RAIL

• TRACTION GEARING
• BOGIE MANUFACTURE & UPGRADE
• WHEEL & AXLES COMPONENTS
• INSPECTION & FAILURE ANALYSIS
• COMPONENT REFURBISHMENT

Made in Australia from the experts with the highest axle loads in the world.

BULL GEARS
• Case carburized & shot peened and ground and/or skived
• Tooth by tooth full contour induction hardened and ground
• Profile regrinding of old worn bull gears to better than new AGMA 12 accuracy (gears can remain on axle).

SPIRAL BEVEL GEARS
• Case carburized TO 58—62 HRc and precision cut to DIN Class 3
• Capacity to manufacture spiral bevel gearing up to $\phi$ 2m.

PINIONS
Case carburised and accurately ground including taper crowning. A shot peened full root radius on our pinions provides a substantial strength increase.

STATE OF THE ART ROBOTIC BOGIE PRODUCTION

ROBOTIC FABRICATION CAPACITY
• 2x7 Axis robotic welding arms
• 2x5T robotic manipulators
• Fully automated robotic fabrication

BOGIE MACHINING
The bogie frames precision machined on one of our CNC heavy machining centres.

BOGIE FABRICATION
CERTIFIED TO ISO3834 & EN15085
Bogie frames can be completely fabricated using both certified welders and robotic welding. Full stress relieving is also available.
Engine blocks are precision machined complete on one of our seven floor borers. In Situ line boring with our portable line boring machine is also offered.

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MACHINING WHEELS
Forged wheels finished machined on one of our six Heavy Duty CNC 5 Axis Machining Centres including multi pallet changer.

MACHINING AXLES
Axes manufactured to AAR Standards or higher. Sourcing of forged material, NDT tested and finished machined.

PORTABLE CMM MEASUREMENT
Portable Co-ordinate Measuring Machines (PCMM) & laser trackers used to measure manufactured components both in the workshop and onsite.

BOGIE UPGRADES
Examples: K Class Bogie upgrade to suit Short G Class bearings. G Class Bogie upgrade to suit Heavy Haulage bearings. Benefits: Increased bearing life; increased axle load capacity.

METALLURGY
Complete metallurgical lab for: • Quality control of heat treatment processes • Metallurgical failure analysis • Our specialty is failure analysis of gearing to AGMA and DIN standards.

HOFMANN RAIL TRACK RECORD:

Bogie Manufacture
• 882 High Capacity Metropolitan Train (HCMT Melbourne) Bogies are built in Bendigo
• 330 B Class Yarra Tram Bogies are built in Bendigo (165 Motor Bogies, 165 Trailer Bogies)

Axle & Wheel Manufacture
• 1,764 HCMT Axles and 3,528 HCMT Wheels are manufactured in Cheltenham
• Bochumer Verein Verkehrstechnik (BVV Germany) provides the design and the forgings
• Hofmann Cheltenham has been audited and approved by BVV
• Precision machining within 10 micrometers accuracy required for the wheels

Cast Parts
• Hofmann are manufacturing 18,000 Cast Parts for the HCMT
• The castings are sourced by Hofmann directly from CRRC approved vendors

Hofmann Engineering have developed an overhaul process that provides further performance over the original manufacturers.

Location of Powerhead English Electric GEC 02PM05A2 (Melbourne light rail train)

HOFMANN RAIL KEY FEATURES
• One Stop Shop for Rail Manufacturing
• Hofmann Bendigo currently has the most advanced Bogie production line in Australia
• Hofmann can assure sustainability of investments through the variety of its product range and the strong position in the defence sector

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