Heat Treatment Plant







Thermal Hire











At the time of installation this plant has the largest capacity in terms of treatable component length in the UK. This complete turnkey heat treatment line is used by our customer for contract heat treatment. Transfer time for the load from furnace to guench is as low as 48 seconds, with the whole plant being PLC controlled from a single control room with no access to the working area being required by the operators during heat treatment or quenching. The plant layout is designed such that the bespoke pass-over charger does not have to travel laterally to transfer the load from the furnace to the quench therefore significantly reducing the time components are exposed to atmosphere, allowing better quenching and ultimately better metallurgical properties for the components.

Comprising of:

- Two Heat Treatment Furnaces
- Two Water Quench Tanks
- Adiabatic Coolers
- Pass-over Charging Machine,
- Loading & Cooling Tables

Furnace Specification:	
Chamber size:	3.7m (W) x 13.0m (L) x 2m (H)
Capacity:	20 tonnes at up to 12.6 metres in length
Temperature Range:	500°C to 1200°C
Temperature Uniformity:	±5°C in the range 500°C to 750°C ±10°C in the range 750°C to 1200°C
Burner Control System:	3 zone cross fired high velocity burners

Water / Polymer Quench Specification:	
Capacity:	20 tonnes at up to 12.6 metres in length
Tank size:	12.8m (L) x 3.5m (W) x 4.3m (D)
Water / Polymer capacity:	180,000 litres
Hydraulic lifting mechanism	
Multi-jet high velocity pumped agitation with re-circulation	

Adiabatic Cooler:	
Capacity:	650 kW

Charging Machine:

Traversing pass-over design allows fast transfer with no lateral movement required.

i.e. each furnace has a quench tank in line, directly opposite.

20 tonne capacity complete with 4 split forks

20 metre lateral travel

12 metre hydraulically operated fork travel

