www.miwenti.com

ABOUT US

MIWENTI is an engineering company with a long time experience and knowledge applied in and around the Electric Arc Furnace (EAF) as well as an extensive practice in the development, engineering and manufacturing of copper components applied in the steel plants.
The products and services supplied to the different steel plants worldwide have allowed us to understand many of the existing problems and difficulties in association with the installation, management and maintenance of the different applications.

In order to guarantee the high quality, starting from the project, from the purchase of raw material (copper) to the production, MIWENTI has a copper foundry and copper workshop. It has gained experience over 30 years in the manufacturing and supplying of products based on the copper technology in the steel industry.
We have focused their knowledge on developing new technologies or applications with the aim of increasing the performance and safety of the operators, reducing the production costs and maintenance costs and increasing the efficiency of the process.

Our strength lies in a 360-degrees service, end-to-end, which starts from the very first point of contact with the customer to the actual evaluation and data collection. Our target is to understand the true needs of ours customers in order to offer them a tailor-made solution. MIWENTI supervises the entire process directly and does not outsource anything to external companies. As a result, we always have under control the development and the security of our processes. As soon as we make sure that perfect functioning and efficiency are achieved we take care about delivery, step by step installation and after-sale support.

The company name, MIWENTI, comes from Chinese and literally means “no problem” and it fully represents our ethos. Our workstyle follows a 100% tailor-made approach which focuses on highly customized solutions for our customers. Our challenge is to offer tangible answers developing ideas and solutions to any specific issue.

MISSION

MISSION

- Innovative **Problem Solving** Solution
- Turnkey **Installations & Assistance**
- **Energy & Water** saving
- **Team-work** with customer
- **Tailor-made** applications
- Maintenance **Cost Reduction**
- High **Reliability**
- **Quality**

OUR POLICY

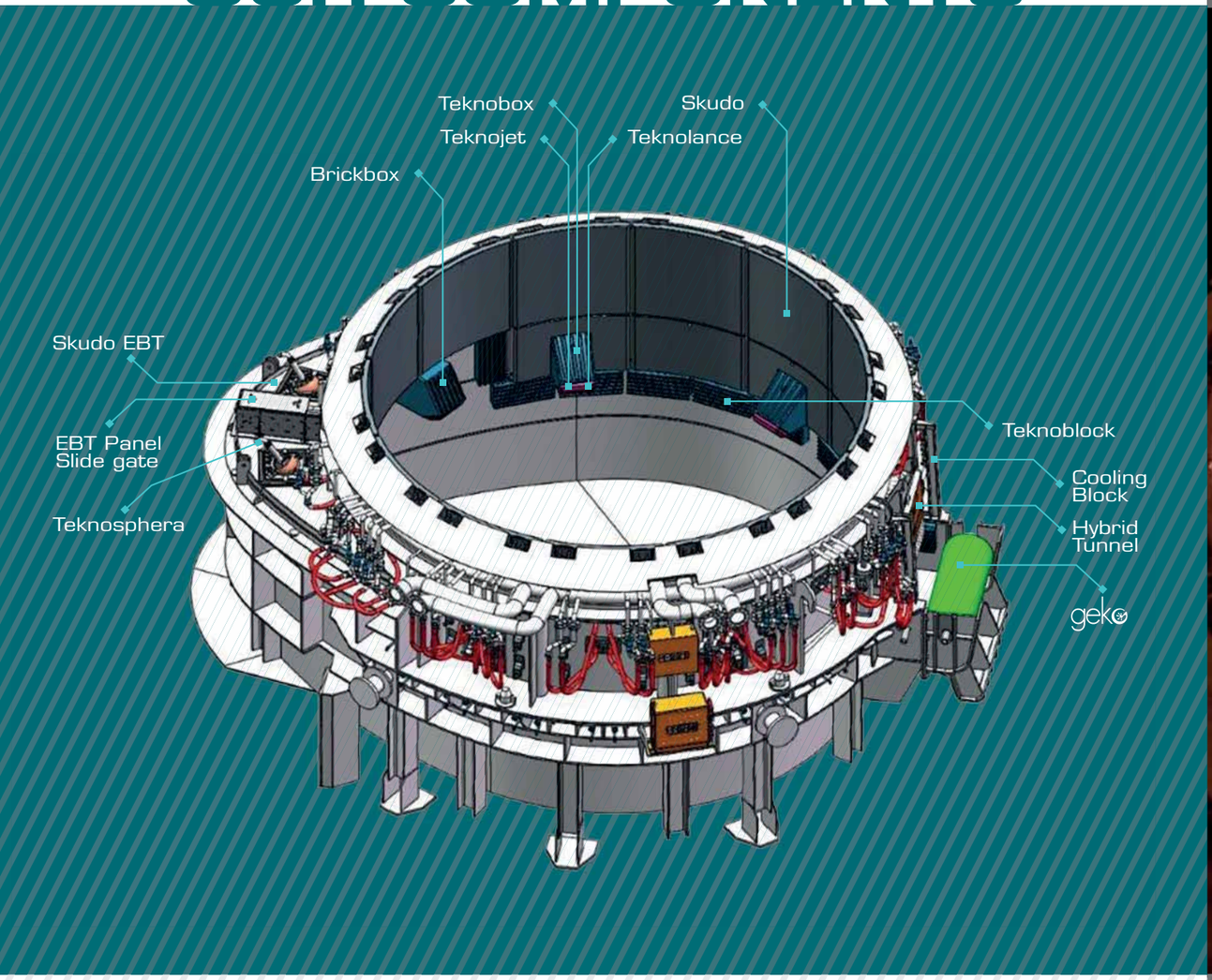
MIWENTI comes from long terms experience in the siderurgic field with following targets:

- Development of new products
- Development of new process strategies
- Development of new maintenance procedures
- Development of new resources management

CERTIFICATION

POLICY

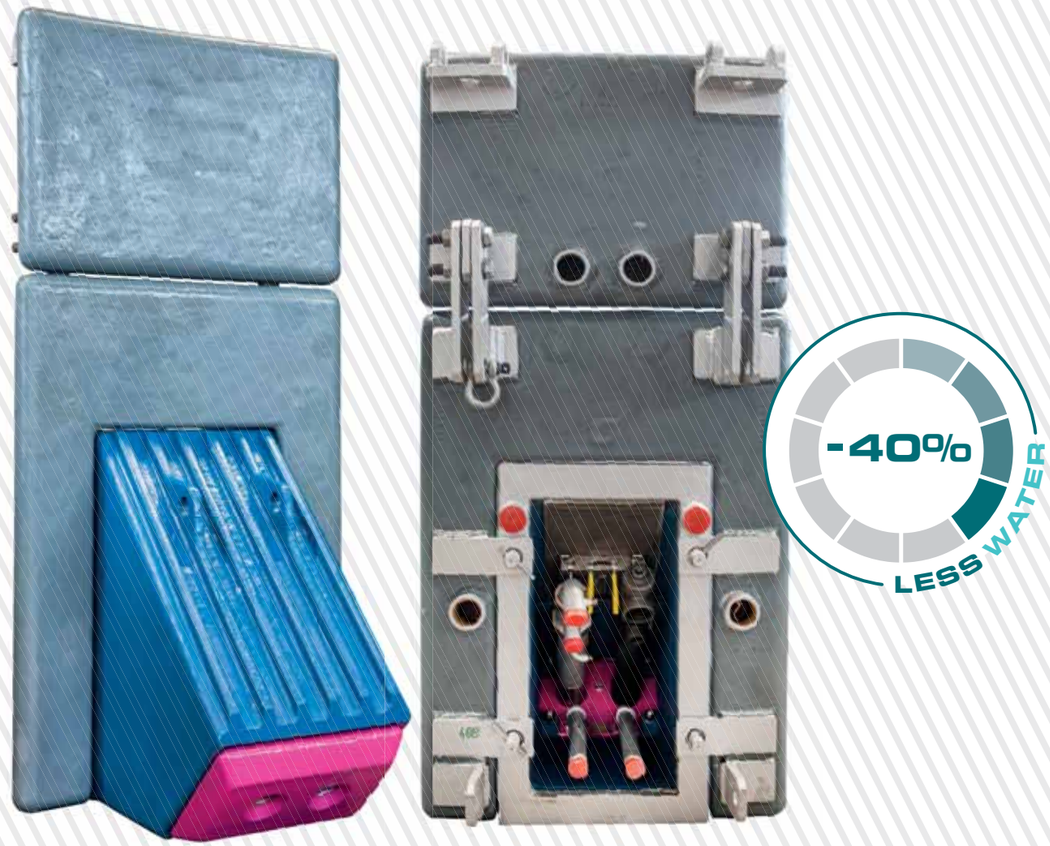
OUR COMPONENTS



COMPONENTS

SKUDO

The SKUDO is a new solution for the EAF wall, which eliminates the risks caused by the water leakage. The SKUDO is 100% monolithic casted copper seamless component with internal canals of rectangular cross-section in which the water circulates.



TEKNOBOX

The TEKNOBOX has been designed to contain and protect the injection lance in the EAF. It is 100% monolithic casted copper component without welding with internal canals of rectangular cross-section in which the water circulates.

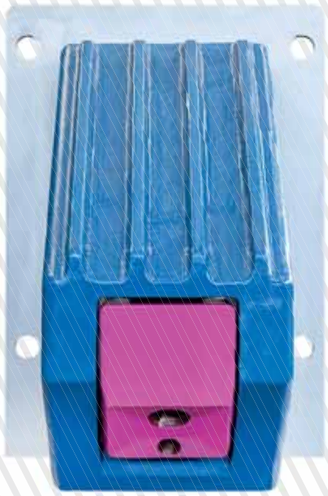
The cooling element is composed of two parts:
> TEKNOBOX, element installed on the furnace;
> TEKNOPANEL, interchangeable front panel.

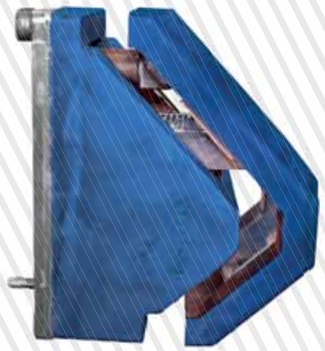
TEKNOPANEL

The TEKNOPANEL is the interchangeable front panel of the TEKNOBOX, it is 100% monolithic casted copper component and it is designed to make the maintenance easier.

MODULAR BOX

The MODULAR BOX has been designed to contain and protect the injection lances in the EAF. It is 100% monolithic casted copper component without welding with internal canals of rectangular cross-section in which the water circulates and it is completely separable in two parts to reduce the maintenance costs.





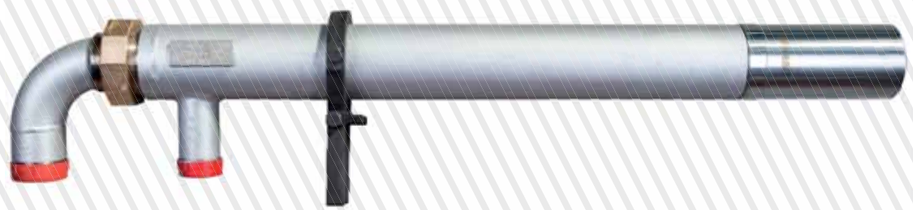
SKATEPANEL

The SKATEPANEL is the interchangeable front panel of the MODULAR BOX, it is 100% monolithic casted copper component and it is designed to make the maintenance easier and safe because it is replaceable from the outside of EAF.

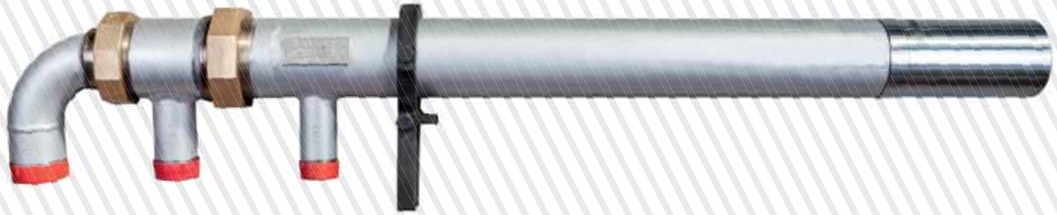
TEKNOJET
2 LINES

The TEKNOJET is a burner-injector with variable and coherent supersonic jet for combustible gases and oxygen to speed the fusion phase of the scrap and to inject oxygen into the liquid steel.

This TEKNOJET can be used in the following phases:
> Scrap preheating as HOT FIRE;
> Scrap cutting as SOFT LANCE;
> Decarburization as SUPERSONIC LANCE.



TEKNOJET
3 LINES

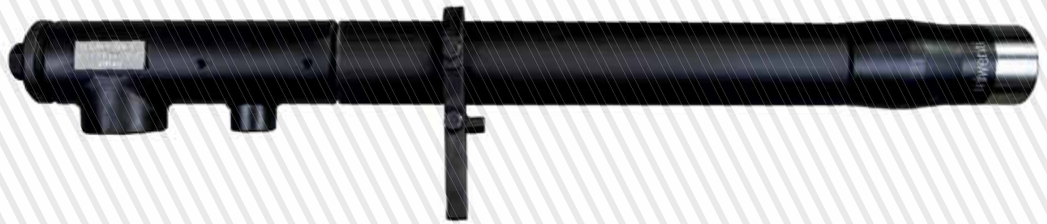


OXYJET

The OXYJET is an injector with variable and coherent supersonic jet for oxygen designed to optimize the oxygen injection phase into the liquid steel.

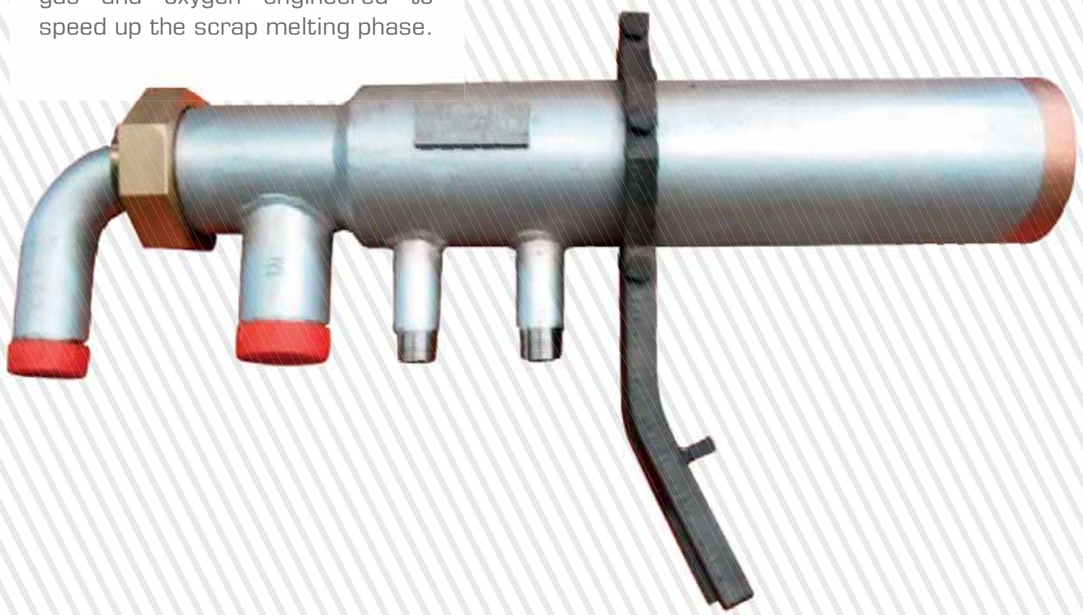
TEKNOLANCE

The TEKNOLANCE is a lance designed for the injection of lime, carbon and other powders at high speed into the liquid steel more than 150 m/s. The TEKNOLANCE has been developed to the decarburization.



BURNER

This is a BURNER for combustible gas and oxygen engineered to speed up the scrap melting phase.



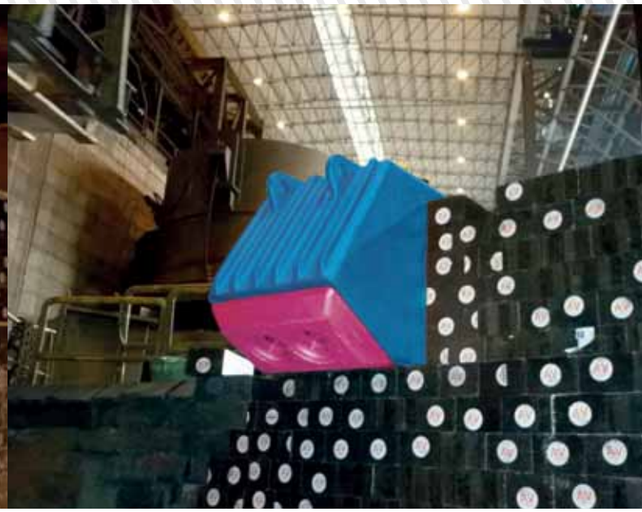
BURNER BOX

The BURNER BOX has been designed to contain and protect the burner in the EAF. It is 100% monolithic casted copper component without welding with internal canals of rectangular cross-section in which the water circulates.

TEKNOSPHERA

The TEKNOSPHERA has been designed to contain and protect the lance with the possibility to change the inclination in the EBT zone. The TEKNOSPHERA is made up of 100% copper fusion with internal canals in which the water circulates.

BRICKBOX



The BRICKBOX has been designed to contain and protect the injection lance in the EAF. It is specifically engineered to be installed in the EBT area of the EAF. It is 100% monolithic casted copper component without welding with internal canals of rectangular cross-section in which the water circulates.

The cooling element is composed of two parts:

- BRICKBOX, element installed on the furnace;
- TEKNOPANEL, interchangeable front panel.

TEKNOBLOCK & TEKNOBLOCKDOOR

The TEKNOBLOCK has been designed to replace the refractory bricks, where the wear is more frequent. The TEKNOBLOCK is 100% monolithic casted copper component with internal canals in which the water circulates. In case of a water leakage, the water does not enter into the furnace but in the safety chamber and from here it is drained away trough communication holes placed at the back.
It can be shaped depending on the position where it will be installed.

COOLING BLOCK

The COOLING BLOCK has been designed to cool the refractory from the external in order to increase its operative life. The COOLING BLOCK is 100% monolithic casted copper component with internal canals in which the water circulates.
It can be shaped depending on the position where it will be installed.





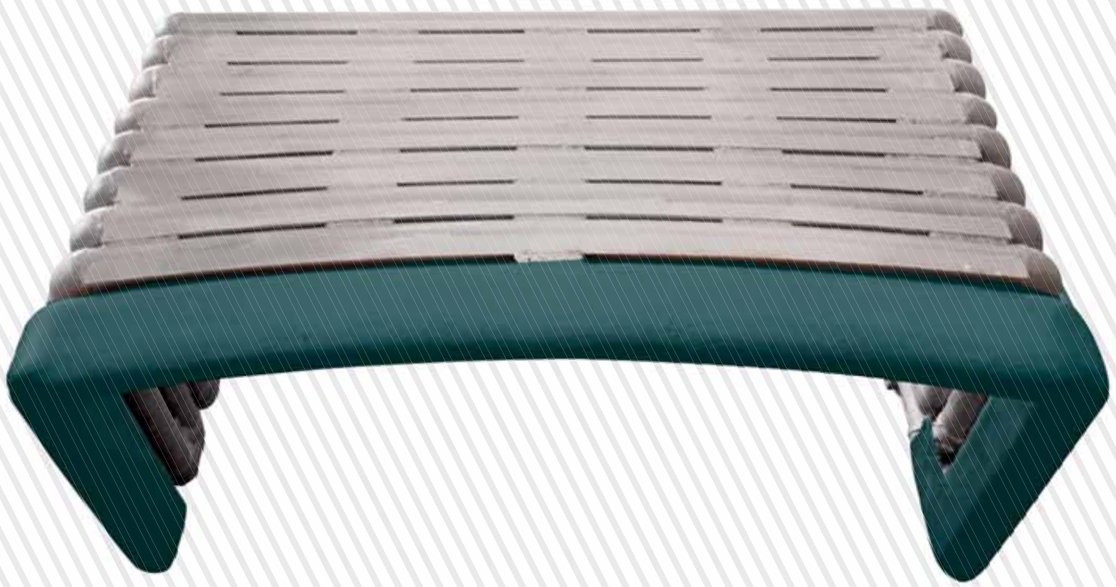
The GEKO is a new solution studied to replace the traditional graphite electrodes, fixed in the slag bank.

This component has the advantage of being safe and reliable, noticeably decreases the management costs, as well as facilitates and reduces the maintenance.

Dimensionally, the GEKO is similar to the existing graphite electrodes, in fact it can be installed on the same support.

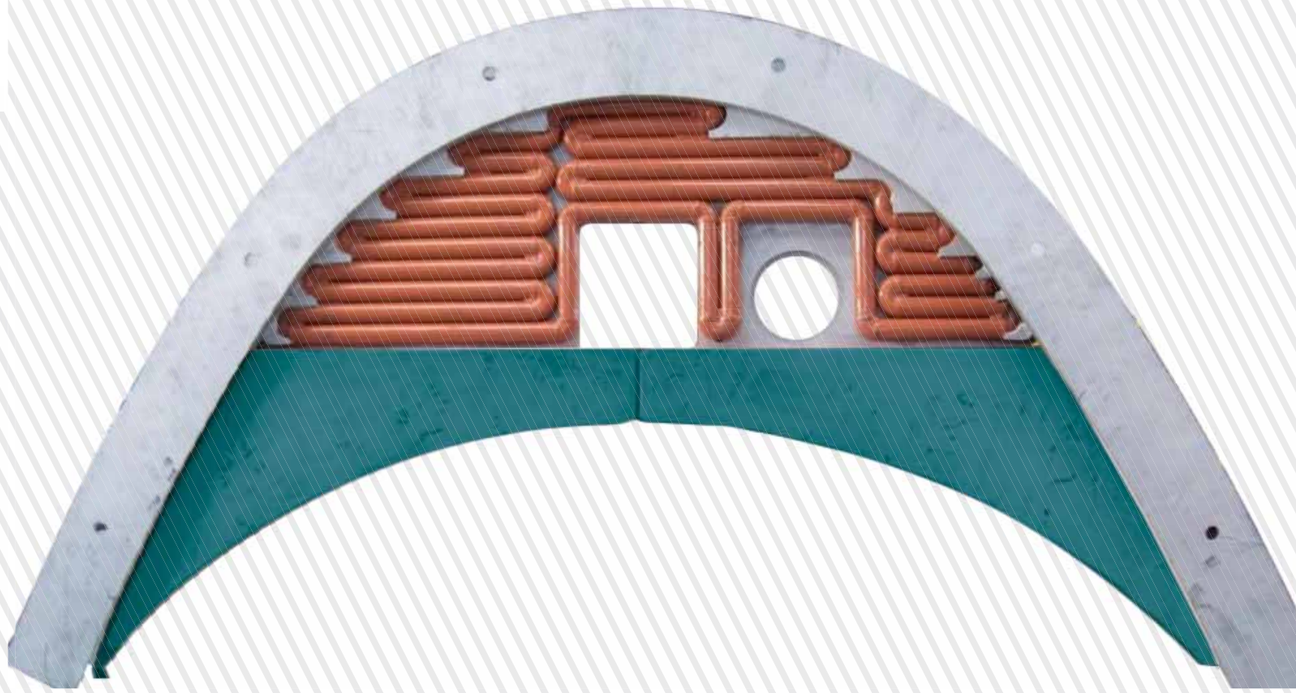
HYBRID TUNNEL

The TUNNEL made with SKUDO+PIPEPANEL is a brand-new concept aimed at reinforcing the furthest layer inside the EAF (Electronic Arc Furnace) in order to increase people's safety by reducing the risks of water leakages. The cooled element is made of a copper cast with internal rectangular-section circuit and a panel composed of an iron coil where pressured water runs in. The two parts are welded together to make a one piece product.



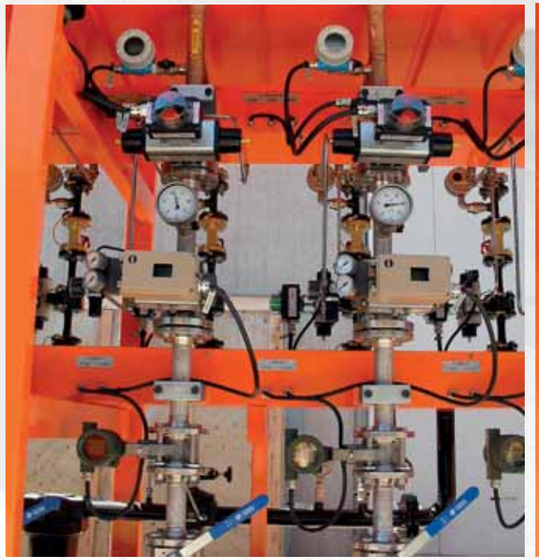
SKUDO EBT

The SKUDO EBT is a new solution for the EAF EBT. It makes the maintenance easier. The SKUDO EBT is 100% monolithic casted copper component fusion with internal canals of rectangular cross- section in which the water circulates.



VALVE STAND

Our VALVE STAND for oxygen, natural gas, nitrogen or other gases or liquids are certified according to international regulations. It can regulate flow from 20 to 5.000 Nm^3/h for each line.



FLAME BACK DETECTOR

The FLAME BACK DETECTOR, is a new solution devised to detect sudden increases in temperature caused by backfire, which develops in the feed pipes of the burners/injectors.

The principle of intervention is based on a PT100, that is indirectly hit by a rise in temperature, which modifies the value of the resistance. This resistance difference is elaborated by PLC, which generates an alarm signal. The detect time is 2 sec.

FBD

ANTI-BACKFIRE NON RETURN VALVE

Is a device that guarantees and increases security of the oxygen and LPG/natural gas regulation valve stand in the melting plants for steel production.

The materials used in the valve are suitable for oxygen, fuel and inert gas passage.

The blocking safety system valve is activated by a thermo-sensor, it works when the detonator reaches the setting temperature to bursts, and stops the flame passage by pre charged spring that pushes the closing shutter.

The response times are significantly reduced, (about 2 seconds) compared to main competitors on market that use a mechanical stop brazed with tin and longer intervention time.

The pressure drop is 0,1 bar.

EBT PANEL SLIDE GATE

The EBT PANEL SLIDE GATE is a cooled component designed to automatize the opening, before, and closing after, the filling EBT tapping hole.

EBT HOLE CHARGING MACHINE

The EBT HOLE CHARGING MACHINE is a new system to close the EBT hole in a safety way, with a reduction of the time and cost. From the furnace cabin, the operator can observe on a display the closing of the EBT hole by a camera installed on board. Total procedure time is 30 sec.

POWDER INJECTION SYSTEM

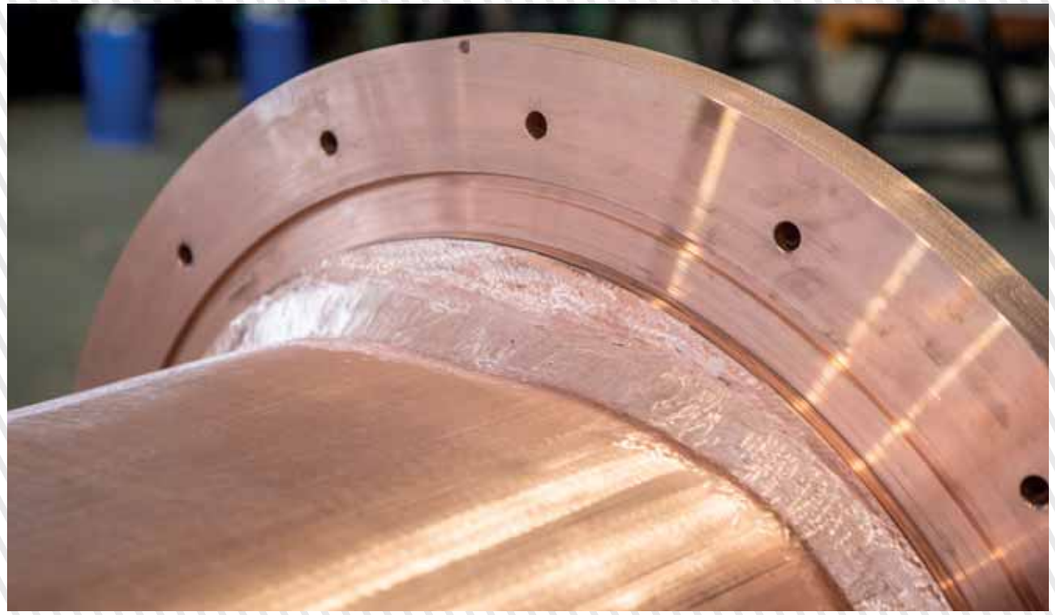
Our system feeds the biroch or injects directly into the EAF through the TEKNOLANCE.
It can feed material from 10 to 200 kg/min. They have capacity up to 500 m^3. The maximum distance is 200 m.

BIROCH

The BIROCH can mix carbon and lime together. It also allows to grind, mix and inject the following powders: refractory bricks, electrode remains. The injection allows the transportation of the material with air generated at a temperature of about 120°C at high flowrate and low pressure. The maximum flow is of 200kg/min.

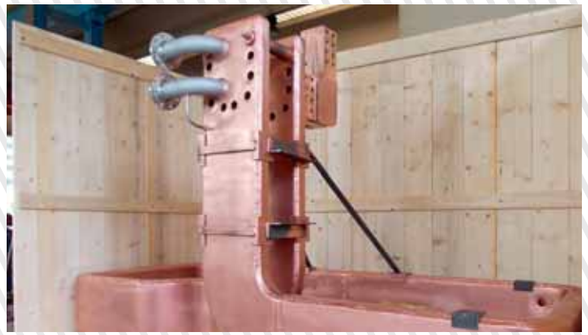
LONGLIFE CRUCIBLE

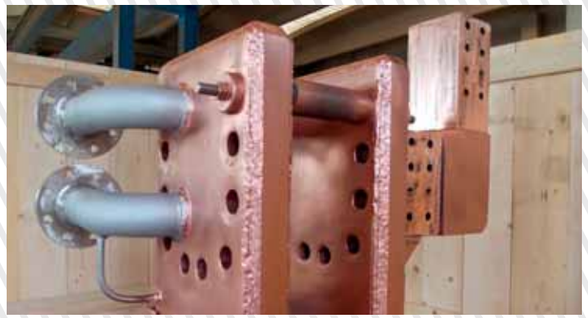
MIWENTI crucible are realized starting from a top quality copper sheet. We can realize two different types: square trough folding and circular through calendering. We use a completely new concept of welding through friction with the advantages of no need to preheat before welding and safeguard of mechanical properties.
All quality controls, dimensional tests and radiography demonstrate how the final product is much more performing compared to traditional welding system.



POWER CONDUCTIVE ARM

We realize all components, such as busbar, bimetallic arm etc, according to Customer request developing also new solutions according to the state of the art technology.





FORGED CONTACT PLATES

Are realized from top quality Cu- Hcp electrolytic copper, forged, mechanical worked, water sealing welded, and finished to satisfy the more restrictive pressure and dimensional controls.

VERTICAL & HORIZONTAL LADLE HEATERS

The VERTICAL LADLE HEATER consists of a base fixed to the ground, over which rotates an arm that supports the ladle heater with the burner in the center.

The HORIZONTAL LADLE HEATER consists of a frame that moves on the rails and allows to cover up to 2 heating stations.

The burner is fed with gas and O2.The surface of the ladle heater exposed to thermal radiation is made up of 40% copper fusion in the external circular crown, where the component is more worn, and 40% ecological fiber-ceramic. We obtain a natural gas reduction of 40%.

TUNDISH HEATER

The TUNDISH HEATER consists of a base fixed to the ground, over which rotates an arm that supports the cover with arranged on the width of the burners. The surface of the cover exposed to thermal radiation is made up of ecological fiber-ceramic, suitable for a temperature up to 1100 ° C. The combustion unit is composed of burners with high speed in order to reach the bottom of the tundish and going back through the tundish sides, insuring a good thermal exchange.

SERVICES

SERVICES

- R.O.I. calculation
- Final **Equipment** Inspection
- **Full Analysis** of energy consumptions
- **Start-**Up
- Find the **Optimal** Solution for each Customer
- **Dedicated Training** for operators
- Complete **Technical** Support
- **Maintenance** service

OUR CUSTOMERS

Italy
Abs
Acciaieria Arvedi
Acciaieria Valbruna
Acciaierie di Sicilia
Acciaierie Venete
Acp
Alfa Acciai
Aso Siderurgica
Cogne Acciai Speciali
Feralpi Siderurgica
Ferriera Valsabbia
Fomas
Forgiature Vienna
Gruppo Pittini
Irasco
Italfond
Lucchini Rs
Metalcam
Nlmk Verona
Ori Martin
Riva Acciaio
Ilva Taranto
Rubiera Special Steel
TPP Duferdofin Nucor
Trafilerie Carlo Gnutti

Albania
Alba Metal

Bangladesh
Abul Khair

Bulgaria
Stomana

Belgium
Thy Marcinelle

Czech Republic
Olwega

France
Albert & Duval
Alpa
Aperam Imphy
Ascoval
Framatome
Iton Seine
Lme
Sam Montereau
Sam Neuves Maisons
W Abrasive

Germany
Ald Vacuum Technologies
Arcelormittal Hamburg
Bes
Bgh
Esf
Georgsmariehütte
Hes
Stahlwerk Thuringen

Greece
Hellenic Halyvourgia
Sovel
Sidenor

India
Essar Steel
Tata Steel

Iran
Arfa steel
Cmic
Hosco
Khazar steel
Ksc
Msc
Pasco
Sks
Saba
Yazd rolling mill

Luxembourg
Arcelormittal Belval
Circuit Foil

Mexico
Grupo Acerero
Siderca
Sigosa

Morocco
Maghreb Steel
Sonasid
Univers Acier

Russian Federation
Leyficon Vacuum Service
Vsw

Saudi Arabia
Capital Steel Billets Plant
Sabic

Serbia
Metalfer Still Mill

Spain
Bronces Levante
Siderurgica Sevillana

Sultanate of Oman
Jindal Shadeed
Sohar Steel

Switzerland
Swiss Steel

Taiwan
Lung Ching Steel

Turkey
Colakoglu
Diler Demir Celik
Ege Celik
Habas
Icdas
Izmir Celic Sanayi
Kroman
Toscelik
Yolbulan

CUSTOMERS

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