Heat Treatment Process Range

MACSTEEL Heat Treatment Plant is the largest most diversified heat treatment plant in South Africa. The heat treatment plant is divided into 3 departments, each specializing in a unique heat treatment process range. The heat treatment plant control instrumentation is computer driven and is on par with any similar system anywhere in the world.

**Batch Processes:**
- Annealing
- Normalising
- Sub-Critical Annealing
- Stress Relieving
- Harden and Temper (Both Water & Oil quench Facilities)

**Furnaces & Ancillary Equipment used in the Batch process.**
- 8 off Gas Fired Top Hat Furnaces that can handle up to 7m length bar stock
- Water & Oil quench facilities
- 2 Straightening Presses to straighten from 40mm dia to 320 dia.
- 2 straightening Reelers to straighten 16mm dia to 40mm dia.

**Continuous Processes:**
- Neutral Hardening
- Austemper Process

**Furnaces & Ancillary Equipment used in the Continuous process.**
- 2 off gas fired Shaker Hearth Furnaces
- 1 off electric Shaker Furnace
- Continuous & Batch Tempering furnaces
- 1 Austemper Furnace

**Specialised Processes:**
- Case Hardening (Gas Carburising & Gas Nitriding)
- Neutral Hardening
- Vacuum Hardening and Tempering

**Furnaces & Ancillary Equipment used in the Specialised process.**
- 2 off Pit Retort Furnaces for gas carburising
- 2 off Pit Retort Furnaces for neutral hardening
- 2 off Sealed Quench Furnaces for neutral hardening and carburising
- 2 Vacuum Furnaces
- 1 Vacuum Temper Furnace
- Shot and Bead Blasting facilities
- Cryogenic freezing facilities