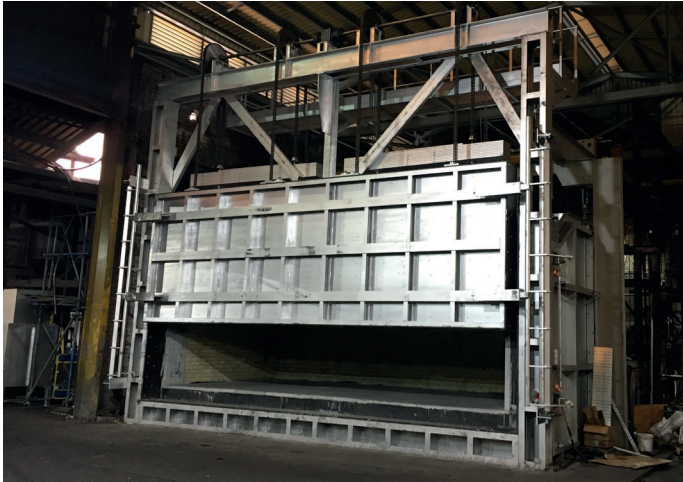


Slab Pre-Heating Furnace



Spartan Furnace



Slab Pre-Heating Furnace

Another furnace supplied to a client in North East of England, Northern Combustion Systems carried out a turnkey project for a new Slab Pre-Heating Furnace.

The new furnace was designed to operate at 1320°C with a temperature uniformity of $\pm 25^{\circ}\text{C}$ at soak temperature. The furnace duty to reheat reference slabs in less than 400 minutes – hot furnace / cold slabs. To reheat reference slabs in less than 600 minutes – cold furnace / cold slabs.

The reference load at 73 Tonnes of slabs comprising 3 stacked slabs 270mm x 2050mm x 5600mm.

The hearth size at 6.8m wide x 3.2m deep. The door opening size at 6.8m wide x 1.8m high

The furnace is fired using 4 ultra-low nox medium velocity regenerative burners mounted at high level in the rear wall of the furnace. The burners controlled in 2 equal zones.

Included is rapid cooling, providing maximum airflow through the burners.

The furnace door operated in the vertical plane, counterbalanced and driven by a motorised gearbox. A pneumatic door clamping and guide system is included to guide and seal the door against substantial heat resistant castings. The furnace designed to allow removal of large slabs using customer forklift trucks.

Full operation of the furnace is monitored and controlled via the Siemens 12" colour touch screen HMI and Siemens S7-1200 PLC. Associated controls include:

- Temperature Recorder - Eurotherm 6100A
- Overtemperature Alarms - Eurotherm 2216E
- Flame Programmers - Kromschroder BCU4800
- Control Actuators - Kinatrol