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BONFANTI FOR STEEL

BONFANTI
solutions for
steel industry

HDC EQUIPMENT

Bonfanti

INTEGRATED HANDLING SOLUTIONS

BONFANTI SOLUTIONS FOR STEEL INDUSTRY

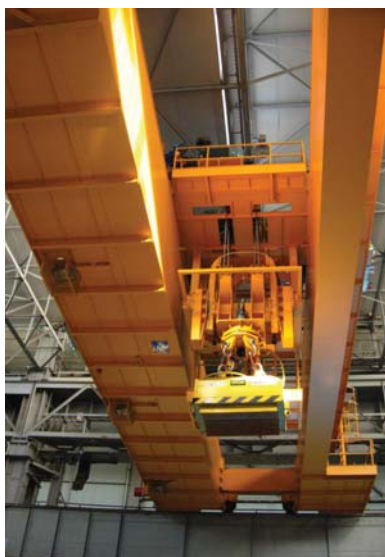
HDC EQUIPMENT

BONFANTI owns a proven experience in fabrication and development of specific solutions for handling and production logistics in metallurgical sector.

The BONFANTI aim is to accompany the Clients in planning of the most effective strategies in order to facilitate the handling in a way to optimise the process timing with a scope to increase productivity, guaranteeing at the same time the quality and safety standards.

Efficiency and innovation in every activity are the conceptual basis of BONFANTI design and technological development.

In order to provide valid replies to Client requests for always bigger productivity, BONFANTI has developed the “HDC” range of products dedicated to steel industry, able to satisfy always more complex operational requirements with the increase of uptime and reduction of time losses.



The “HDC” equipment is studied to respond to the specific requirements of this extremely heavy duty sector such as:

- Safety
- Reliability
- Highest performance levels

This range of products consents to cover all the production process handling starting from scrap going all the way to the final phases dedicated to storage and dispatch areas.

Since every application inside the steelworks presents its own particularities, requiring specially designed solutions, BONFANTI has diversified its “HDC” range based on various stages of the production process.

For this reason the “HDC” range of products varies from relatively simple maintenance cranes with medium duty up to the high capacity process cranes with heavy duty service.

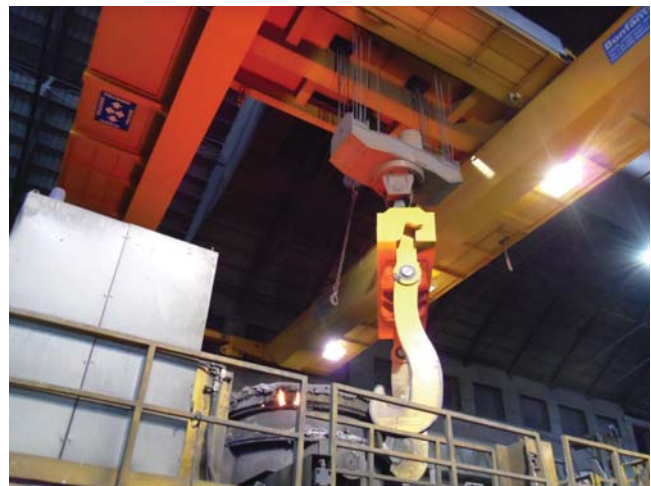
Based on various stages of the production process, main product types are:

- Scrap yard cranes
- Furnace charging cranes
- Casting cranes
- Ladle turrets
- Rolling mill/cage changing cranes
- Billet/bloom/slab handling cranes
- Bar/coil/bundle/steel sheet handling cranes

Being orientated toward continuous improvement, the solutions applied on “HDC” equipment get constantly updated to make them always more suitable to solve specific issues related to this sector such as:

- Presence of heat sources and dusts
- Management of limited maintenance periods
- Operators safety

The design basis of “HDC” equipment assumes maximum care to the aspect of standardization of mechanical and electrical parts in order to make less burdensome the supply of spare parts.



Maximum attention is paid to safety aspects; standard features of our “HDC” equipment already include:

- Limit switch devices on all movements
- Emergency limit switch devices
- Load limiting devices
- Easy accessible components for maintenance activities
- Suitably designed maintenance walkways and balconies
- High visibility identification nameplates

All this consents to provide to the end users the experience and products whose main objectives are the increase of productivity and logistic efficiency with particular regard to the increase of safety and to reduction of the maintenance costs.

AUTOMATION

In a context of continuous technological and organizational evolution, also the metallurgical sector is increasingly looking to remote/automatize the internal logistics.

BONFANTI is particularly specialized in the study of solutions coherent with this operational logic.

This is obtained through design and supply of the equipment where greater handling precision, reduced wear of components, higher productivity and operational reliability, higher functional safety are the key elements of the company philosophy orientated towards the satisfaction of every specific requirement of our own Clients.



BONFANTI STANDARDS AND QUALITY

BONFANTI equipment is designed using FEM and ISO standards in accordance with the MACHINERY DIRECTIVE for CE marking.

Their dimensioning, besides the standards, takes into account both the particularities of the service as well as the conditions present in the work area where they are going to be used.

Since long time already BONFANTI has been operating under the control and quality assurance regime certified ISO 9001 for the following activity fields: design, fabrication, installation, commissioning and after sales support.

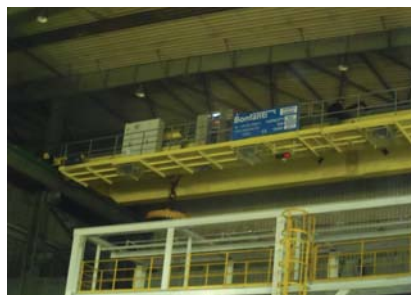
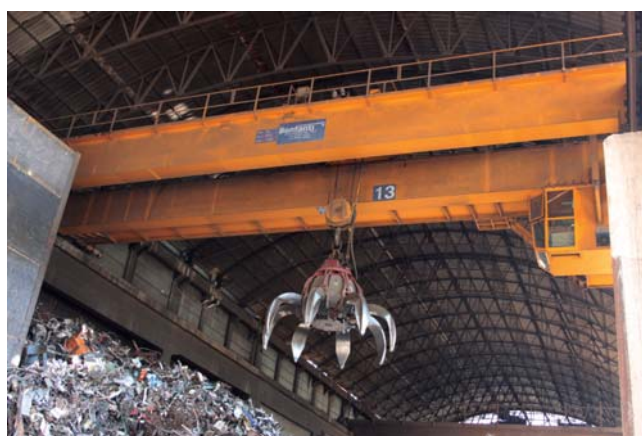
Paying maximum attention to the standardization of spare parts and proposing Spare Part Kits carefully chosen, BONFANTI offers to the Clients the opportunity to contain the costs of their supply and to minimize the reparation times (and production loss times) that, consequently, generate costs much higher than those dedicated to spare parts.



SCRAP YARD CRANES

These are very fast cranes usually designed in the highest classes foreseen by the standards.

Particular attention is dedicated to the predisposition for under hook equipment such as magnets/grabs with corresponding electrical control cabinets, cable reels and backup batteries and to their eventual supply.



DATA SHEET

Capacity	up to 40 t
Span	up to 40 m
Class of structures	A7 ÷ A8
Class of mechanisms	M7 ÷ M8
Hoisting speed	up to 30 m/min
Cross travel speed	up to 60 m/min
Long travel speed	up to 120 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.

FURNACE CHARGING CRANES



Furnace charging cranes are designed to be used in an environment where key words are safety, redundancy and reliability: reeving with four independent ropes, double motors and double hoisting brakes, emergency brakes on drum and easy maintenance are only a few particularities.

Being critical cranes in the entire production process and operating in very hot and dusty environments, they are designed paying particular attention to systems for protection against heat/flame and to minimization of dust deposit.

The redundancy applied to main mechanisms, both at mechanical as well as at electrical level, ensures the continuity of the service even in case of malfunctions, eliminating risky situations and reducing time losses (downtimes).

In order to make less burdensome the supply of spare parts and considering that sometimes this type of cranes is used as back-up to casting cranes, the use of common components is foreseen for these two crane types.

DATA SHEET

Capacity	up to 250 t
Span	up to 32 m
Class of structures	A6 ÷ A8
Class of mechanisms	M6 ÷ M8
Hoisting speed	up to 10 m/min
Cross travel speed	up to 40 m/min
Long travel speed	up to 80 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.





CASTING CRANES

Casting cranes, being critical and operating with a high risk level, foresee a range of applications that ensure an uninterrupted operation with highest reliability levels: reeving with four independent ropes, double motors and double hoisting brakes, emergency brakes on drum and easy maintenance are only a few particularities.

The redundancy applied to main mechanisms, both at mechanical as well as at electrical level, ensures the continuity of the service even in case of malfunctions, eliminating risky situations and reducing time losses (downtimes).

In order to make less burdensome the supply of spare parts and considering that sometimes this type of cranes is used as back-up to furnace charging cranes, the use of common components is foreseen for these two crane types.

DATA SHEET

Capacity	up to 250 t
Span	up to 32 m
Class of structures	A6 ÷ A8
Class of mechanisms	M6 ÷ M8
Hoisting speed	up to 10 m/min
Cross travel speed	up to 40 m/min
Long travel speed	up to 80 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.



LADLE TURRETS



They are built to serve continuous casting lines and normally house two ladles.

The rotation is performed on abundantly dimensioned slewing bearing and double rotation mechanisms duly protected and housed inside the supporting column, each able to perform the movement.

Each mechanism respectively is equipped with two motors, electrical and/or pneumatic type, one of which is normally destined to operate in case of electric energy blackout (by means of UPS in case of electric motor or by means of compressed air in case of pneumatic motor).

DATA SHEET

Capacity	up to 250 t
Class of structures	A6 ÷ A8
Class of mechanisms	M6 ÷ M8
Rotation speed	up to 1 rpm

Turrets with technical characteristics different from those reported above can be studied and supplied upon specific request.





ROLLING MILL / CAGE CHANGING CRANES

These cranes are designed in a way to be able to be used for normal production operations where high speed is required as well as for maintenance/cage changing operations where slow and precise speeds are requested.

Moreover can be used also as temporary back-up to other process cranes present in this area.

Therefore, upon specific request, they can already be prearranged for the managing of various under hook equipment typical for the rolling mill area, such as magnets or grabs.



DATA SHEET

Capacity	up to 100 t
Span	up to 40 m
Class of structures	A5 ÷ A7
Class of mechanisms	M5 ÷ M7
Hoisting speed	up to 15 m/min
Cross travel speed	up to 30 m/min
Long travel speed	up to 80 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.

BILLET / BLOOM / SLAB HANDLING CRANES



These are highly critical cranes since they are inserted in production process for the rolling mill feeding and/or for stock deposit/pick-up of semi-finished products.

If necessary in function of the plant layout, they can be equipped with rotation trolley guaranteeing in this way the maximum operational flexibility and production capacity.

The structures and electrical equipment, if necessary in function of the product that is to be handled, are equipped with systems for protection against irradiation of the incandescent material.

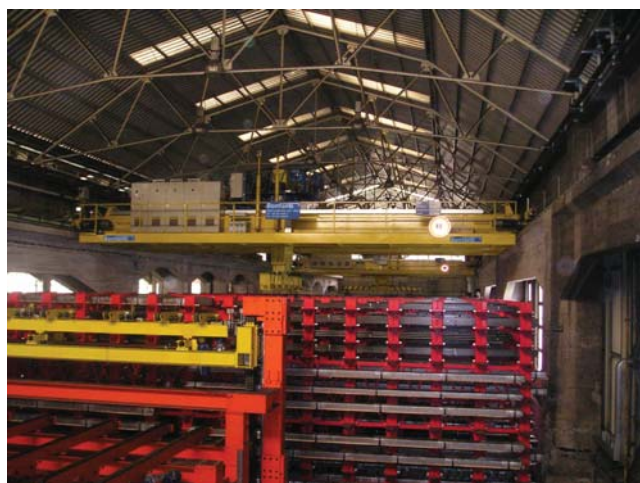
Depending on type and temperature of the material that is to be handled, they can be equipped with various under hook equipment such as magnets or mechanical/hydraulic grabs.



DATA SHEET

Capacity	up to 50 t
Span	up to 40 m
Class of structures	A6 ÷ A8
Class of mechanisms	M6 ÷ M8
Hoisting speed	up to 30 m/min
Cross travel speed	up to 60 m/min
Long travel speed	up to 120 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.





BAR / COIL / BUNDLE / STEEL SHEET HANDLING CRANES

These cranes are normally used for handling of finished products at the end of lamination line and/or inside finished products warehouse.

In function of the plant layout, these cranes can be equipped with rotation trolley.

Depending on type of the material that is to be handled, these are designed to receive various under hook equipment such as magnets or mechanical/hydraulic grabs.



DATA SHEET

Capacity	up to 50 t
Span	up to 40 m
Class of structures	A6 ÷ A8
Class of mechanisms	M6 ÷ M8
Hoisting speed	up to 30 m/min
Cross travel speed	up to 60 m/min
Long travel speed	up to 120 m/min

Cranes with technical characteristics different from those reported above can be studied and supplied upon specific request.



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