Bogie-hearth Furnaces
Batch Heat Treatments

insertec
Furnaces & Refractories

Bogie-hearth Furnaces - En

INSERTEC manufactures and supplies Bogie-hearth Furnaces for batch heat treatment, specially aimed at industrial sectors, such as:

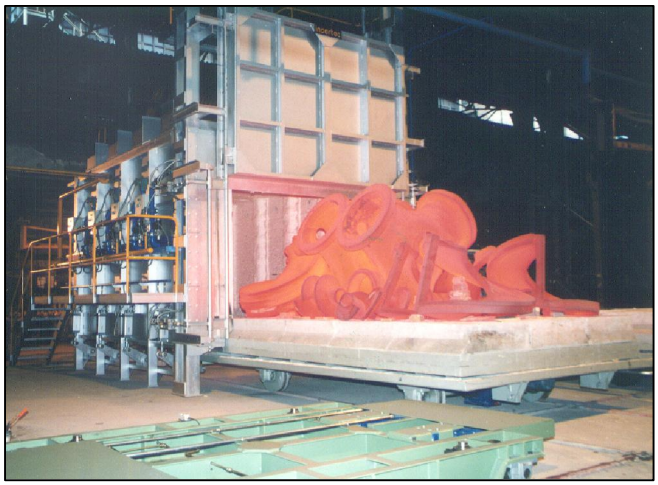
- Metalworking.
- Energy (Wind, Hydraulic, etc.).
- Petrochemical.
- Mechanical.
- Heat Treating.

and combined with our own professional Technical Assistance on site.

Bogie-hearth Furnaces can be mainly divided into the following series:

- **TSCG** Series are directly gas fired Furnaces.
- **TSCE** Series are electrically heated Furnaces.

being technically designed depending on the type of load to be heat-treated.



Bogie-hearth outside the Furnace after heating cycle.

Available Heat Treatments:

- Hardening.
- Tempering at low and high temperature.
- Annealing.
- Normalising.
- Austenitising.
- Stress relieving.
- Preheating prior to Hot Forging.

Front view of Bogie-hearth Furnace with bogie transfer car for handling on site.

General Description:

Bogie-hearth Furnaces are usually provided with one only sliding type front door for batch loading and unloading. Door support structure is also provided with electromechanical or hydraulic driving system, being supplied by request the door tightening system in order to improve the sealing against the heating chamber frame.

Pieces to be heat-treated are charged into the Furnace by means of an electromechanically driven **Bogie-hearth**, which is used as self-moving Furnace floor.

These ones can be placed on the working surface of Bogie-hearth or upon the existing load supports, made of refractory concrete preshaped pieces, or heat-resistant alloy steel, in accordance with process technical requirements.

Sealing between Bogie-hearth and Furnace chamber sidewalls is achieved by means of an adjustable perimetric joint, driven by a hydraulic or pneumatic tightening system.

Heat insulation of Furnace is usually made of pressed ceramic fiber for roof, sidewalls and front door, and refractory concrete and insulating bricks on floor.

The **heating system** of Furnace consists of:

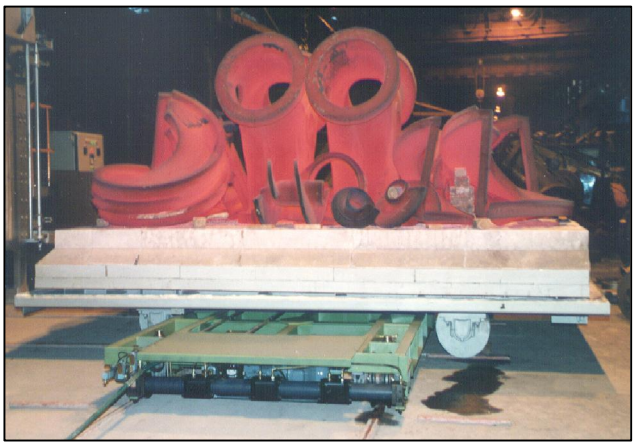
- Gas fired open burners operating under different combustion control modes depending on process temperature range, such as, sequential pulsating or combustion air fixed gas regulating modes.
- Heating elements by means of wire or strip type electric resistances, depending on the total electric power required for process.

In general, this kind of installations are fully automated and capable of being programmed according to the required temperature-time cycle, including limit switches, safety alarms and interlocked operation systems.

Bogie Transfer Car

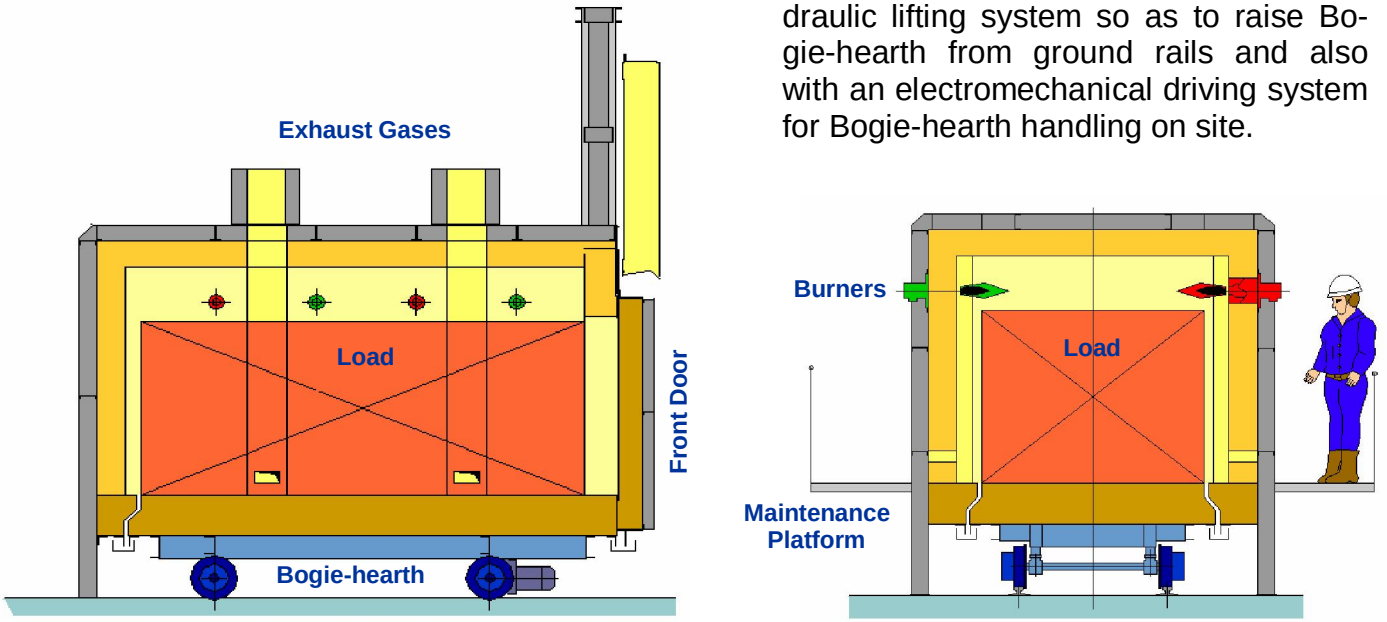
Bogie Transfer Car can be provided for Bogie-hearth handling on site.

Once Bogie-hearth is outside the Furnace, Bogie Transfer Car starts moving as far as it is located under it. Then Bogie-hearth is raised and carried over Bogie Transfer Car for required handling movements, being finally positioned in front of any of the available working positions on site (Furnace, cooling chamber, load-unload tables, etc.).



Bogie Transfer Car in handling operation.

Bogie Transfer Car is provided with a hydraulic lifting system so as to raise Bogie-hearth from ground rails and also with an electromechanical driving system for Bogie-hearth handling on site.



Bogie-hearth Furnace longitudinal and cross sections.