



**OUR
CORE BUSINESS**

**INDUSTRIAL FURNACES FOR THE HEAT TREATMENT
OF STEELS AND LIGHT ALLOYS**

CHARGING MACHINES FOR FURNACES

**SUBORDINATING ACCESSORIES FOR THE HEAT TREATMENT
(QUENCH TANKS, TILTING DEVICES AND OTHER)**

**COMPLETE TURNKEY INSTALLATIONS
FOR THE HEAT TREATMENT**

**MANAGEMENT SYSTEMS ATTENDING
THE HEAT TREATMENT
PROCESS CONTROL**

**POSSIBLE HEAT TREATMENTS WITH OUR EQUIPMENT:
FOR STEEL:**

- AUSTENITIZING WITH OIL - WATER - POLYMER - AIR QUENCHING,
- TEMPERING,
- NORMALIZING,
- ANNEALING,
- STRESS-RELIEVING.

FOR ALUMINIUM:

SOLUTIONING,
AIR - WATER - POLYMER QUENCHING,
AGING, FINAL COOLING.



BRIEF DESCRIPTION OF OUR MAIN APPLICATIONS

WHAT MAKES OUR COMPANY UNIQUE? WHICH IS OUR SUCCESS GOAL?

Complete customized solutions and realizations for any need of the customer, for no matter which type of piece and range of productivity.
Our core business includes: the study of the feasibility, the design and project, the construction, tests and start-up, aftersales technical assistance. Ready-to-use.
Continuous lines with roller type furnaces; batch type lines with fix chambers attended by one side or rotating charging machines; boogie-hearth type furnaces.

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PHILOSOPHY

**YOUR INSTALLATION
IS STUDIED IN EVERY DETAIL
TOGETHER WITH YOU
CUSTOMIZED ON THE BASIS
OF YOUR REQUIREMENTS.
EACH TYPE OF FURNACE
IS COMPLETELY DESIGNED
AND BUILT IN OUR TURIN
PLANT ACCURATELY
HOTTESTED BEFORE SHIPMENT**

**SENT IN YOUR LOCATION,
WHEREVER IT IS
WHERE THE FEEDING
CONNECTIONS ARE DONE
AND THE OPERATIONAL
FUNCTIONS ARE OPTIMIZED.
YOUR INSTALLATION
WILL BE SOON
"READY TO USE".**

OUR CUSTOMERS

AUSTRIA
BELGIUM
CHINA
CZECH REPUBLIC
FRANCE
HUNGARY
INDIA
ITALY
MEXICO
POLAND
SOUTH AFRICA
USA

THOSE CLIENTS WHO HAVE IN THEIR PRODUCTION STANDARD:

- Pieces obtained by casting
- Forged pieces (hot or cold)
- Mechanical industries “First fitting”
- Spare parts and all those production cycles that require specific heat treatment cycles, also to third parties.

SIZING OF OUR INSTALLATIONS

Hi-Tech engineering builds **continuous installations** with a productivity from 2-3 to 100÷120 tons/day, in the light alloys field, and from 20-30, till 200 tons/day and more, in the field of steels.

In the case of “**discontinuous**” **machines** (car bottom furnaces, box type furnaces), they are capable of unit charges of several hundred kilograms up to more than 100 tons for the car bottom furnaces and 50 tons for the batch type furnaces.

CONTINUOUS INSTALLATIONS

LIGHT ALLOYS FIELD
PRODUCTIVITY FROM
TONS/DAY

120

STEELS
PRODUCTIVITY FROM
TONS/DAY

200

DISCONTINUOUS MACHINES

CAR BOTTOM FURNACES
UNIT CHARGES
UP TO TONS

100

BOX TYPE FURNACES
UNIT CHARGES
UP TO TONS

50

OUR GOALS

MANAGEMENT SYSTEM ARCHITECTURE

TECHNICAL ASSISTANCE AFTER SALES

“**Turnkey supply**”: the great versatility and flexibility of Hi-Tech engineering allowed us to enlarge and complete this our main philosophy: Follow-up of our Client through all the phases of the project; from the study to the after-sales services.

Hot-testing before delivery: all the lines designed and built by Hi-Tech engineering, are pre-assembled and very often hot tested, in the presence of the Customer’s technicians, in our Turin factory.

The installations are then disassembled and shipped to their final destination where, once on site, they are quickly reassembled and delivered ready for use.

Supervision on PC with charge tracking - the system is able to know where the charge is in each moment of the heat treating process.

Automatic report containing all process data.

Dialogue and interface with the internal management system of our Customer for more complete information.

R. A. S. (Remote Assistance Service): through an internet connection with our offices, allows to carry out controls and updates of the management system of the installation.

V. S. S. (Video Surveillance System): with such system, unique in its specific application, Hi-Tech engineering runs a visual continuous monitoring of the installation in real time, thanks to matching of mobile camcorder and Internet.

The research and the solution, in cooperation with the technicians of the customer, of any faults occurring during the production, are taking place in a fast and effective way, with real economic advantages.

T5 heat treatment for aluminium engine blocks V6.



T6 heat treatment and thermal sand removal for aluminium engine heads.



Heat treatment of aluminium parts for the automotive industry.



Heat treatment line for automotive parts with air quench and water quench.



Heat treatment line for different cylinder heads, with air quench and water quench.



Heat treatment for engine blocks and cylinder heads.



Globular annealing heat treatment of rings for bearings.



Car bottom furnace for the heat treatment of different parts, globular annealing and isothermal annealing.



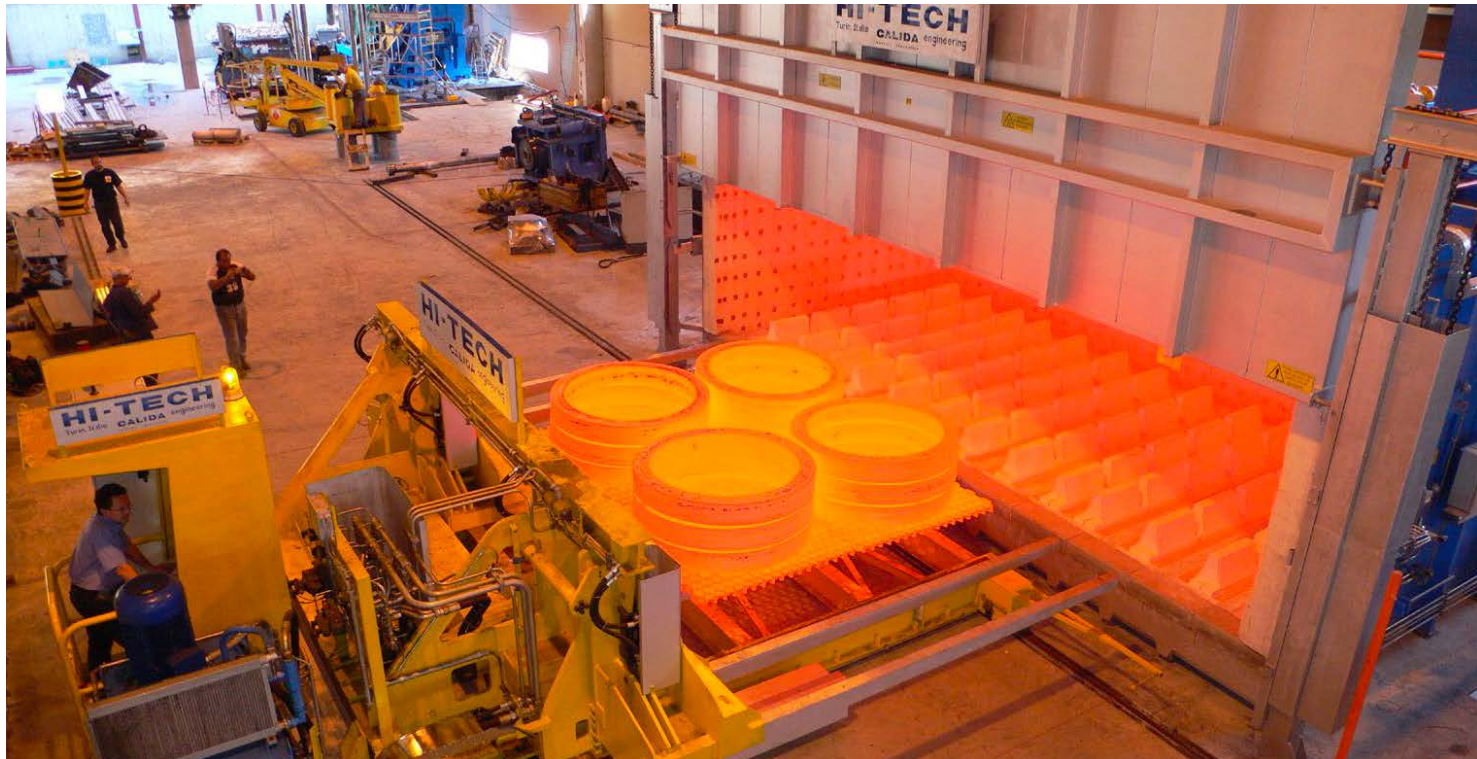
Car bottom furnace for rings with fiber hearth insulation.



Car bottom furnace.

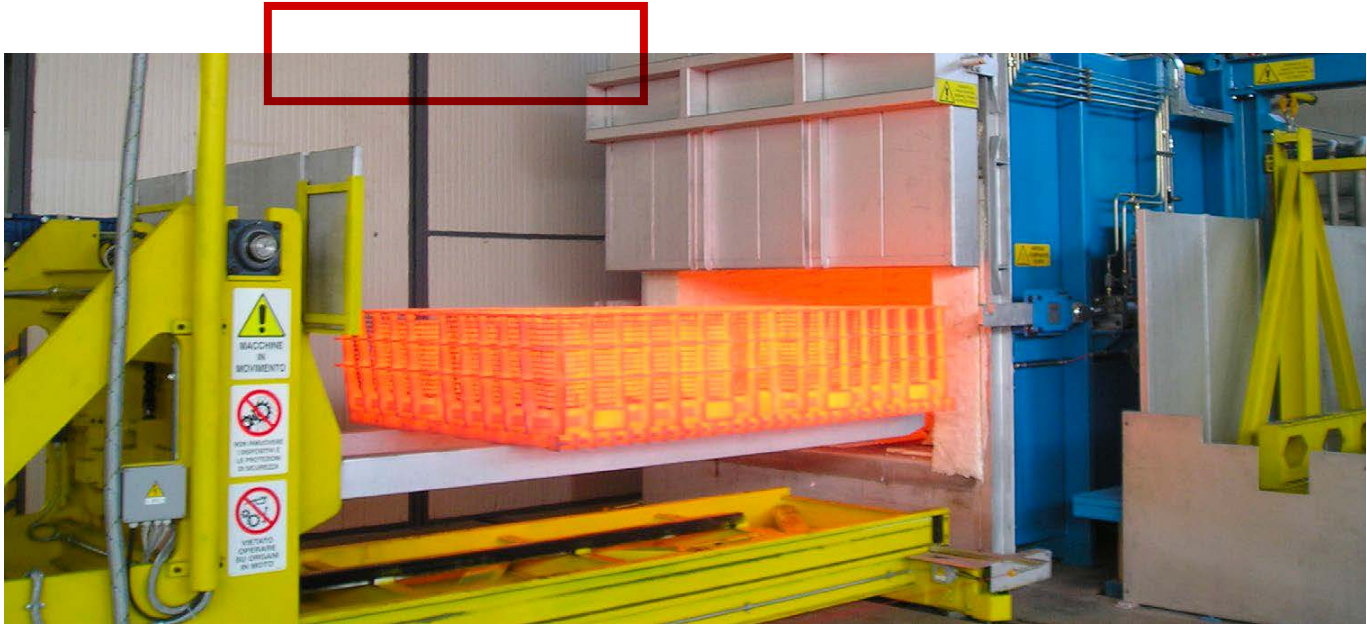


Rings for energy and aerospace industry.



Heat treatment of large size forged rings (batch type line for 8 meters diam. rings).

Different parts for fittings.



Parts for automotive industry.

Versatile furnace
for rings and wheels.



Batch furnace for
aerospace parts.



Modular
versatile line.



Versatile
batch furnace
for modular line.



Box type
forging furnace
for aluminium.



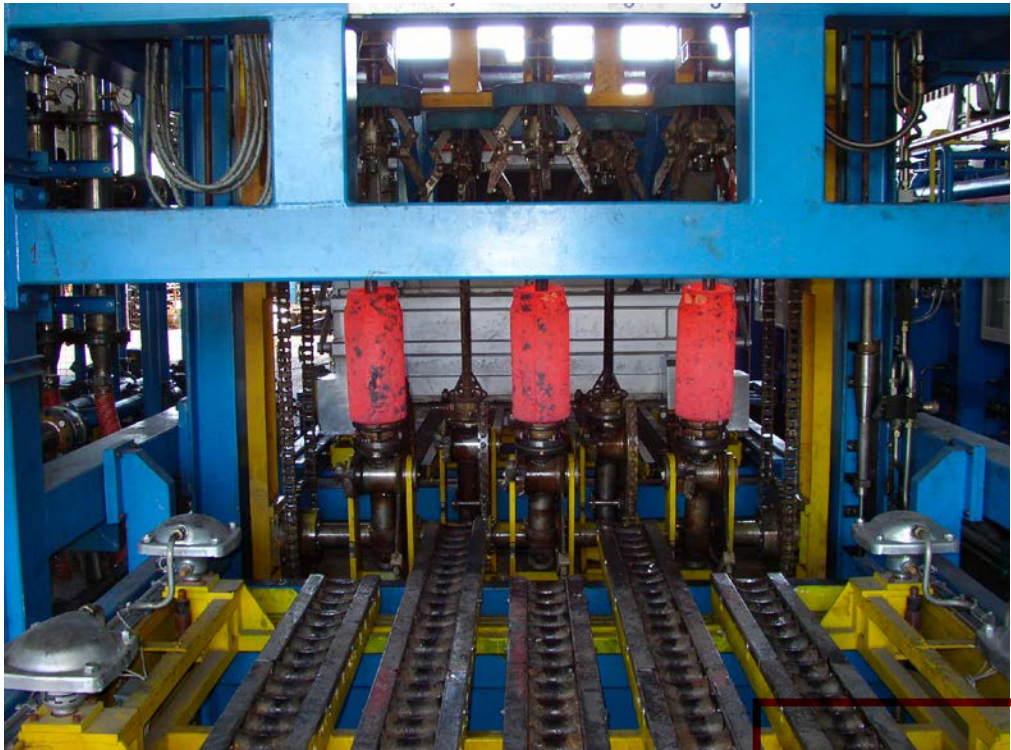
Batch type lines
with box type furnaces
and charging machine.



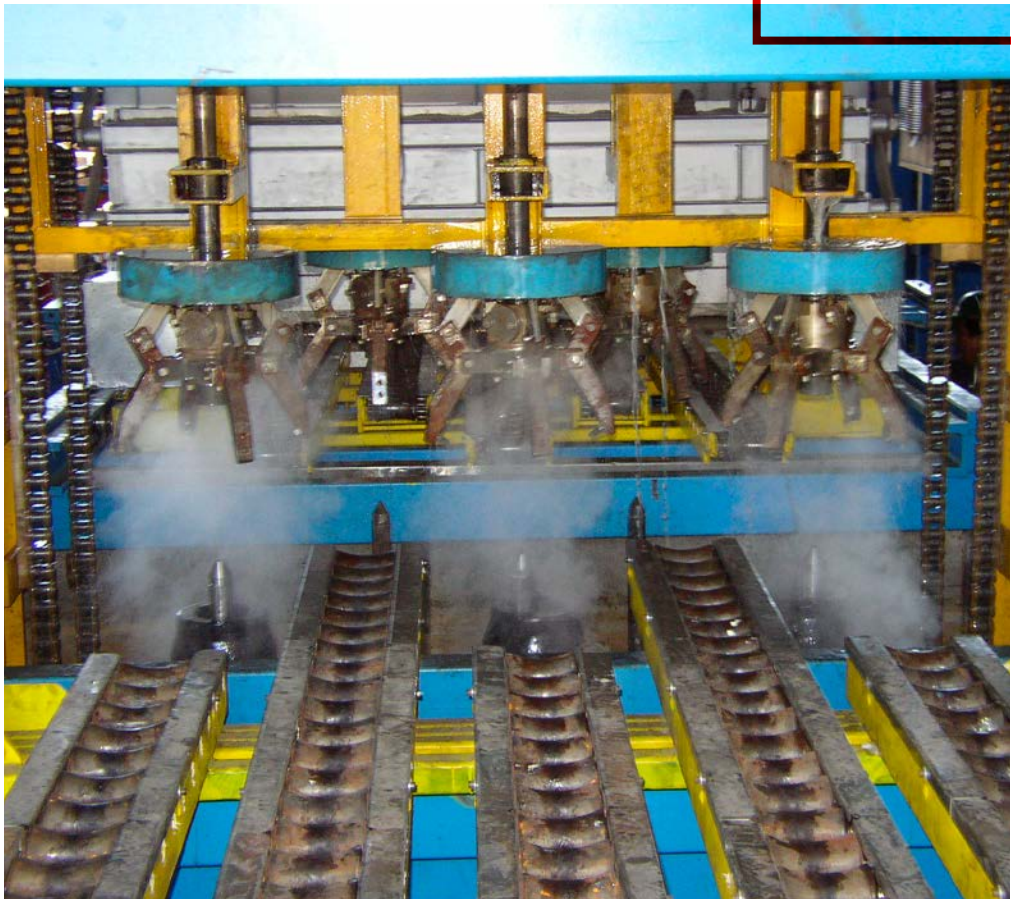
Versatile line with
oil quench for
automotive parts,
agricultural and
undercarriage
products.



Water-Polymer quench of rings and wheels.



Water-Polymer quench of tool joints.





Direct quench after forging,
parts for undercarriage.



Quenching
of valves.



Water quench installation
for Oil & Gas parts.



System for individual forced
quenching of tool joints.

Belt type furnace
for isothermal annealing.



Belt type continuous line
for isothermal annealing after forging.

Continuous lines
with roller type
for automotive parts.



Continuous lines with roller type furnaces for plates.



Continuous lines with roller type furnaces for up to 7.5 meters bars.



Continuous lines with roller type furnaces.



Tunnel type installation for bars.

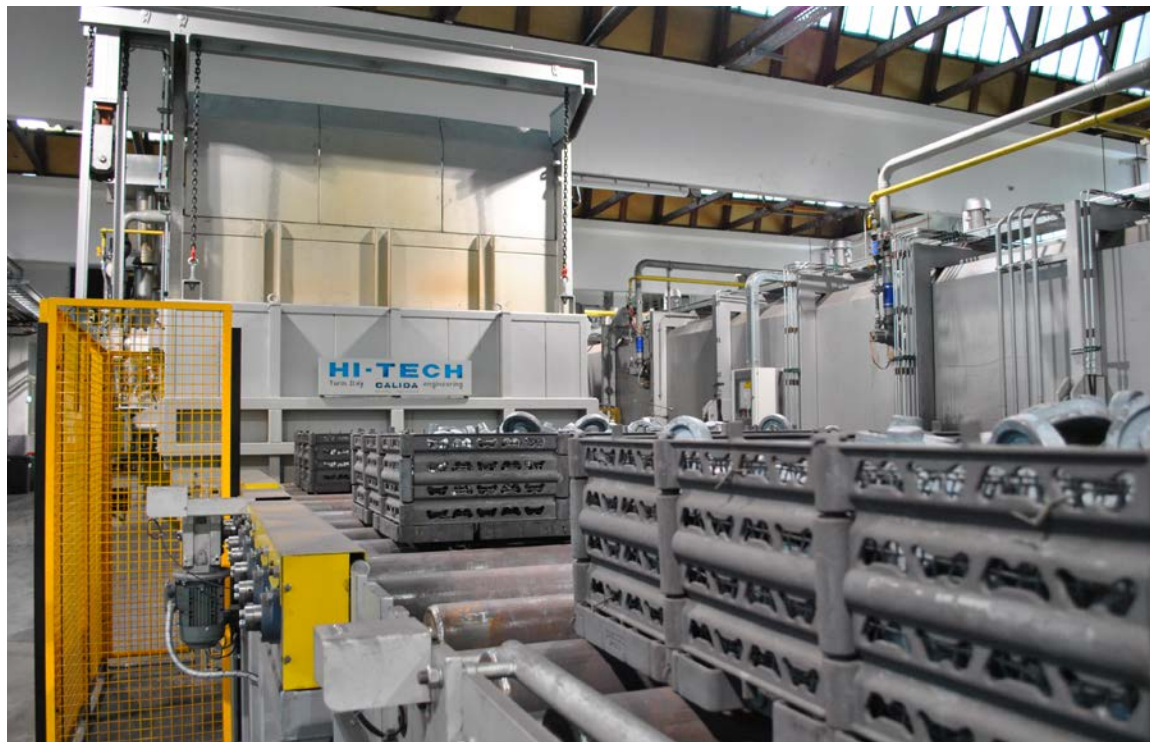


Continuous lines with roller type furnaces.

Continuous line
for quenching for
Oil & Gas parts.



Polyvalent roller type line
for automotive parts.



Tunnel type line for heat treatment
of different parts inside baskets.

Revamping of modular line
with new isothermal cell.



Accessories attending HT line:
tilting devices.



Inter-operational
shuttle.



Forced cooling chamber.



Shuttles and transfer roller tables.



Rotating platforms.



Laboratory furnaces.





Tilting device
for continuous
roller type furnace.





Transfer shuttle.



Implementation with blasting machines.



Conveyor for cooling of connecting rods.

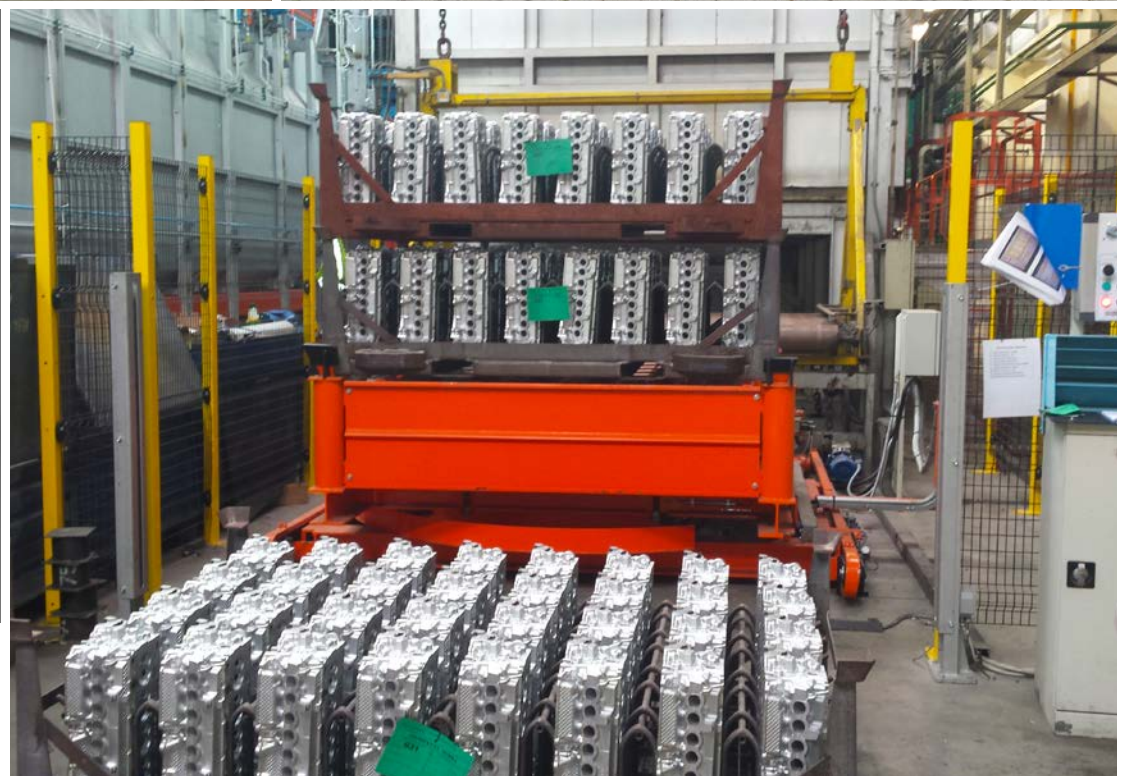


Racks
for steel parts.





Racks for aluminium parts.





Transport
to Czech Republic.



Transport
to Belgium.



Transport
in Italy.

Transport
to South Africa.



Transport
in Italy.



Transport
to France.



Transport
to Mexico.

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