

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



ADVANCED GEARING HEAT TREAT

HORSBURGH & SCOTT
GEAR UP™

Horsburgh & Scott has in-house gas carburizing, induction hardening, stress relieving and through-hardening to meet all of your gearing heat treat requirements. We also have resident metallurgical expertise for process design and process control.

INDUCTION HARDENING

- Newly installed CNC gear induction hardening machine
- Gears to 5.0m diameter x 0.75m face
- Shafts to 3.0m length x 1.25m face
- Optimized for gear pitches of 3.0DP to 0.75DP
- Nondestructive ultrasonic case depth testing

CARBURIZING AND HARDENING

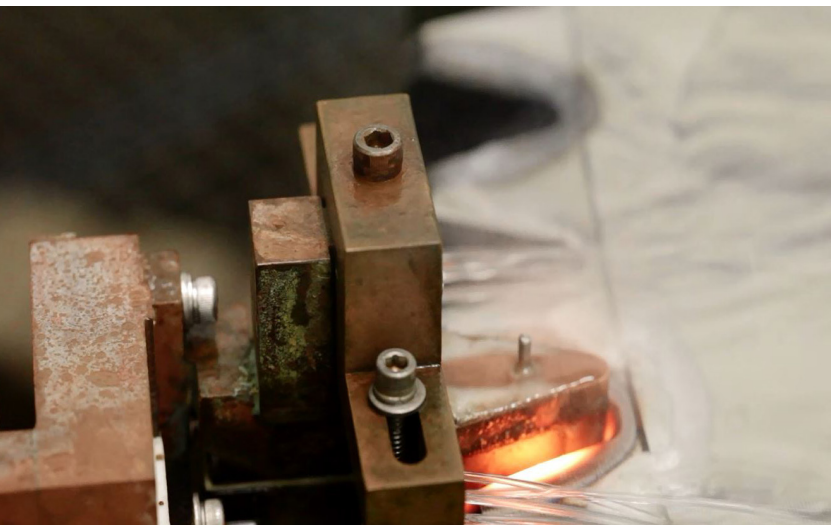
- Newly installed pit carburizing furnaces
 - 1 pit 2.0m diameter x 2.5m depth
 - 1 pit 2.5m diameter x 2.0m depth
- Other pit carburizing furnaces
 - 2 pits 1.0m diameter x 1.5m depth
 - 2 pits 2.0m diameter x 4.5m depth

DEDICATED HEAT TREAT FACILITY

- Stand-alone 50,000 sq. ft. facility
- Captive and commercial carburizing and hardening
- Captive induction and commercial hardening
- Experienced metallurgical engineering staff
- Gears and shafts processed from 100 to 50,000 lbs.

OTHER HEAT TREAT EQUIPMENT

- Stress relieving (up to 100,000 lbs.)
 - 6.0m x 6.0m x 4.0m
 - 5.0m x 5.0m x 4.0m
 - 2.0m x 4.0m x 2.0m
- EquoTip, Knoop, King, Rockwell, Micro and BHN hardness testers
- Complete metallurgical laboratory



Induction hardening for stronger gears that stand up to high stress usage, increasing gear life and productivity.



Carburizing and hardening with surface combustion pit furnaces for large gear treatment.

GEAR UP™
for higher productivity

ADVANCED GEARING CAPABILITIES

Horsburgh & Scott has its own in-house heat treating operations with a dedicated 50,000 square foot heat treat facility to ensure the best quality control available.



HORSBURGH & SCOTT
GEAR UP™

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
- 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

IN-HOUSE HARDENING FOR HIGH QUALITY AND RELIABILITY

CARBURIZING

A surface heat treatment process in which iron or steel absorbs carbon when the metal is heated, with the intent of making the metal harder and stronger (3310, 4320, 4820, 8620, 18CrNiMon7, etc.)

INDUCTION HARDENING

A form of surface heat treatment in which a metal part is heated by induction heating and then quenched.

THROUGH HARDENING

Carbon and alloy steels (1045, 4130, 4140, 4330v, 4340, etc.) that are hardened to ranges between 200 - 400 BHN.



 216/431/3900

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