Hofmann Engineering Pty Ltd

HOFMANN Engineering

News

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Manufacturing and refurbishing precision equipment

Hofmann expands capacity to handle larger jobs

It took 604 tons of concrete for the foundations, but eventually Hofmann's remarkable new CNC floor borer has come into operation, significantly expanding the company's capability to handle larger jobs.

The borer has a travel capability of 12m in the X axis and 4m in the Y axis and incorporates a CNC 40t rotary table.

The totally programmable machine is driven by a Siemens 840D controller. A major feature of the machine is its ability to compensate for sag in both the Y and Z axes.

Other features of the machine, whose spindle is driven by a 60kW motor, include auto tool change and a Renishaw touch probe for inspection purposes.

This machine means that large boring jobs can be completed without having to move the fabrication around, a significant time saving.

The borer can machine sections 12m apart while the fabrication remains in the same position.

Being CNC controlled it can be programmed to machine any required shape.

Dredger gearbox being finish machined.

A major benefit of CNC control is repeatability. Once a particular gearbox has been machined by the borer, subsequent similar gearboxes can easily be machined, saving time and money.

SKV - New agent in Wyoming USA

Hofmann Engineering has formed an agency agreement with SKV (headed by Steve Vinot) in the Gillette Wyoming area for dragline and shovel parts.

Hofmann Engineering will supply parts via SKV who will stock the parts and also install them as required. Email contact for Steve Vinot: skvllc@vcn.com

SKV's unique jacking system being used to install a new slew gear on a P&H shovel.

On site portable line borer is about to get even better

Having recently sold its 400th portable line boring machine, Hofmann Engineering will soon be trialling a Mk 3 boring head prototype designed to dramatically expand the versatility of these popular line borers.

Whereas in the past the boring head on these machines has been hydraulically driven, the new Mk 3 boring head will offer operators the option of hydraulic, electric or pneumatic power.

It will also incorporate a 3" boring bar allowing the machine to handle the machining of larger bores, with the same machine able to configure to 2¼", 2" or 1¼" boring bars.

The other significant change is the reduction in weight from the current 42kg to under 25kg without compromising on strength.

The prototype of the new Mk 3 head, which has been conceived in-house by Hofmann's design department, will be on display at the Perth Mining Exhibition from August 12 to 14.

Designed to undertake precision machining and inside diameter welding, the Hofmann portable line boring machine can perform boring, taper boring, facing, taper facing, drilling and welding operations on site, eliminating costly downtime and dispensing with the need to dismantle equipment destined for repair.

Currently it is widely used for the in situ line boring and welding repair of worn bores in mining equipment.

A recent application is the machining of the bogie pivots on the underside of ore cars.

The first portable line borer (Mk 1) was introduced to the market by Hofmann in 1986.

Two years later its capabilities were expanded, enabling the machine to undertake the machining and welding of bores with one set-up.

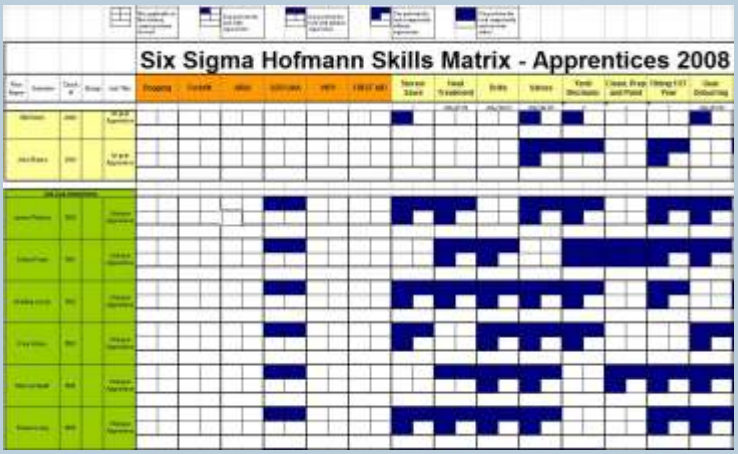
In subsequent years a range of attachments were added, such as a 180mm facing and boring head, a small bore kit, taper facing and boring kit, and a large bore kit.

A redesigned Mk 2 version was introduced in 1994 with a gearbox feed unit.

To date the machines have been sold in Australia, New Zealand, PNG, Indonesia, Singapore, Dubai, Ireland, Chile, South Africa and Ghana.

Training focuses on ongoing improvement in all areas

Hofmann Engineering has taken the first steps to Lean Manufacturing, which is a world recognised best practice system to generate better organisation, reduced costs and quicker deliveries.



As part of this program supervisors from all sections are currently working on an employee Six Sigma Skills Matrix, which is designed to enable supervisors to see at a glance what skills each employee has and what skills they may need to learn.

Plans are also under way for the implementation in our works of the 5s workplace organisation system - a system involving a series of activities designed to improve workplace organisation and standardisation.

In the area of OH&S we recently achieved 311 days without a Lost Time Injury, and have now set our sights on reducing medically treated injuries by 50%.

With the recent change in Worksafe regulations, top priority is being given to the training of people involved in high risk work on forklifts, dogging, rigging and crane operations.

First Aid training with Royal Life Saving is also being planned.

The KIS system is continuing to proceed to plan and late last year over 60 JHA's were put on line on the shopfloor on the time and attendance bar counting units.

Hofmann's three safety teams continue to perform well and thought is currently being given to possibly combining the teams into one safety committee.

From a backyard workshop to a world player - the real story

As Hofmann Engineering heads towards its 40th birthday we will in this newsletter be looking at the remarkable history of a company which is today a major player on the precision engineering market both in Australia and internationally.

In this, the first part of the Hofmann Engineering story, we focus on the company's humble beginnings.

1969-1971

In 1969 John Hofmann started his engineering business with a little Deckel milling machine, Deckel grinder and a small lathe.

Operating from his brother Erich's garage in Dianella, he undertook precision machining and tool making work.

Erich, who still had a full time job, gave John a hand in his spare time.

After six months Erich joined John on a full time basis. Among the company's main clients in those early days were organisations such as Bristile and the Chamberlain Tractor Manufacturing Company. Their main requirement was precision tool making.

Services offered by Hofmann Engineering in the early days included precision engineering, tool and cutter grinding, tool making and plastic injection mouldings.

By 1971 Hofmann Engineering had established a small workshop where the current building (at 3 Alice St) now exists.

Hofmann Engineering in 1971.

Agency agreement formed in Turkey

Erich Hofmann, Leighton White and Todd Aird concluded a recent world trip by visiting the Page Company in Istanbul, Turkey.

Hofmann's comprehensive range of dragline, shovel and other parts are now being marketed in Turkey following the formation of an agency agreement with the Page company.

Email contact: leventyarar@page-ltd.com

Photo:

Erich Hofmann and Todd Aird with Ibrahim Yanar, Levent Yarar and the Page team in a dragline bucket at a Turkish coal mine.

The way to get fast, accurate materials analysis on site

The recent acquisition of a fully portable ARC-MET 8000 spectroanalyser will enable us at Hofmann Engineering to give you fast and accurate materials analysis on site, and speed up breakdown work and welding, by providing confirmation of the material composition.

Able to analyse low alloy steels, tool steels, stainless steel, aluminium, copper and nickel alloys, the ARC-MET 8000 offers many benefits including fast and accurate analysis, repeatability of results, convenient mobility, ease of use, versatility and accurate calculation of carbon equivalent.

The new analyser means we can now give you a full materials analysis service including hardness testing, magnetic particle inspection and failure analysis.

Cutter developed for Woodside subsea hot tap

Woodside installation team members with Hofmann Engineering specialists at Bassendean, from left, Shane Landy, Matt Collett, Erich Hofmann, Nino Folgliani, John Hofmann, Ian Wilson and Alyce Hofmann

Hofmann's technological expertise and comprehensive design, metallurgical and engineering resources were recently called on to help Woodside solve a critical undersea problem at its Angel oil project off the coast of WA.

At Angel, Woodside needed to cut (hot tap) a hole in an existing subsea pipeline, 65m below the surface, without interrupting production and without causing a spill.

The operation was pivotal to the greater Angel project because it would provide the entry point needed into Woodside's trunkline system for gas and condensate to flow to the Karratha gas plant.

The key challenge was developing a cutting tool with the endurance to be able to cut through a 65mm coupon without requiring a cutter change.

In order to help solve this endurance problem Woodside called on Hofmann Engineering's expertise.

After initial input from our onsite machining team, which advised Woodside on various ways of improving their design, our executive director John Hofmann and one of our engineering cadets, Alyce Hofmann flew to the USA at Woodside's request to provide further assistance with the cutter design.

With Hofmann's input the problem was solved and the hot tapping operation was completed in less than 10 hours. This is possibly a world record for the largest hot tap ever carried out on a Class 900 pipeline system.

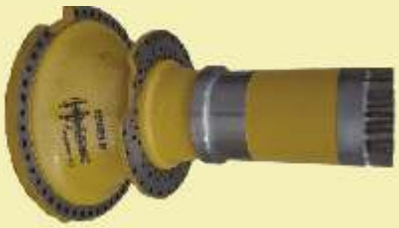
In addition to the consulting service, our workshop produced the tooling used by a diver to provide correct alignment of the main cutting tool.

Meeting the demand for rebuilt haul truck spindles

With OEM suppliers unable to meet the demand, Hofmann Engineering is increasingly being called on to rebuild wheel drive motor spindles.

Most recently it refurbished wheel drive spindles for CAT haul trucks operating in Indonesia. This involved machining off the worn undersize splines and bearing journals.

They were then rebuilt to specification using a technically advanced, individual weld & heat treatment procedure and the splines were induction hardened to provide fatigue and cracking resistance before being returned to the client as new.



Congratulations

Congratulations to all staff who celebrated anniversaries with Hofmann Engineering recently, especially to Antonio Dearaujo, who completed 25 years of service, along with Mark Hofmann, Emanoil Tatara-Sibu and Andrew Sykes who achieved 20 years of service with the company.

The following are also to be congratulated. 15 years: Mylles Bates; Troy Freeman; Dan Coraga; Val Lukjanowski; Chris Johnston. 10 years: Wade Marland; Wayne Leonard.

Now - the safe way to actuate slurry drain valves

A portable 'Open and Close' device for slurry drain valves, which eliminates unsafe and damaging methods of opening and closing such valves, is now in operation.

Engineered and manufactured by Hofmann Engineering from Alcoa World Alumina employee concepts, the portable valve actuation device puts an end to the current practice of opening and closing valves with hammers etc - a practice that can result in valve damage, production interruptions, high maintenance, downtime costs, and operator injuries.

The device eliminates all operations, which currently have to be undertaken manually. Equipped with dual operating ports it can be mounted in any position on the piping structure.

It is operated by means of a torque multiplier and features advanced gearing technology, giving it the capability to remove blockages and built-up scale within the piping.

The device won the CME Occupational Safety & Health Award for 2007 and Alcoa has been granted patent approval within Australia while various overseas patent applications are under way.

Slurry actucator device with standard safety guarding fitted

Media Support Services 1300 557 660

Condolences

Our condolences to Bernard Logan on the sad passing of his wife, Maureen and Alan Thomas on the passing of his daughter, Dawn.