

—INTECO—

WE ARE INTECO

APLAN[®]
process oriented automation





WE ARE NOT THAT EASY TO FIND



WE ARE TRADITION



WE ARE
METALLURGY



INTECO Headoffices



—INTECO—
TBR CASTING

advanced refractory
ART
technologies

—INTECO—
Italy

melting&casting
INTECO
technologies

—INTECO—
Beijing

—INTECO—
PTI
process technology international

—INTECO—
Dalian

—INTECO—
India

TECTRADE
—Handelsgesellschaft mbH—

—INTECO—
FUCHS

APLAN®
process oriented automation

—INTECO—
siderimpes

The INTECO Group



OUR ASSETS

Engineering

- › 3D engineering
- › FEM & CAD analysis
- › Planning & feasibility studies
- › Project management & technical assistance

Partners

- › Highly qualified manufacturing plants
- › Metallurgical universities in Europe
- › Experts for process modelling & simulation
- › Technological experts & metallurgical consultants

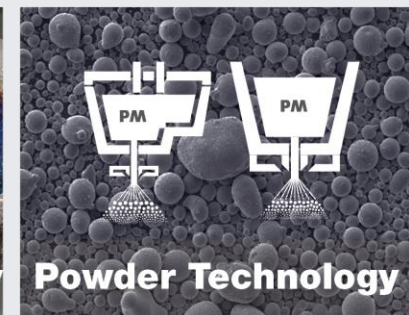
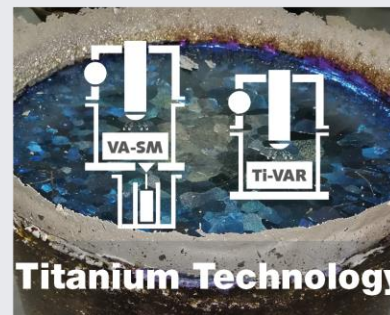
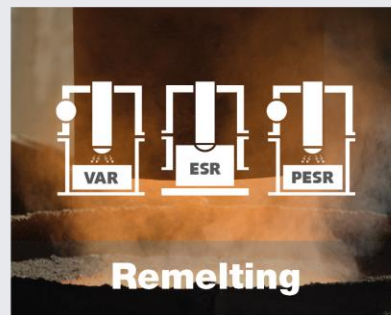
Expert Know How

- › Melting and casting technology in all fields of the steel industry

INTECO's Product Portfolio



PROCESS KNOW-HOW & CONSULTING



PROCESS KNOW-HOW & CONSULTING

DIGITAL SOLUTIONS &
INDUSTRIE 4.0

DIGITAL SOLUTIONS &
INDUSTRIE 4.0




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EAF – ELECTRIC ARC FURNACE



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PORTFOLIO & FEATURES

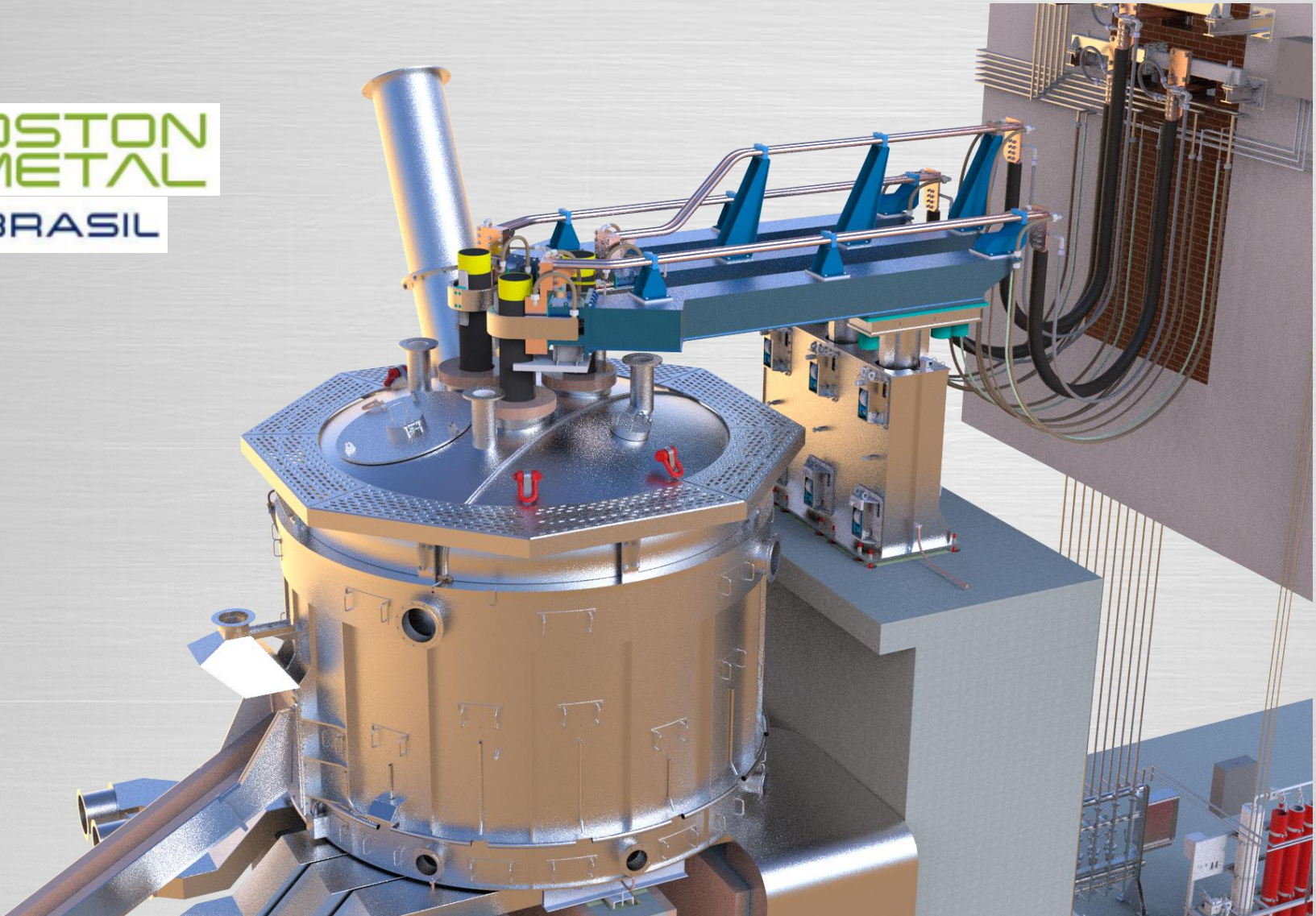
- ›  technologies since 2015
- › Tapping weights from 2 to more than 300 t
- › Split Fe-Cu water cooled upper shell panels and roof panels
- › Three points or single point roof lifting
- › Swing bridge with roller bearing or king pin
- › Copper or aluminum conductive arms
- › Combined raw material input design (Scrap, DRI/HBI, Hot Metal)
- › Hot heel size from 0% to 40% tapping weight
- › UHP index from 0.5 to 1.5 MVA/t
- › From single charge to multi bucket charge
- › Tapping systems with EBT tap hole or tapping spout
- › Tailor made design and process technologies

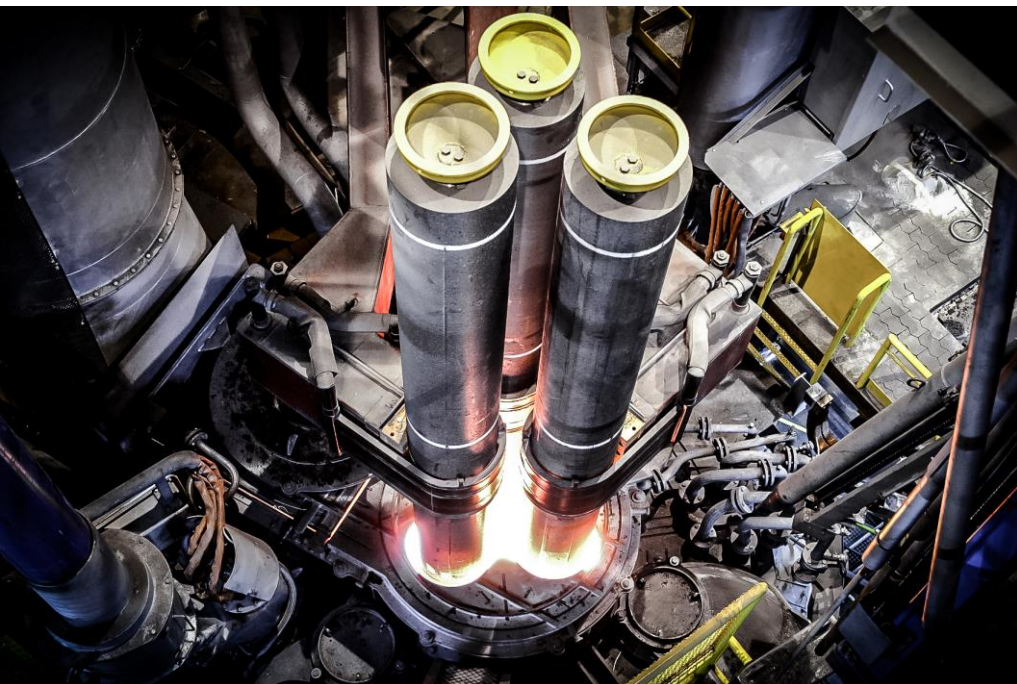


| SAF

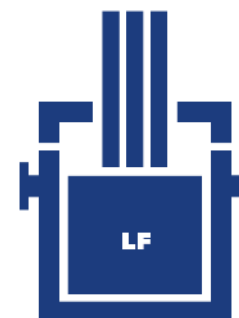
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BOSTON
METAL
BRASIL



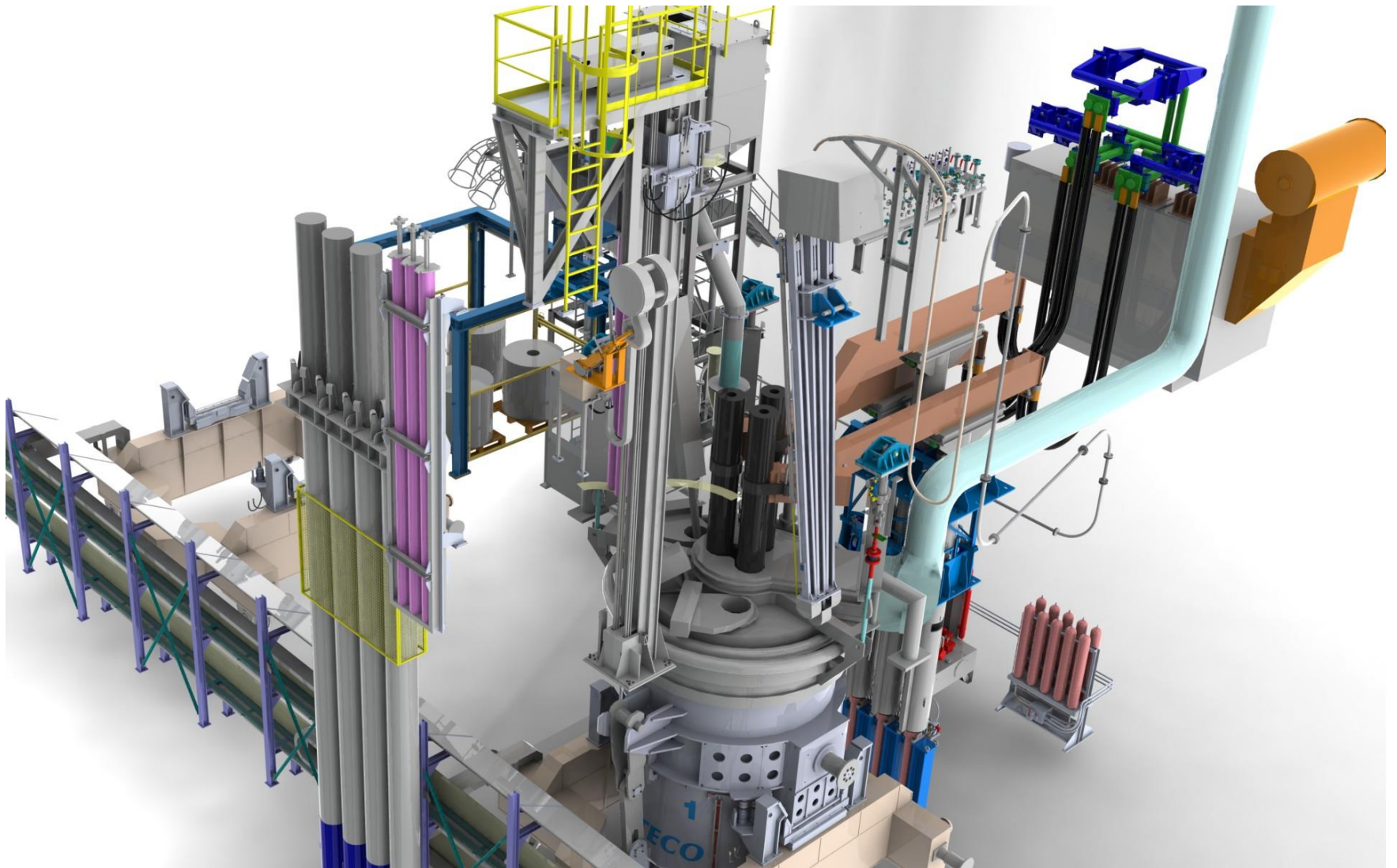


LF – LADLE FURNACE



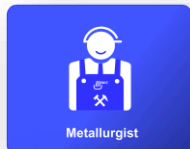
LF

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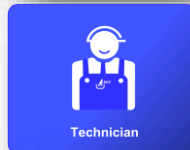
LF and EAF

ISEC – Electrode Regulation



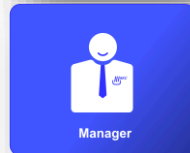
Metallurgist

- › increase PRODUCTIVITY
 - › max active power input



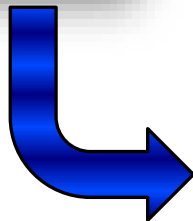
Technician

- › best ENERGY EFFICENCY
 - › less losses



Manager

- › less ELECTRODE- AND REFRACTORY CONSUMPTION
 - › less consumables



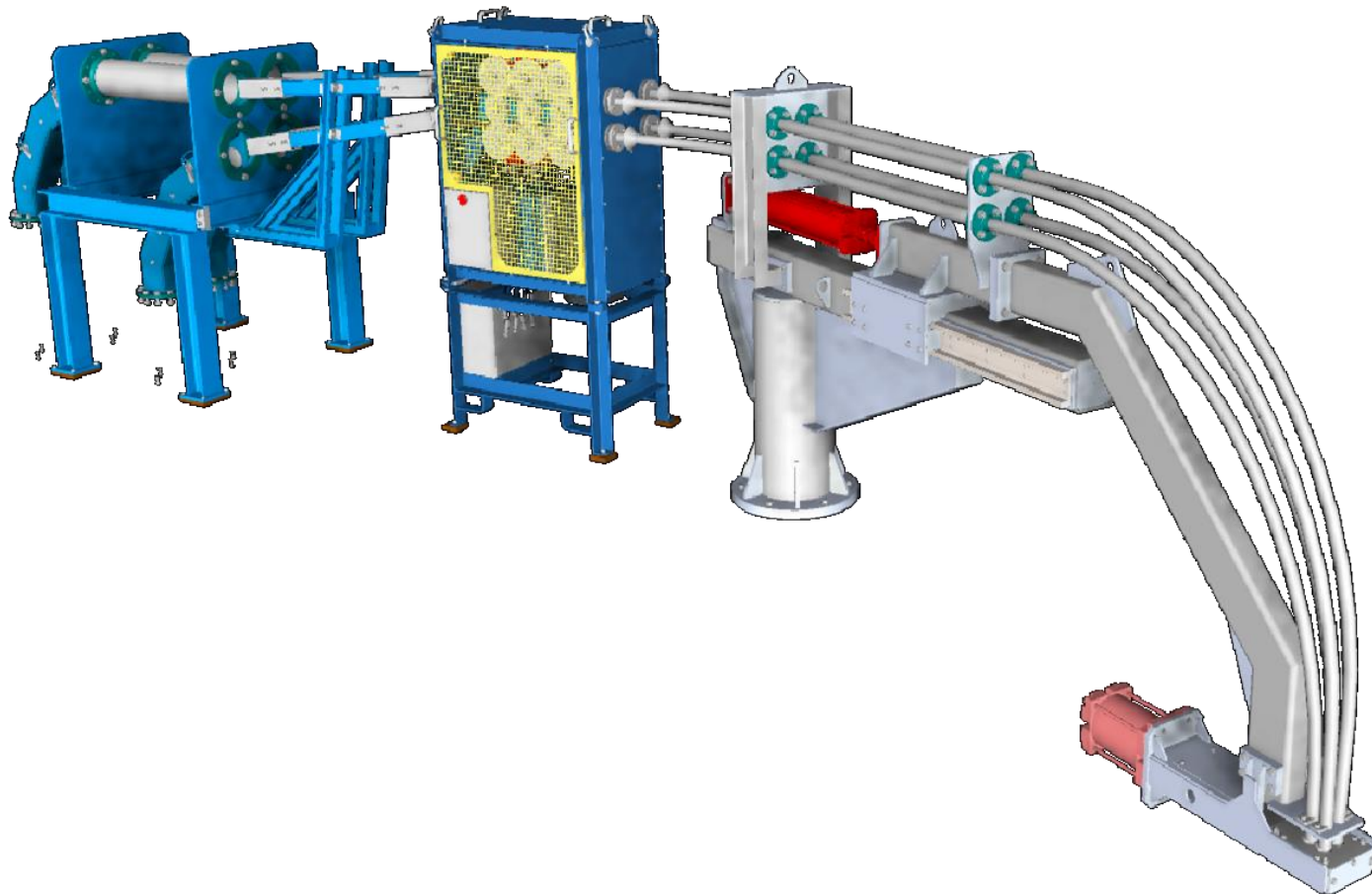
- › arc stability
- › right working point
- › covered arc (foaming slag control)
- › right operating profile



LF

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Wire Feeding Machine





VD/VOD – VACUUM (OXYGEN) DEGASSING



VD/VOD

PORTFOLIO & FEATURES

- › Single or twin vacuum vessel operation stand
- › Heat sizes 3 to 350t
- › Steam ejector vacuum pumps
- › Dry mechanical vacuum pumps
- › Alloying under vacuum conditions

USP's OF INTECO DESIGN

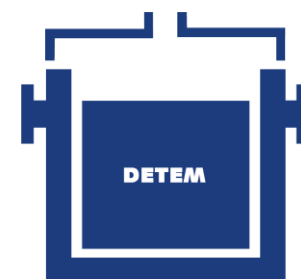
- › Complete in house design
- › VOD ladle cover with flat inner surface (steel plates or copper plated)
- › Automatic gas coupling system (proved design to work in vaccum)
- › Stuffing box for oxygen lance (INTECO Patent)
- › All auxiliary equipment out of one hand

VD/VOD





DETEM VD/VOD – VACUUM (OXYGEN) DEGASSING



DETEM VD/VOD

PORTFOLIO & FEATURES

- › Ladle degassing plants for small steel plants and foundries
- › Heat sizes 3 to 20t
- › Steam ejector vacuum pumps
- › Dry mechanical vacuum pumps
- › Alloying under vacuum conditions

USP's OF INTECO DESIGN

- › Best CAPEX and OPEX due to optimized design
- › VOD ladle cover with flat inner surface (steel plates or copper plated)
- › Same metallurgical treatments as in larger VD/VOD's possible
- › Stuffing box for oxygen lance (INTECO Patent)
- › All auxiliary equipment out of one hand



RH DEGASSING



RH

PORTFOLIO & FEATURES

- › Single or twin RH vessel operation station
- › RH vessel fast exchange system
- › Steam ejector vacuum pumps
- › Dry mechanical vacuum pumps
- › Snorkel maintenance car

USP's OF INTECO DESIGN

- › Complete in house design
- › Ladle- or RH vessel lifting system
- › TOP-burner & O₂-blowing lance system
- › Variable dust separating/cooling system
- › Integration in existing steel plants



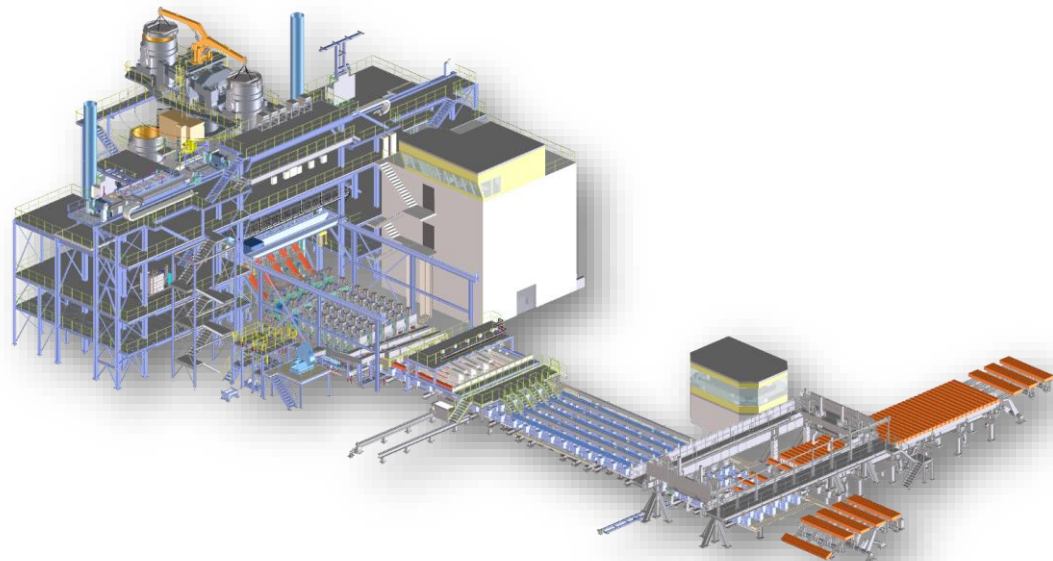
CC – CONTINUOUS CASTING



CC

PORTFOLIO & FEATURES






- › Bow type or vertical bending/unbending machines
- › Vertical casting machine
- › Horizontal casting machine
- › Segment casters

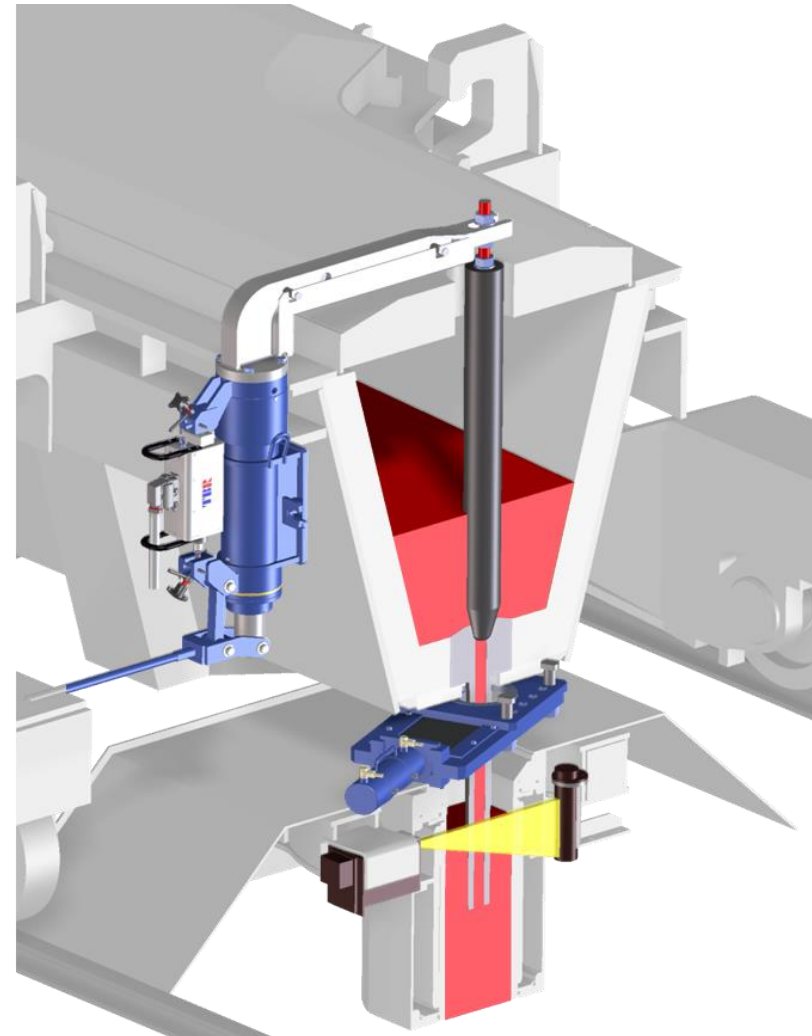


CC

Mould Level Control

Components:

-  **Stopper Rod Mechanism**
-  **Hot Area Servo Drive**
-  **Mould Level Master**
-  **Emergency Slide Gate**
-  **Subentry Shroud Changer**





VIM – VACUUM INDUCTION MELTING





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ESR – ELECTROSLAG REMELTING



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VAR – VACUUM ARC REMELTING



INTECO - Brazil

Clients - Projects

- › Barro Alto – FeNi Refinery – Anglo American
- › Onca Puma – FeNi Refinery – Vale
- › Boston Metals Brazil – SAF 15t slag
- › Boston Metals Brazil – SAF 45t slag
- › Villares – WFM, Scrap EAF, ESR-control
- › Araguaia – FeNi Refinery – Horizonte Minerals.
- › CSP – WFM
- › Ternium Brazil – Gas Coupling system
- › Valourec – Water Coupling System EAF
- › Codemin – FeNi Refinery – Anglo American
- › AM – Barra Mansa – Gas Coupling System
- › SIMEC Pinta – Consulting Service
- ›Gas Coupling System.....

Partner

- › APLAN – Belo Horizonte

World Class Customers



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THANK YOU !

DISCLAIMER



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