



Manufacturing and refurbishing precision equipment

Now - greater precision will give you longer gear life

The installation of one of the largest grinders of its type in this part of the world will deliver to our customers significant benefits - particularly in terms of longer gear life and smoother, quieter operation.

Installed at major capital cost, the new Hofler Rapid 2000 form grinder delivers even greater precision in the production of gears. Your gears will run more quietly because of the improved grinding accuracy. The end result of greater precision? Longer gear life.

With this grinder we will be introducing to the mining industry levels of precision required of high speed turbines used in marine, power generation and aeronautic applications.

When it comes to external grinding, the Hofler can handle diameters of 2,000mm and face widths of 1,500mm. It can achieve a quality standard of AGMA 14 DIN 3. The machine is able to accommodate internal diameters of 2,000mm and face widths of 390mm to a quality standard of AGMA 14 DIN 3.

Complete on-machine inspection of involute, helix angle and pitch is readily available.



Bringing high precision grinding to the mining industry.

Lifting the bar even higher

Hofmann Engineering has embarked on a program designed to ensure that, in addition to ISO 9001, it will in future also adhere to stringent international standards relating to safety and the environment.

The program is in line with the international trend to treat safety and environmental issues as integral parts of any quality management system.

Says Hofmann's Peter Whitehead, "safety is no longer regarded as merely the responsibility of a safety officer. Like quality, it is the responsibility of every single person in the company.

"The holistic SEQ (Safety, Environment, Quality) system, which we will implementing, will see Hofmann's continuing to apply the ISO 9001 quality management system. We will, however, also work towards meeting the requirements of the international 14000

environmental standard and the independent AS 4804 safety standard."

Introducing Paul

Paul Middleton, who has been with us for 15 years, has been appointed as our new safety officer.



Getting it right in Zambia

Founder John Hofmann believes the gear set which he recently commissioned in Zambia is his best ever installation.

“Despite some of the problems encountered when working in Africa, we achieved perfect contact of every tooth across the face and involute as well as the desired tip relief and crowning.”

The installation took place at a sugar mill near the capital of Lusaka in a fertile valley described by John as one of the most stunningly beautiful on earth.

For this particular replacement project, Hofmann manufactured an induction hardened, hard cut, 4m diameter gear and a case carburised and crowned pinion at its Bassendean works.

It won the Zambian contract as a result of its growing reputation in Africa as a specialist in the manufacture of quality gears for sugar mills and other applications.



Introducing our new ‘Big Bender’

The commissioning of our new 5,000t vertical roller press means we can now bend Hofalloy forged material for large gears, rope drums, mill shells and pressure vessels in-house.

Some time back we decided to install our own large press because we couldn't find anyone able to bend a material of 390 BHN. Realising that we would have to do it ourselves, we unsuccessfully searched the world for a press of this size.

It was then decided to buy a smaller machine and re-engineer it so as to make it capable of bending large plates of Hofalloy. The sourcing, redesigning, rebuilding, installing and commissioning of the machine required mammoth contributions from our design, technical, fabrication and installation teams as well as staff from most other departments.

The press can bend Hofalloy up to 220mm thick, 3700mm wide and with a hardness of up to 390BHN.

It operates by a progressive bending method that feeds the plate through at small increments. By means of 5,000t of hydraulic pressure on a reciprocating beam the plate is given a bend.

Although this may appear as a series of flats, in practice the curve is very smooth and no flattening will occur. This roll press is very user friendly and can be operated by both manual and automatic modes giving maximum control when pressing.



Bending forged plate for girth gears.

— Congratulations all —

Congratulations to all staff that celebrated anniversaries with Hofmann Engineering. Especially to Michael Tymus who celebrated 25 years of service recently. The following are also to be congratulated:

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| 20 years service: | Ziggy Swalski, Bruno Butkevicius and Tim Robson. |
| 15 years service: | Adam Kilijanski, Ian Martin and Paul Middleton. |
| 10 years of service: | Bryn Tozer, Leigh Sizer, Michael Laker, Steve Hole, Ray Larty, Brian Pelham, Ross Holloway and Sylvia Blackburn. |

Service exchange for planetary transmissions

You can now have the swing and planetary transmissions on your P&H 4100A series machine significantly improved, refurbished or completely replaced by Hofmann Engineering. And you can do this all on a new VIP Service Exchange Program.

Our service to owners of 4100A rope shovels includes full or partial assembly and replacement with new, improved performance gearing. Your refurbished or upgraded transmission will be fully assessed, tested and backed by a full technical report.

You can benefit from a number of modifications developed by Hofmann to improve on your transmission's performance. These include modifications which will enable your transmission to handle higher loads while increasing its output, torsional strength, wear resistance and operating life.



Crankshaft successfully repaired

This high alloyed pump crankshaft (shown fully repaired) would normally have been thrown out as scrap after a crack 350mm long x 95mm deep developed during operation.

However, our experience with developing and implementing weld procedures for high integrity items, enabled the repair of the crankshaft well before a replacement casting could be manufactured.

After welding to our procedure designed to minimise distortion, the crankshaft was thoroughly crack detected by MPI and UT. The journals were machined and burnished and the item despatched on time enabling the pump to run at maximum available capacity.



How we averted a beer disaster

You've heard of the pub with no beer. Well this nightmare almost became a reality recently. Fortunately, Hofmann Engineering helped prevent this potential catastrophe before the Press got hold of what would without doubt have been a front-page story.

The problem started with the failure of the current pair of final drive pinions on Alcoa/Kaal's aluminium sheet rolling mill - a failure that created the possibility of a tin can shortage.

With visions of beer rationing staring them in the face our specialist technicians knew they had no alternative but to meet an urgent 18-week delivery deadline for the manufacture and supply of replacement pinions.

If you consider the size of the two pinions (as seen in the photo), a delivery lead time of 28 weeks would have been more the norm, particularly if you appreciate that we are talking about two very large carburised and gear-ground double helical pinion shafts.

No doubt motivated by rumours of a long thirst, our supplier produced the forgings in eight weeks. We were left with 10 weeks to complete the job.

The biggest challenge was the gear grinding which, due to the length of the pinions, required the removal of the table brake drum and incorporating the table brake as part of the pinion shaft.



Replacement parts that outperform the original

A culture of innovation has led to Hofmann Engineering becoming a major supplier of a broad range of purpose-made replacement parts for gearboxes and production machinery.

Our 5-strong design team under Wayne Leonard has played a key role in the development of these products, which have often emerged from the need to engineer replacement parts for our customers.

Not content to merely reverse engineer replacement parts, they have succeeded in developing parts that outperform the original equipment.

In addition to replacement parts, recent months have seen many of the Design Team's innovations being successfully implemented in mining and industry.

"Our role," says Wayne, "is not only to solve problems but also to help our customers do things differently. The benefits of this approach to the customer are many, ranging from improved productivity to lower operating costs and longer equipment life.

"People don't come to us if all they need is a jobbing shop. They use us because they value the total Hofmann package, including our design expertise and the quality of our manufacturing staff and equipment," he adds.

1st apprentice pays a visit



We recently received a surprise visit from our first ever apprentice.

Gary Findlay joined us in 1969 and remained on our staff until 1975.

He is pictured with Erich F Hofmann (left) and Leighton White.



New female apprentice

Our first female apprentice Hanna Collis recently came on board.

She is shown with Bill Rossi, Master of Apprentices.



A life expectancy of 10 years.

Increase rope drum life

Induction hardening of the hoist drum rope grooves on a UDD dragline can significantly increase wear resistance and therefore the life expectancy of both the rope and drum.

Induction-hardened rope grooves should help you achieve a drum life expectancy of 10 years. The first one, which we treated five years ago, has been inspected at six monthly intervals since its installation. To date it is still looking good.

Based on our past experience and our equipment, we have the in-house capability to induction harden hoist drums varying from 1t to 100t, with diameters ranging from 1,000mm to 10,000mm.

700 valves for Jamaica

Hofmann Engineering has won an online reverse auction to supply more than 700 Alcoa slurry valves to Alcoa's alumina refinery in Jamaica as part of its early stage expansion program. The valves are expected to be completed by June this year.

The contract was won by Hofmann in the face of strong competition from major multinational valve companies.

Hofmann currently holds a three year contract to supply Alcoa valves and inventory spare parts to Alcoa's WA operations.

Our dedicated Valves Department is well equipped to handle the manufacture of slurry valves for local and international alumina refineries. We have the know-how and facilities to manufacture valves to any design.



Valves destined for Jamaica.