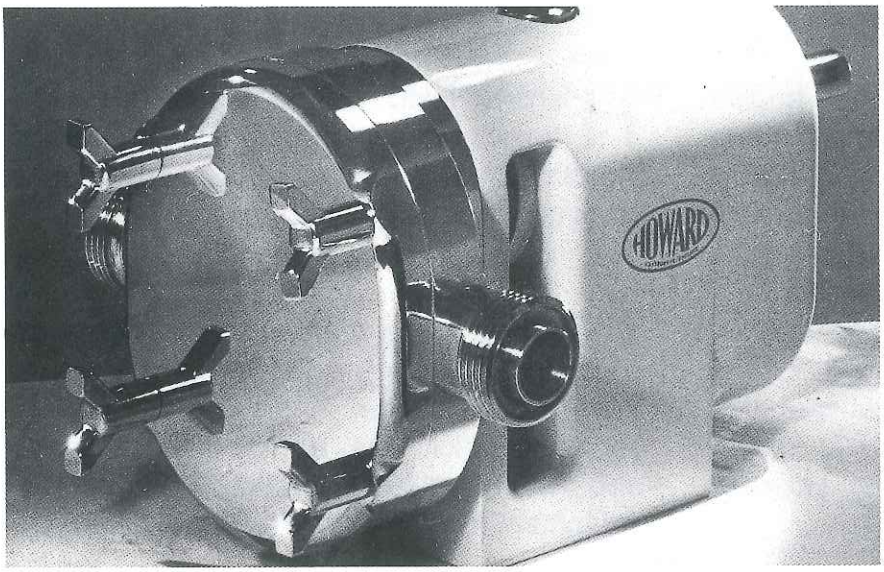


An early lobe rotor pump

Special dual rotary pump
for marine service.

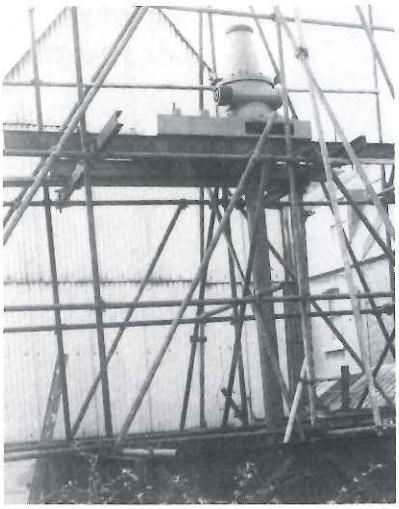


Combined Bilge and Circulating Water Pumps for 300 H.P. Marine Diesel.

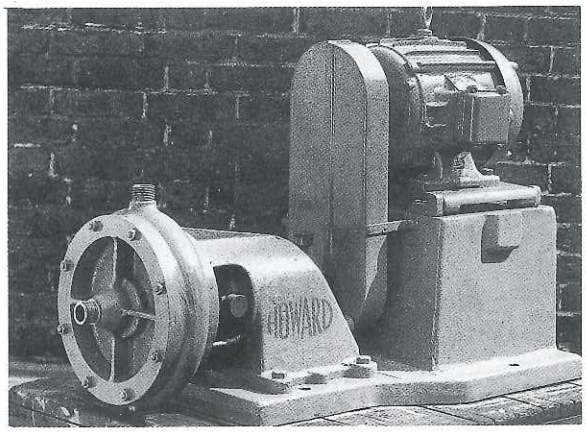


Modern hygenic service
rotary pump

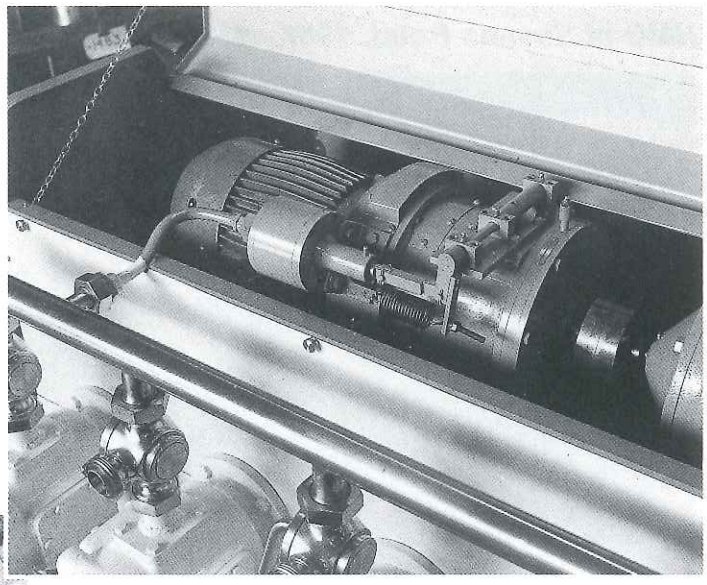
Large mixer for
Australia
circa 1950



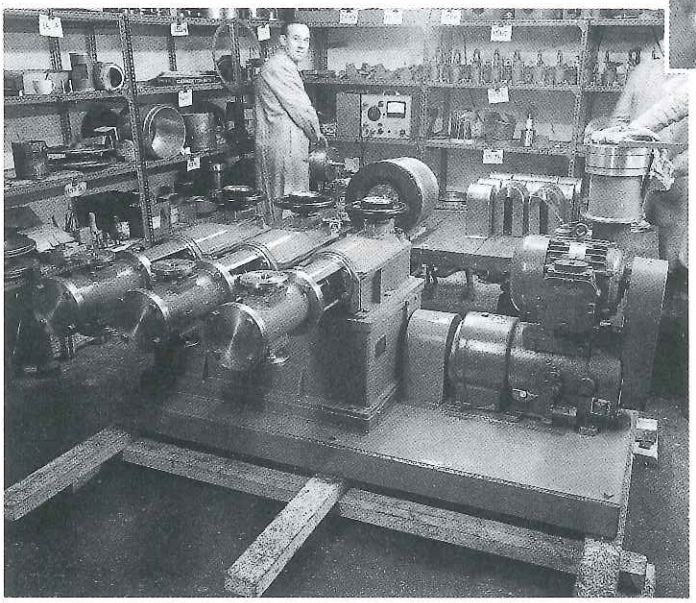
Early Howard centrifugal pump



Several different types of pumps were also being 'dabbled' with, from reciprocating and lobe rotor to centrifugal. Geoffrey took a keen interest in pump design and set to work developing a 'tri-lobe' configuration which has since become a standard within the UK industry.



Magnet driven safety/
variable speed drive

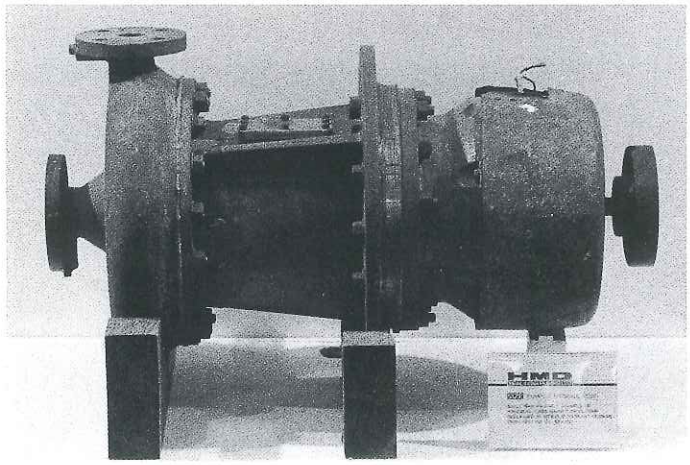


Valveless variable stroke
blending pump

The solution lay dormant for a few years as Geoffrey decided to further his career in other branches of engineering. His mind however, continued to refine his ideas on seals into a practical answer.

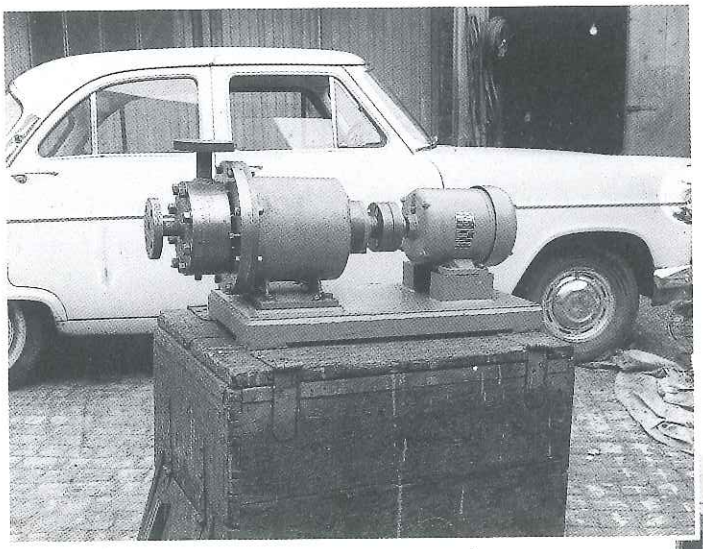
At this time Geoffrey began to concentrate his keen intellect on the problems associated with seals as gland packing and stuffing boxes were recognised as a weak link within pumps of any type.

1946 was the next important date when Charles, who had trained as a salesman, and Geoffrey decided that it was about time something was finally done about leaking pumps, so they started up in business by themselves specifically to address this problem.



"PUMPUS HYDRAULICUS"
Electro-magnet seal/less pump
circa 1952

HMD at Susans Road. 1957 - 1970

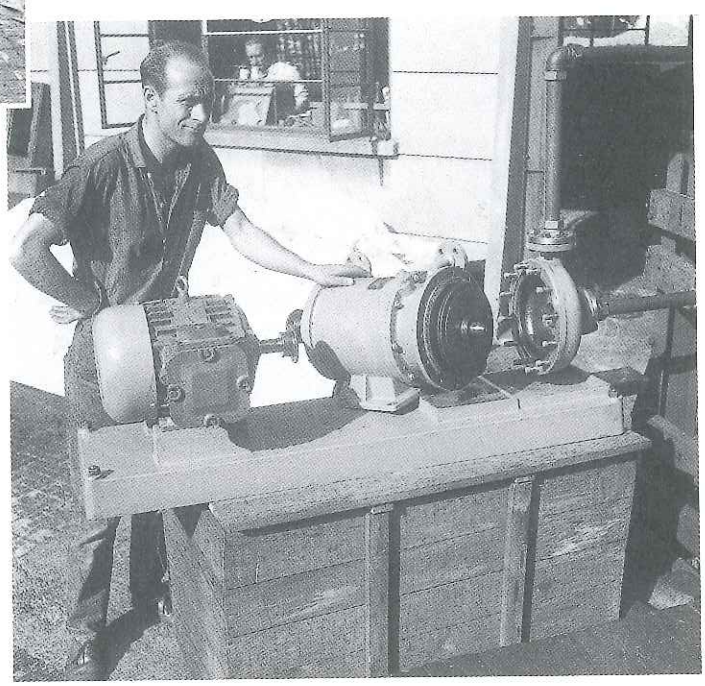


Small HP pump (and company car)

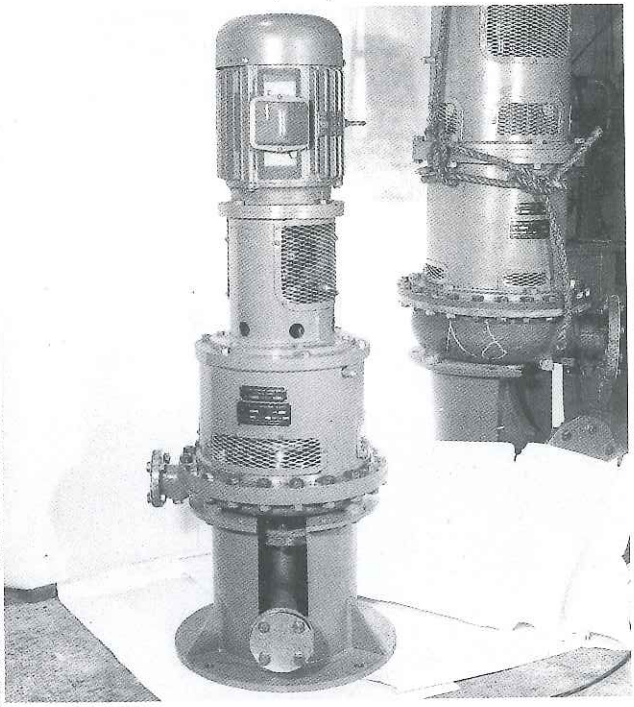
Hydraulic and Mechanical Developments was formed to simply design and develop a pump that would not leak. To enable the research to be carried out the company manufactured piston pumps, conventional mixers, and undertook general engineering work, thus providing the necessary funds to keep the seal/less development underway. Scouring the vast supplies of war surplus provided the material needed for the containment shroud for those first seal/less pumps. These were in the form of periscope tube sections from the submarine building programme. Using electro magnets, the prototype pumps were built, tested and installed into ICI at Huddersfield for field testing in 1947.

Whilst the results were very encouraging it was found that the electro magnets needed a reliable D.C. electric supply which caused some concern. The hunt was on for an alternative, the breakers yards being scoured again and the answer found. Strong permanent magnets destined for limpet mines had been developed and were used to replace the troublesome electro magnets.

NPSH test rig



Vertical pump for nuclear service.

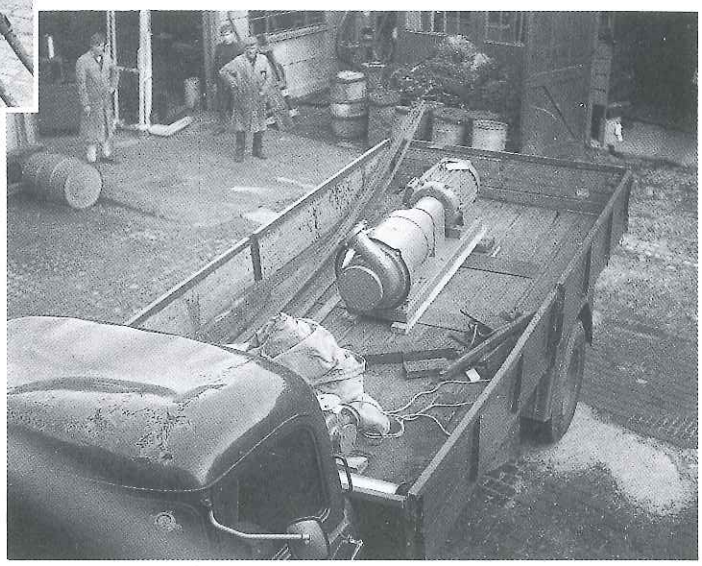


Large order waiting despatch to ICI.

Centreline mounted
large duty pump

Being men of vision, both Charles and Geoffrey decided that the world needed pumps that did not leak. The company grew from strength to strength over the next 18 years or so, as production was concentrated on this guiding principle, until in 1970 there was no more room left for further manufacturing in Susans Road.

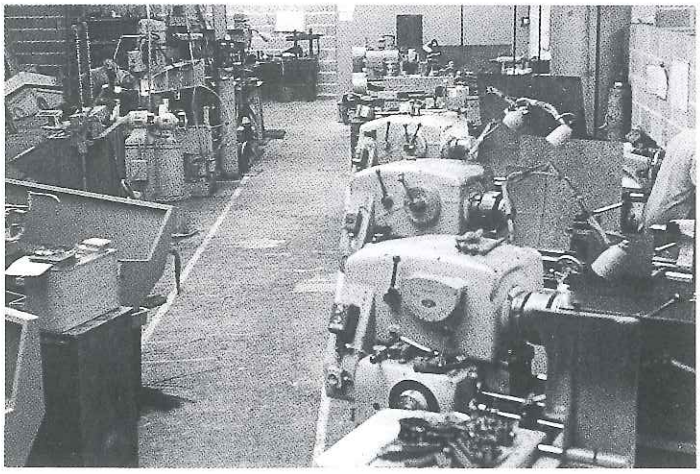
Hot oil service pump enroute

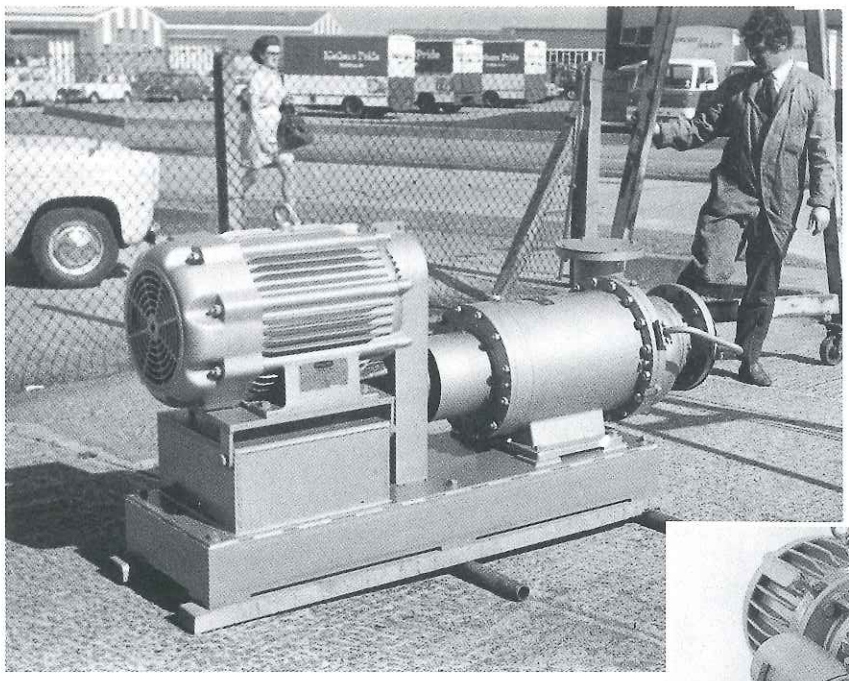


All through this period, the machining of pump components had been carried out by subcontracting, and assembly had taken place in the back of Geoffrey's garage. Things were to change, a workshop in Susans Road, Eastbourne, was leased to form the manufacturing base for the company which also changed its name to Howard Mechanical Developments Ltd and the office moved from London into Geoffrey's drawing room, also in Eastbourne

Suction lift test for nuclear
Power station pumps

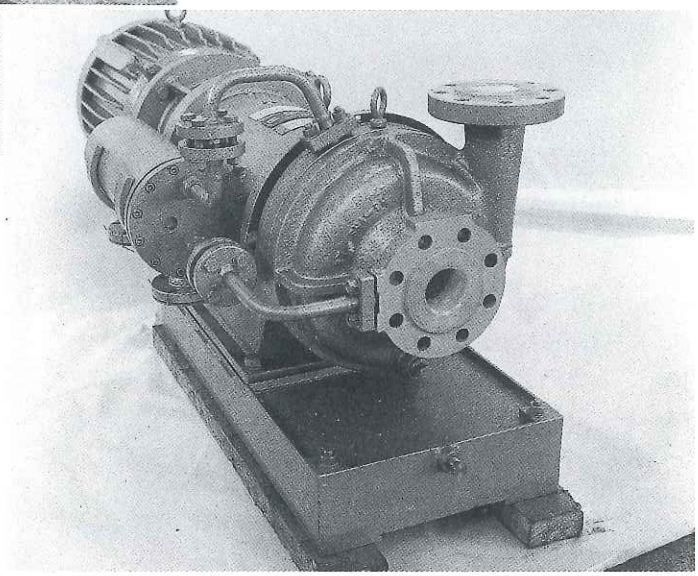
Vast increase in space



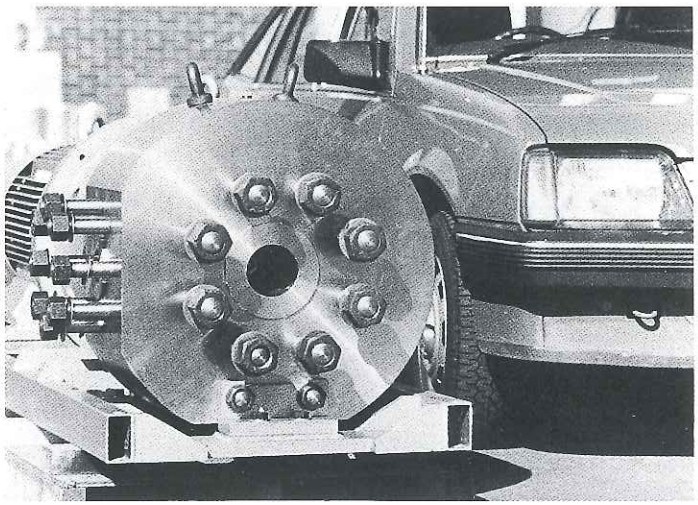


Belt driven H8 pump

Hampden Park Industrial Estate proved to be the next (and current) home for HMD Seal/Less Pumps Ltd, as it was now known.



H5 pump with bearing feed cooler



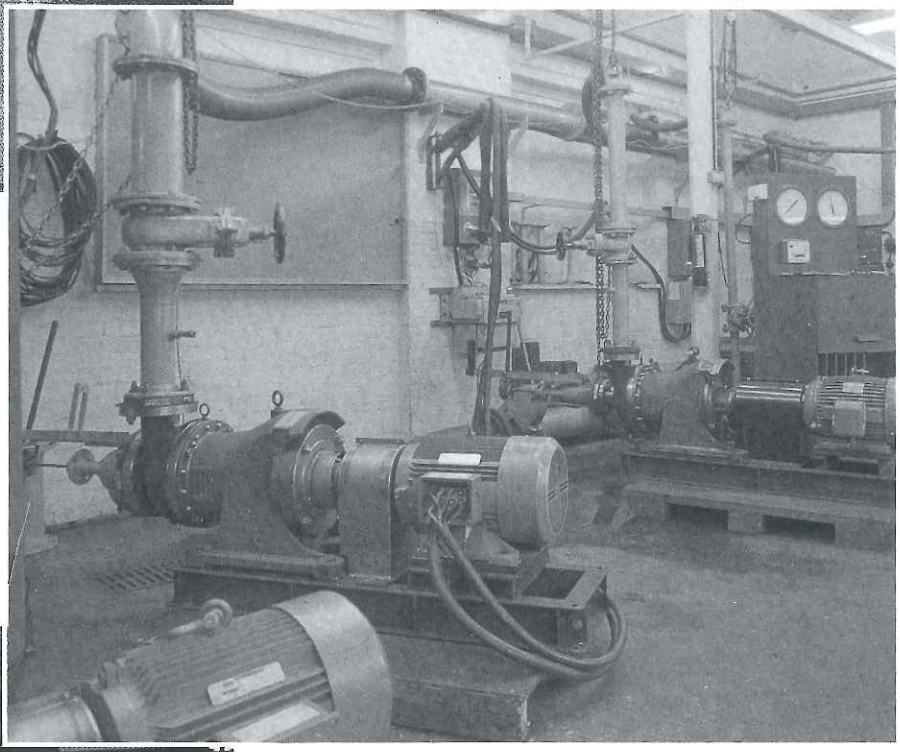
Large HP pump

An R&D facility and computer aided machining centres now form the heart of the Hampden Park facility - a far cry indeed from the garage Geoffrey and his late brother Charles, had commenced manufacturing in. HMD has for many years been regarded as the best money can buy in Seal/Less Pumps and are proud that this is still the case.

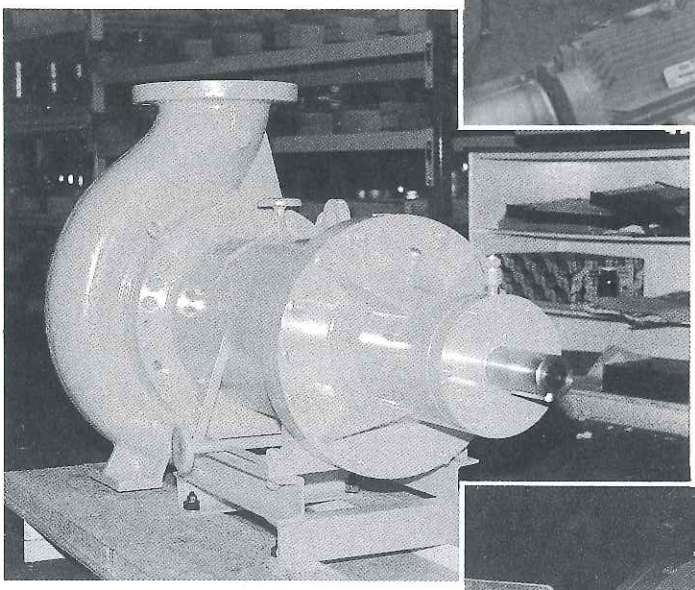
Consignment enroute to a refinery in Korea.

The 1987 & 1990 storms caused disruption - but we still made pumps ! !

The legacy that Charles and Geoffrey gave to Eastbourne has ensured that a buoyant pump manufacturing community is thriving in a town better known for its tourism.

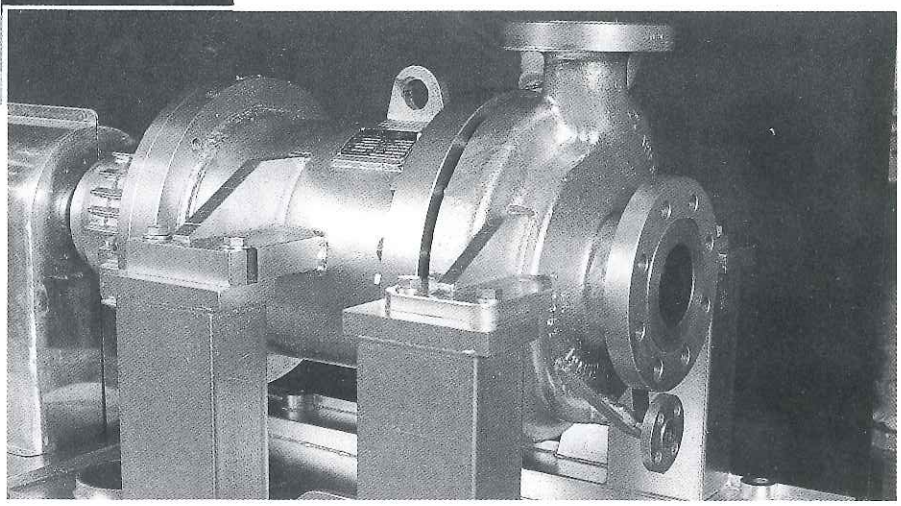


The modern test plant



Large special high temperature pump for USA

This story is very much one of 'from little acorns great oaks grow' without the vision of the Howard brothers HMD would not be in existance, contributing to the wellbeing of industry and its personnel.



The current petroleum pump

Tuesday 21st July 1992 saw the celebration of Mr Geoffrey Howard's 85th Birthday and as a mark of respect to this imaginative man a photographic record of his engineering achievements was presented to him by Alan Putland, Managing Director, of HMD Group Ltd.

1946 Company founded HYDRAULIC & MECHANICAL DEVELOPMENTS Ltd.

1947 Electromagnetical seal/less pumps manufactured for ICI to handle Dowtherm at 300^{0}C.

1951 First permanent magnet synchronous drive pumps manufactured up to 20 HP.

1956 Vertical magnet drive pumps installed in United Kingdom's first nuclear reactor.

1962 First torque ring (induction drive) seal/less pumps manufactured.

1962 High system pressure pumps to 300 bar produced for Rolls Royce Ltd.

1970 Introduction of HMD pumps into US market with Kontro Inc.

1978 First magnet drives with rare earth magnets produced.

1980 CS series pumps produced for high temperature applications.

1982 Renamed HMD SEAL/LESS PUMPS Ltd.

1984 First API (petroleum) standard pumps manufactured.

1985 Achieved BS5750 quality standard.

1985 200kw seal/less pumps manufactured.

1987 AQAP1 (Ministry of Defence) quality standard.

1988 First seal/less pumps for Trident submarines delivered.

1989 Awarded ISO 9001 quality standard.

1990 Introduction of ANSI specification pumps up to 100 HP.

1991 World release of the *INsight*™ electronic pump condition monitor.

1992 UK sales organisation, group operations worldwide.

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