

GEAR UP™
with the company most qualified
to handle all your gearing needs.



POWER GENERATION

Horsburgh & Scott has helped Power Plants remain in operation and improve efficiencies for 130 years. Our engineering team's expertise, advanced 3D modeling, system analysis, and innovative design tools allow us to custom design gearing to your exact specifications. Our excellence in gearing has become the industry standard for Pulverizer, Air Preheater and Conveyor manufacturing, replacement and repair.

POWER GENERATION APPLICATIONS

- Pulverizers
- Air Preheaters
- Conveyor Drives
- Haulage Drives
- Dumper Drives
- Crusher Drives
- Cooling Tower Drives
- Pump Drives
- Winch Drives

ENGINEERING EXPERTISE

- Over 25,000 hours / year
- Drawings for 90 different brand gearboxes and spare parts

HORSBURGH & SCOTT
GEAR UP™

STATE-OF-THE-ART-FACILITIES

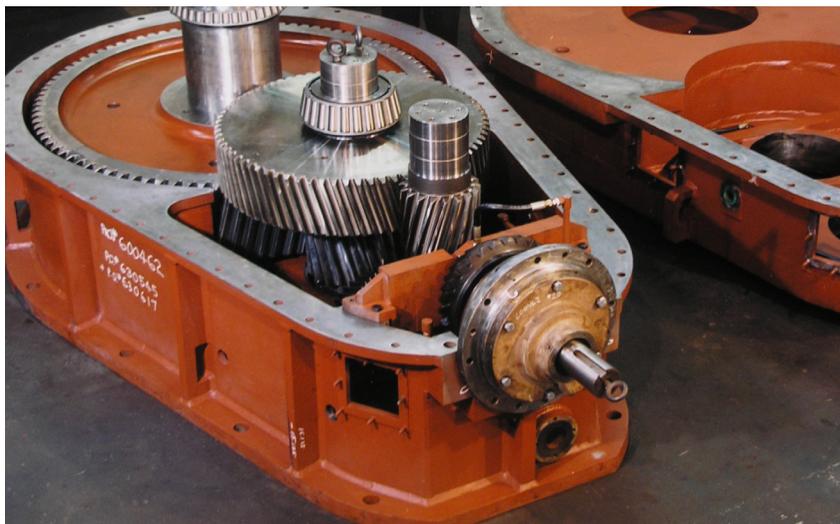
- 245,000 sq. ft. of manufacturing
- 36,000 sq. ft. of heat treating
- 100,000 sq. ft. of assembly, weld and repair
- 7,000 sq. ft. -- H&S Canada (Sudbury, ON)

GEAR & SHAFT GRINDING SPECIFICATIONS

- External: outside diameter to 6.0m (237in)
- Internal: outside diameter to 3.5m (138in)
- Face width: up to 2.0m (79in)
- Module: up to 40 (0.63 DP)
- ISO grade: up to 4 (AGMA quality 14)

GEAR TOOTH CUTTING SPECIFICATIONS

- Spur, helical, double helical, herringbone, internal and worm gears
- External: outside diameter to 7.3m (287in)
- Internal: outside diameter to 4.8m (189in)
- Face width: up to 2.0m (50in)
- Module: up to 70 (.375 DP)
- ISO grade: up to 8 (AGMA quality 10)



Rebuild, repair, field service and preventative maintenance for stronger gears that stand up to high stress usage, increasing gear life and productivity.

In-house turnkey solutions from design and manufacturing to heat treating and carburizing for all your gearing needs.

GEAR UP™
for higher productivity

ADVANCED GEARING CAPABILITIES

Horsburgh & Scott provides the toughest, most reliable gearing solutions for power generation. We specialize in gearing designed for high stress usage, and can increase operation productivity and decrease downtime.

TURNKEY GEARING SOLUTIONS

- 130 years of gearing expertise
- Custom gear design, fabrication and manufacturing
- Rebuild and repair
- Responsive field service and preventative maintenance
- Expert re-engineering and performance upgrades
- In-house heat treat and carburizing for superior gear strength and operating life
- Welding center with robotic welding equipment for precise and strong welds
- Overhead cranes with lifting capacity up to 150 tons
- Gears up to 40 ft (12m) in diameter
- Grinding to AGMA class 14
- Sophisticated tools and practices to follow rigorous standards, including AGMA, ISO 9001:2008, AASHTO and API
- Zeiss Coordinate Measuring Machine for quality measurements within 2 microns



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GEAR TEETH PROFILING EXPERTISE

- **Crowning** - Helps center the tooth contact in the middle of the facewidth, and helps prevent catastrophic tooth breakage.
- **End Relief** - Helps prevent end loading in cases of heavy shock or momentary overloading, and helps to prevent heavy loading at the ends of the teeth which could lead to tooth breakage.
- **Tip Relief** - Helps promote smooth engagement and disengagement of the meshing gears, and helps prevent tooth breakage.
- **Lead and Profile Modifications** - Helps to promote contact across the entire tooth facewidth when the gear is under load, and provides major improvements in the life of gearing operating under heavy loads.
- **Shot Peening and Special Coating**

INNOVATIVE EQUIPMENT

- Fellows 65-16 Shaper with full CNC controls
- Giddings & Lewis VTC 2000 vertical turning
- Gleason-Pfauter P1600/2000 hobber/gasher
- Gleason-Pfauter P2000G form grinder
- Gleason-Pfauter P2006 form grinder
- Gleason-Pfauter P2400/3000 hobber/gasher
- Hofler R1600/2000 form grinder
- Hofler R6000 form grinder
- Schiess horizontal boring mill
- G&L 3500 vertical turning center
- Farrel 50' vertical turning center
- Aichlin carburizing pit furnace (2)

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