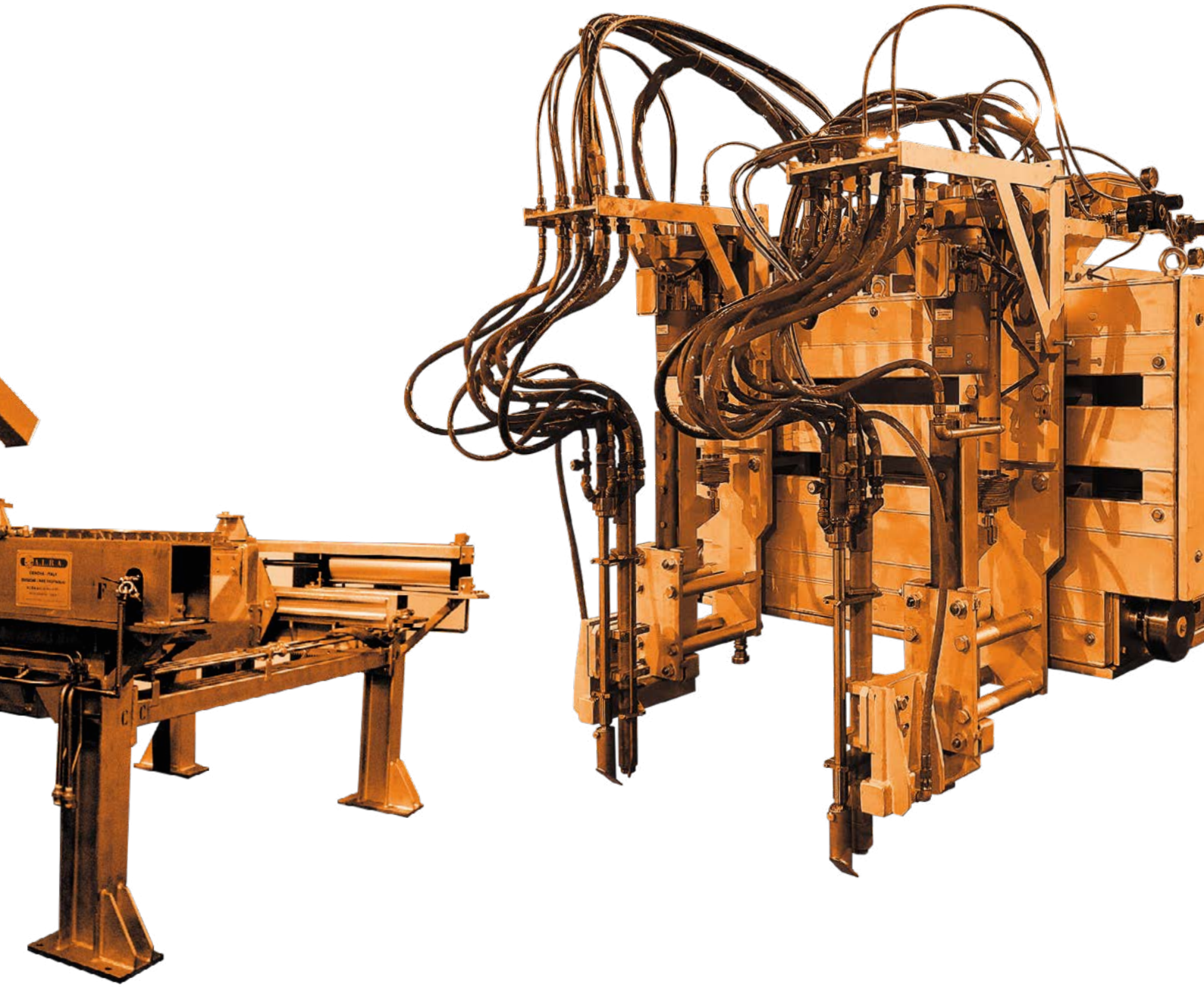
A.L.B.A.®
CUTTING TECHNOLOGY SINCE 1956

65th
1956-2021

MACHINE ENGINEERING
MAIN CATALOGUE



CUTTING
MACHINES EQUIPMENT

A.L.B.A. | YOU CAST, WE CUT

65 YEARS, AND WE'RE STEEL YOUNG

MADE FOR THE FUTURE

A.L.B.A.®
CUTTING TECHNOLOGY SINCE 1956

HEADQUARTERS & MAIN PRODUCTION
GENOVA / ITALY

ALBA MECCANICA
MECHANICAL ON DRAWING PRODUCTION

MECHANICAL & CARPENTRY PRODUCTION
CUNEO / ITALY

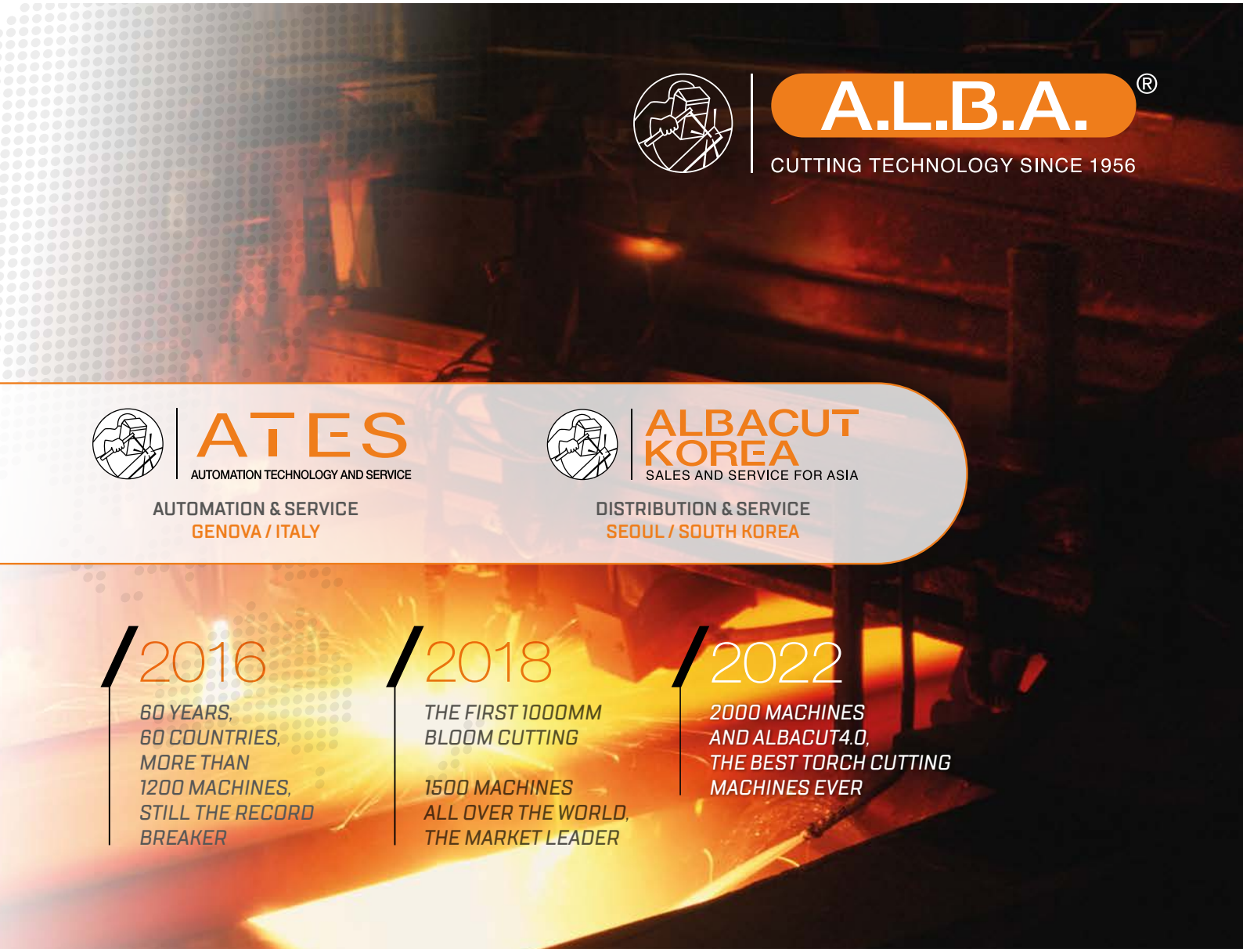
1956
A.L.B.A. WAS FOUNDED IN ITALY

2006
PRESENT IN OVER 50 COUNTRIES WORLDWIDE

2012
THE FIRST 800MM BLOOM CUTTING

1000 MACHINE DELIVERED ALL OVER THE WORLD

2014
BORN ALBA GROUP AN INTEGRATED PRODUCTION SYSTEM FOR SPECIAL INDUSTRIAL MACHINES



A.L.B.A.®

CUTTING TECHNOLOGY SINCE 1956

ATES

AUTOMATION TECHNOLOGY AND SERVICE

AUTOMATION & SERVICE
GENOVA / ITALY

ALBACUT KOREA

SALES AND SERVICE FOR ASIA

DISTRIBUTION & SERVICE
SEOUL / SOUTH KOREA

2016

60 YEARS,
60 COUNTRIES,
MORE THAN
1200 MACHINES,
STILL THE RECORD
BREAKER

2018

THE FIRST 1000MM
BLOOM CUTTING

1500 MACHINES
ALL OVER THE WORLD,
THE MARKET LEADER

2022

2000 MACHINES
AND ALBACUT4.0,
THE BEST TORCH CUTTING
MACHINES EVER

ALBA GROUP

ALBA GROUP

The Group companies are able to manufacture entire turn-key plants independently, and also to provide single supplies of equipment and accessories for the steel and iron industry.

Design, purchase of raw materials, production, assembly, testing, distribution and assistance are activities carried out within the group thanks to the various skills featured by the group companies.

IN FIGURES

70 employees with an average age of 42 years
8,100 m² of total area
77% turnover coming from abroad

Le aziende del gruppo sono in grado di realizzare in modo autonomo sia interi impianti chiavi in mano, sia singole attrezzature ed accessori per la siderurgia.

Progettazione, acquisto delle materie prime, produzione, assemblaggio, collaudo, distribuzione e assistenza sono attività realizzate all'interno del gruppo grazie alle diverse competenze delle aziende.

I NUMERI

70 impiegati con un'età media di 42 anni
8.100 m² di superficie totale
77% di fatturato proveniente dall'estero

A.L.B.A.® CUTTING TECHNOLOGY SINCE 1956

GENOVA / BRESCIA - ITALY

A.L.B.A. S.r.l. - Genoa (ITALY)
Group headquarters and production unit dealing with design, construction, assembly and testing of equipment and systems (5,000 m²).

A.L.B.A. S.r.l. - Brescia (ITALY)
Warehouse-workshop located in Northern Italy, it operates as logistic and global distribution centre with technical assistance and maintenance division assisting the entire group (600 m²).

A.L.B.A. S.r.l. - Genova (ITALY)
Sede principale del gruppo e unità produttiva dedicata alla progettazione, costruzione, assemblaggio e test delle attrezzature e impianti (5.000 m²).

A.L.B.A. S.r.l. - Brescia (ITALY)
Magazzino-officina situato nel nord Italia, opera come centro logistico e di distribuzione globale con reparto di assistenza tecnica e di manutenzione funzionante per tutto il gruppo (600 m²).

ALBA MECCANICA
MECHANICAL ON DRAWING PRODUCTION

CUNEO - ITALY

ALBA MECCANICA S.r.l. - Cuneo (ITALY)
Production unit specialized in the "custom-made" production of structural works and industrial components (2,500 m²).

ALBA MECCANICA S.r.l. - Cuneo (ITALY)
Unità produttiva specializzata nella produzione "a disegno" di opere di carpenteria e componentistica industriale (2.500 m²).

ATES
AUTOMATION TECHNOLOGY AND SERVICE

GENOVA - ITALY

ATES S.r.l. - Genoa (ITALY)
Internal unit dedicated to industrial automation and after-sales assistance.

ATES S.r.l. - Genova (ITALY)
Unità interna dedicata all'automazione industriale ed all'assistenza post-vendita.

ALBACUT KOREA
SALES AND SERVICE FOR ASIA

SEOUL - KOREA

ALBACUT KOREA Ltd. Seoul (SOUTH KOREA)
Sale and post-sale assistance for the Asian continent.

ALBACUT KOREA Ltd. Seoul (SOUTH KOREA)
Vendita e assistenza post-vendita per il continente Asiatico.

AN INTEGRATED PRODUCTION SYSTEM

United we stand, and in A.L.B.A. we believe in this.

ALBA GROUP is an organized firm and from today, it is able to carry out the entire production process independently, leading to the manufacturing of turn-key plants, equipment and accessories for the iron and steel industry.

Design, purchase of raw materials, production, assembly, testing, distribution and customer care are all activities carried out within A.L.B.A., thanks to the work of the various firms that make up the group and deal with specific phases of the production process.

L'unione fa la forza e in A.L.B.A. ne siamo convinti.

ALBA GROUP è una realtà organizzata e da oggi in grado di realizzare al suo interno l'intero processo produttivo che porta alla nascita di impianti chiavi in mano, attrezzature e accessori per la siderurgia.

Progettazione, acquisto delle materie prime, produzione, assemblaggio, collaudo, distribuzione e assistenza avvengono tutte in A.L.B.A., grazie al lavoro delle diverse aziende che compongono il gruppo e che si occupano di fasi specifiche del processo produttivo.

ITALIAN DESIGN

A NEW STYLE IN STEEL CUTTING

A Made in Italy cutting plant means first and foremost an important project. The project is a fundamental step in our work process, and our all-Italian approach to the iron and steel sector leads to creative yet exacting solutions.

For us, being Italian means:

- extreme creativity during the engineering stage with a beautiful and, above all, intelligent design;
- strict schemes as far as safety is concerned;
- use of select and high-quality materials and components;
- optimisation of systems developed in relation to customer demands, to avoid wastes;
- constant cost controls to always offer the best at the best price;
- maintenance costs reduced to a minimum: everything is analysed and planned down to the smallest details;
- excellent results in terms of performance;
- outstanding results in terms of service life.

We constantly focus on plant reliability while always considering operator safety.

This always guarantees excellent results in terms of performance, but also makes cutting operations simpler and safer, while reducing routine maintenance to an absolute minimum.
Our philosophy is a new style in steel cutting.

Each plant has its own history and everyone has their own ideas. But excellent ideas are what generate superior results.

PERFECT ENGINEERING

1000 LITTLE REQUIREMENTS A 1000 AND 1 BIG SOLUTIONS

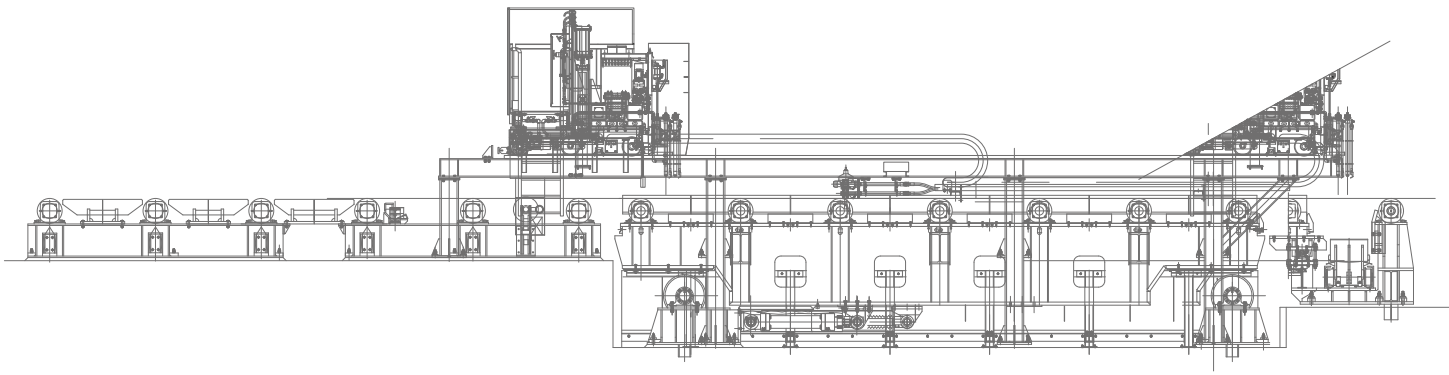
We do create major projects, but they must be followed up by perfect development.

That's why our entire technical staff works with down-to-earth enthusiasm, day in and day out, to find the right solutions.

Many factors must be taken into consideration to achieve what we call the "right solution". There are many requirements during the engineering phase to which, for us, it is natural to develop the best solutions in order to reach the highest possible satisfaction. Maximum in terms of quality, performance and productivity, is our goal. But we also lower management costs and extend the service life of the entire system, and all while reducing maintenance requirements to a minimum.

During the engineering stage, we consider and analyse all potential future problems. And we do so with passion: reducing management costs and, thanks to our future outlook, foreseeing and working out the right solutions. Our plants shall not generate any surprises or unforeseen circumstances, that's a must for us.

Because who, like us, works in the world of steel, must always look ahead.



RELIABLE MANUFACTURING

SELF-MADE PROCESS

Our main objectives are reliability over time, maintenance reduced to a minimum and extended plant service life.

That's because in a complex and dynamic market like the iron and steel industry, production can't afford to slow down. And neither can we. And this is just what we keep in mind while we design and develop our plants.

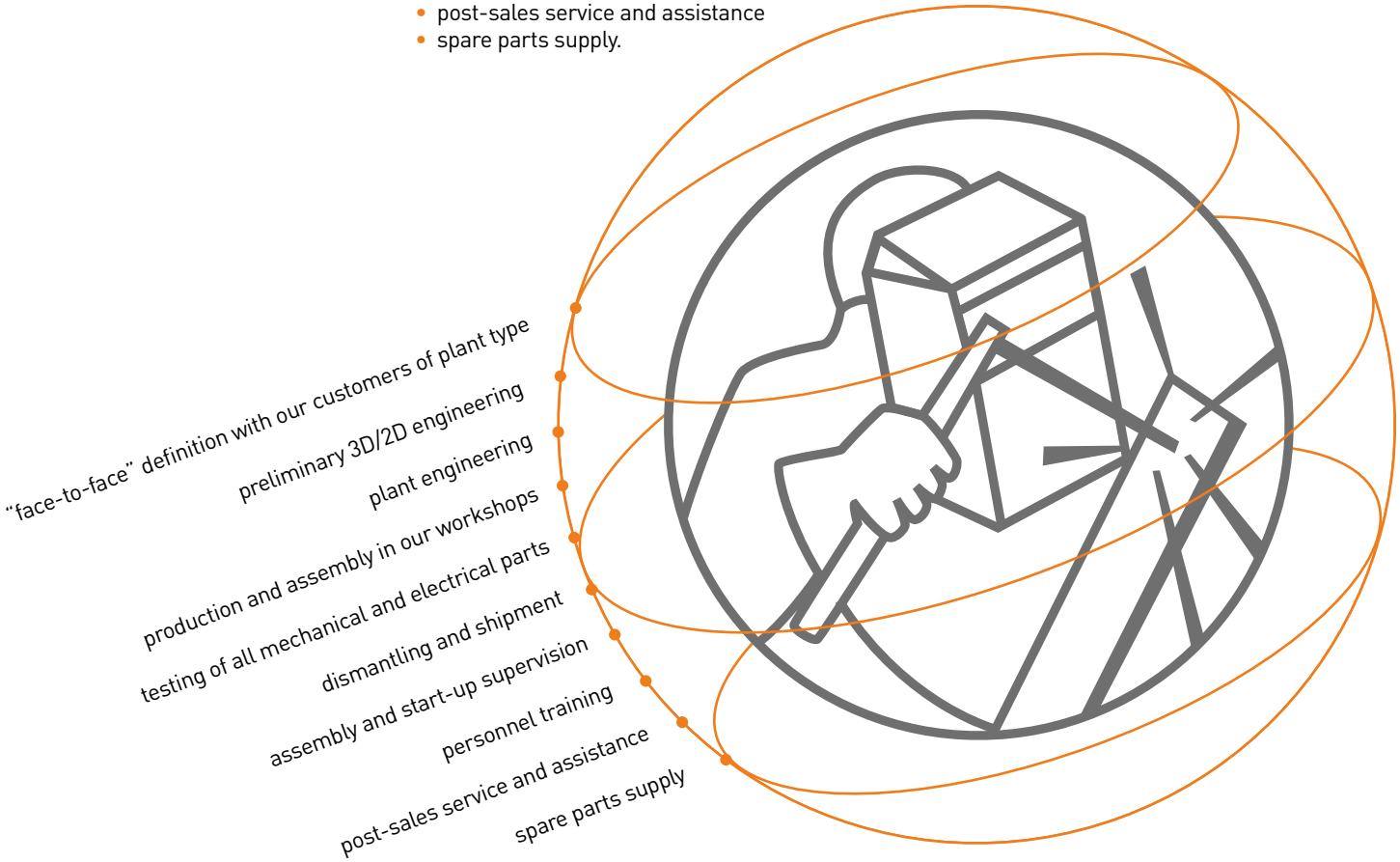
Our company can develop the cutting plant in house and monitor the entire cycle, from design engineering to production and full-capacity operation.

To design, engineer, produce, assemble and test according to a specific plan based on 10 fundamental steps:

- "face-to-face" definition with our customers of plant type
- preliminary 3D/2D engineering
- plant engineering
- production and assembly in our workshops
- testing of all mechanical and electrical parts
- dismantling and shipment
- assembly and start-up supervision
- personnel training
- post-sales service and assistance
- spare parts supply.

We are a small company and that's why we can allow ourselves the luxury of focusing on even the smallest details.

We apply the real craftsmanship of the Made in Italy manufacturing industry, while using modern production processes. That's our little secret.



BILLET & BLOOM TORCH CUTTING MACHINES

1


2

A.L.B.A.'s torch cutting machine designed to be used in CC plants for cutting billets, blooms, beam blank and rounds are well known for their reliability, ruggedness and short cutting times. They can work in full automatic, semi-automatic or manual mode achieving the best performances as well as cutting results.

Each oxy-cutting car is equipped with 1 high performance high speed water-cooled torch type ALBACUT with integrated pilot flames and contain the granulating system, fluid control system, cooling system and all the other necessary equipment and safety devices.

The machine structure, clamping system and torches are water-cooled by a controlled flow and protected against sparks by heat shields and provided with automatic centralized greasing system for easy maintenance.

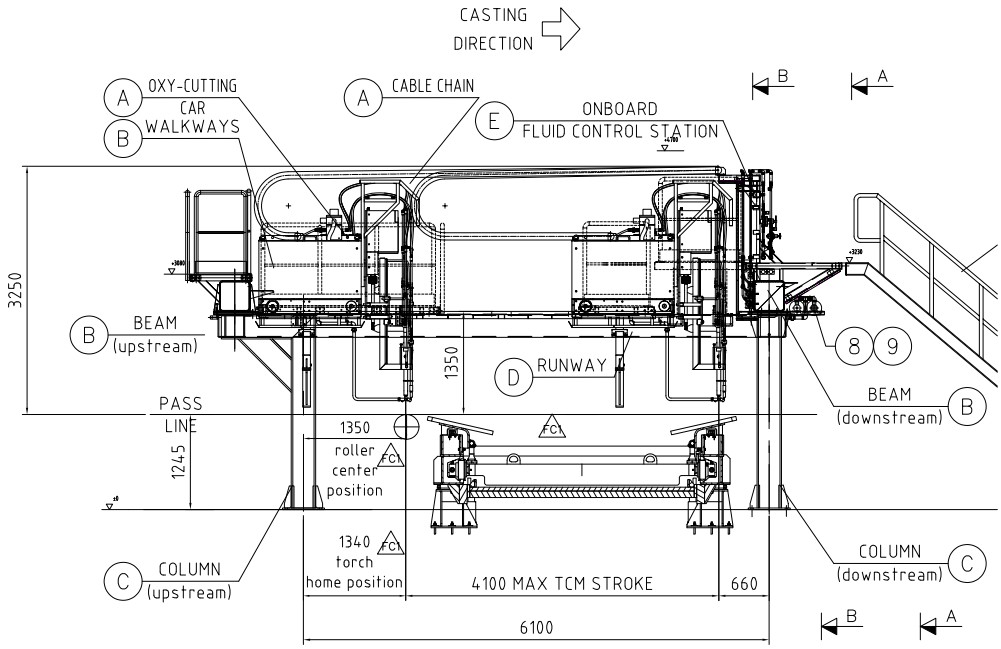
SPECIAL FEATURES

The machine could also be equipped with the following special features as an option, if required:

- measuring rolls for billets length detection;
- second torch for in line sample cutting with pneumatic up/down system;
- up/down system for torches automatic high adjustment for different billet thickness;
- iron powder injection system for stainless steel cutting;
- in-line oxygen deburring system mod. S.A.C.


3

1 Oxycutting car for big rounds 800 mm
2 TCM for rounds
3 TCM for billets up to 160 mm

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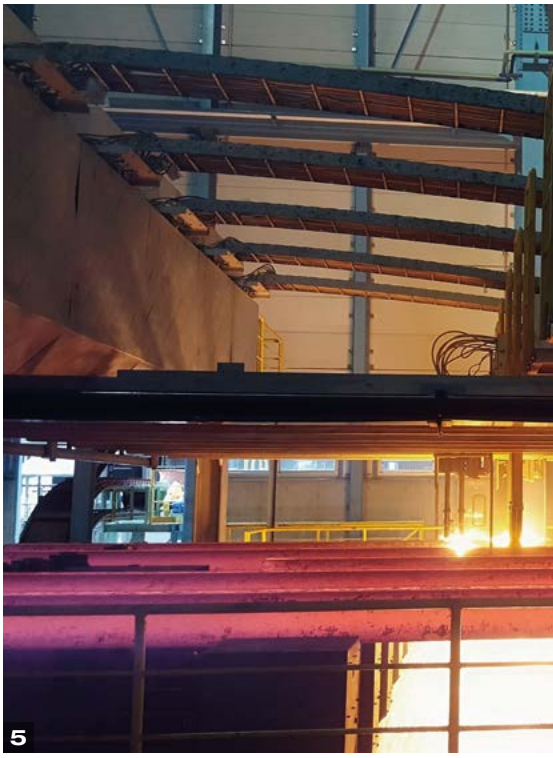
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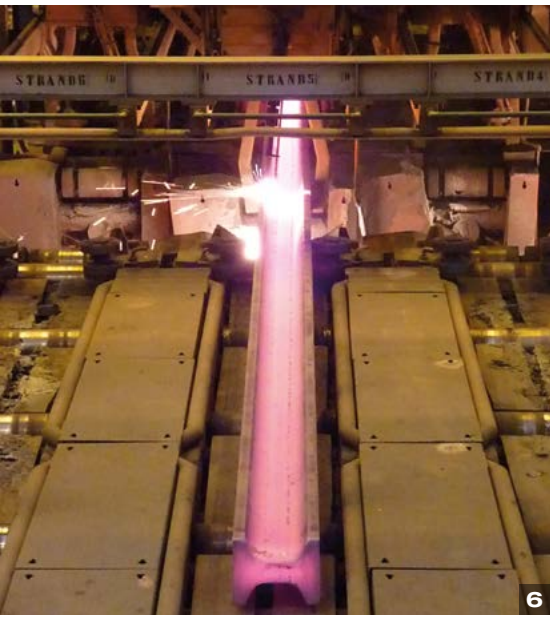
Under the sequence, the cutting cars are clamped onto the strand by a pneumatic clamping device. In this way synchronous running of the machine is guaranteed. Then, the cutting cycle will start with the heating phase and cutting. After termination of the cut, the cars will be released from the strand opening the clamp. They return with an independent motor into the starting position to be ready for the next cut.

Designed and manufactured considering all the necessary conditions in order to avoid risks for personnel and plant during the use and maintenance of the machine, it will be equipped with all the required safety devices according to all international standards.

The machine is based on a proven technology with high reliability and low maintenance and is specifically developed to offer high performances in heavy industrial environments.

The billet/bloom torch cutting machine is CE certified and developed according to the UNI EN ISO 9001:2008 quality standard.

4 8-Strand TCM for billets up to 160 mm
5 5-Strand TCM for billets and blooms up to 250x310 mm
6 TCM for BB
7 6 Strand BB TCM
8 5-Strand TCM for blooms up to 190x247 mm
9 TCM for BB
10 6-Strand TCM for stainless steel round bars up to 500 mm



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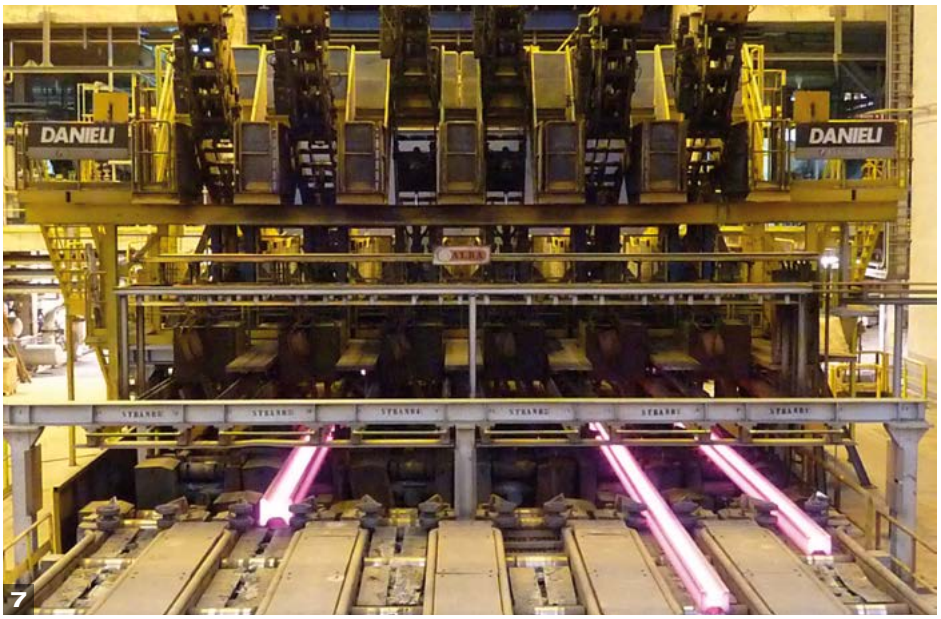

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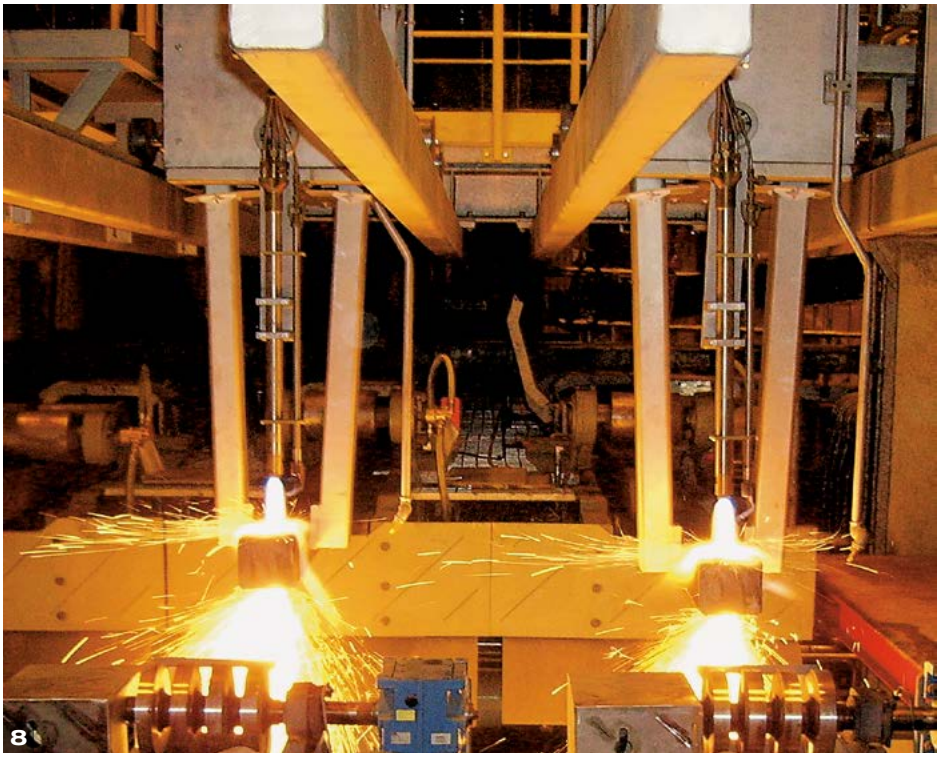
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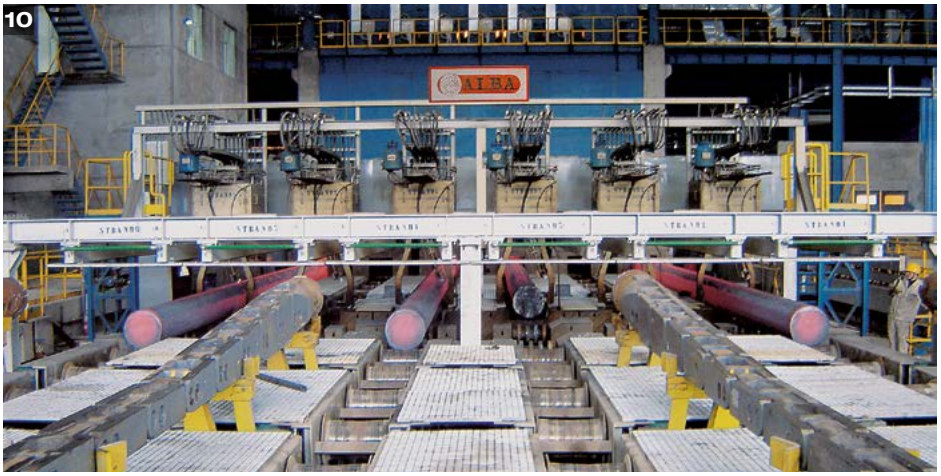

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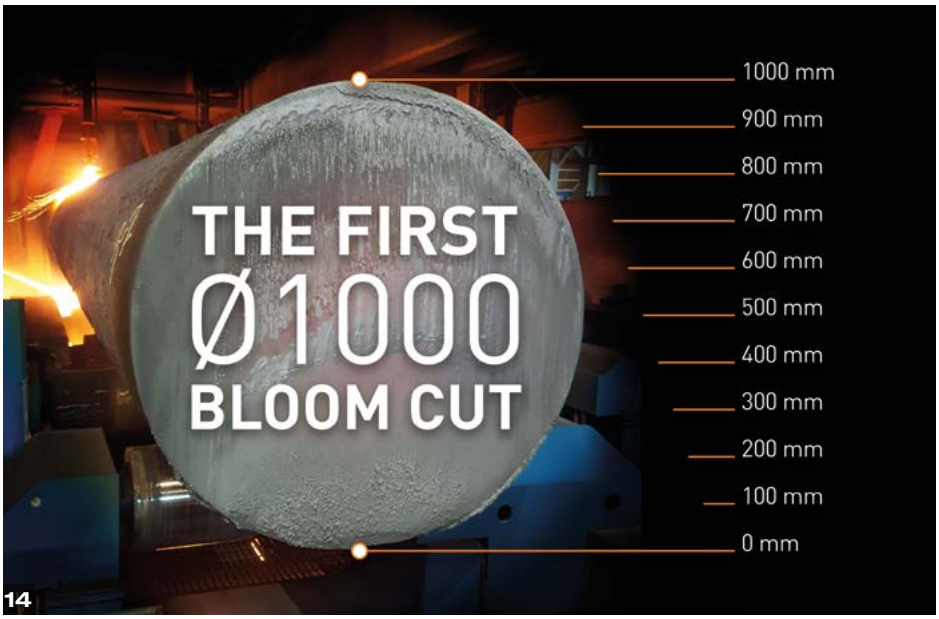
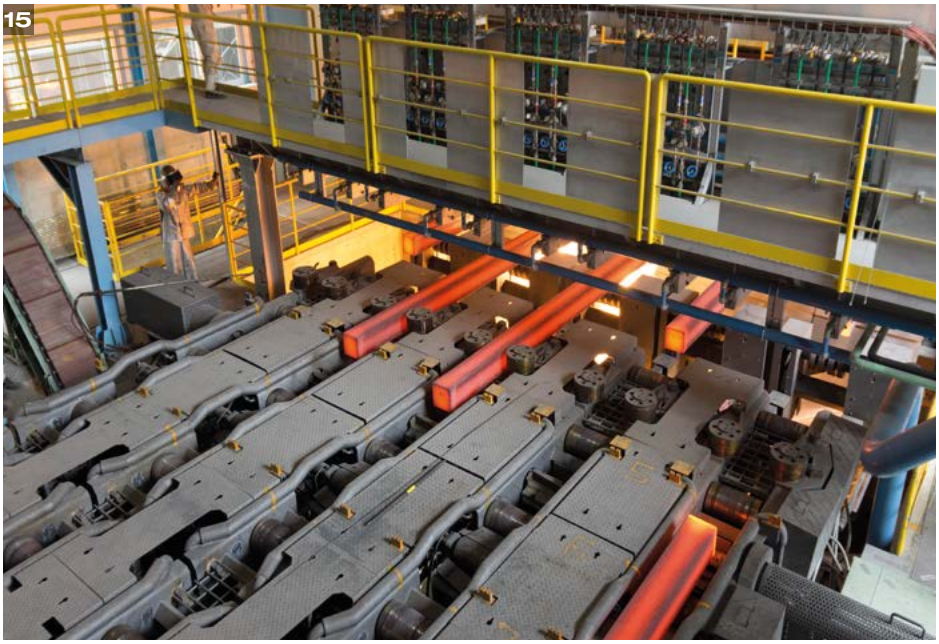
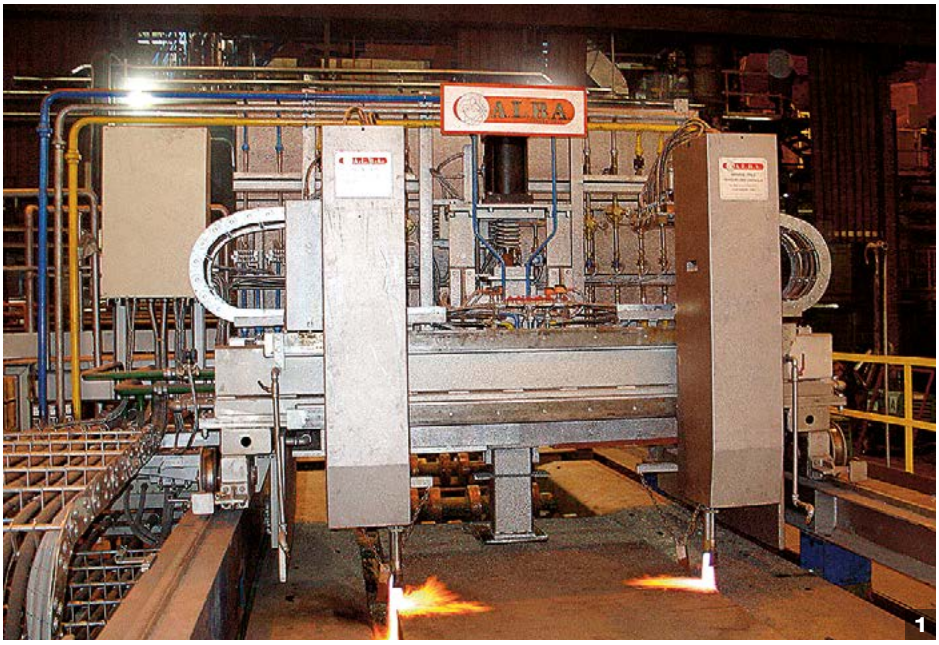




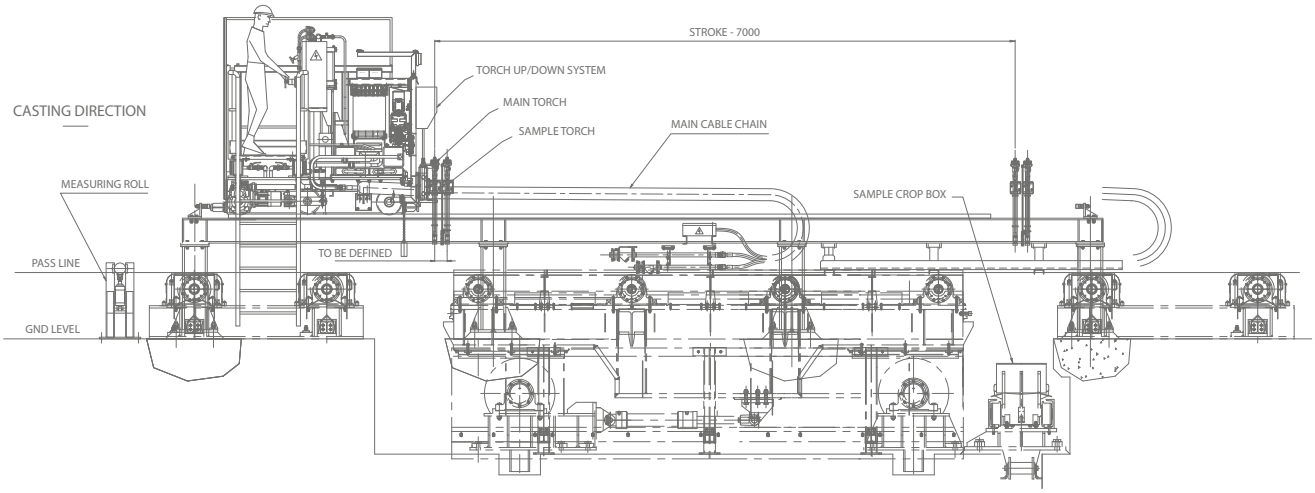
11 Oxycutting car for rounds with sample and iron powder
12 Vertical TCM
13 Oxycutting car for twin bloom and mini slab
14 The first ever cast Ø1000 mm bloom cut
15 5-Strand TCM for billets and blooms up to 250x310 mm

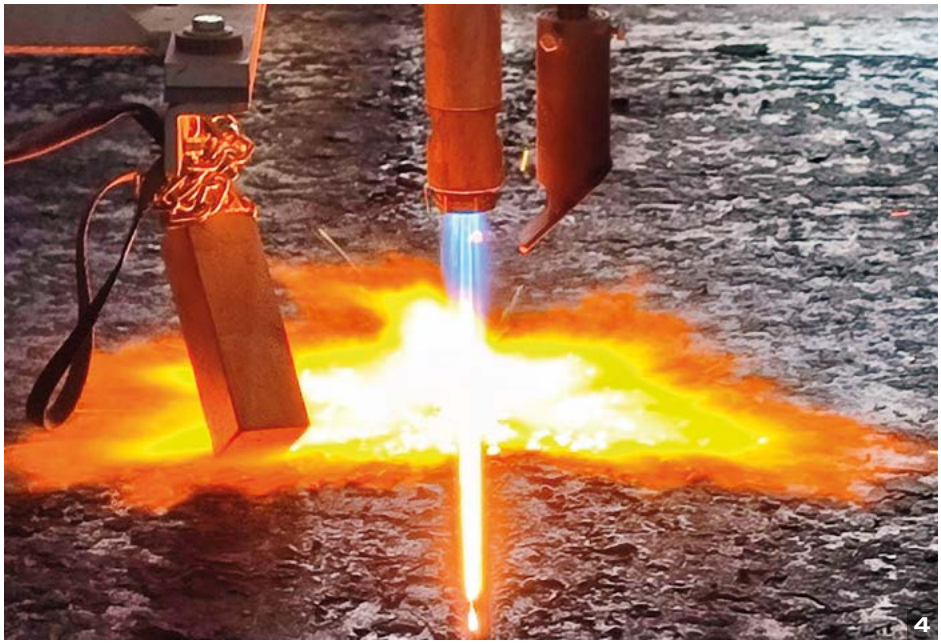
SLAB TORCH CUTTING MACHINES



A.L.B.A.'s torch cutting machine designed to be used in CC plants for cutting slabs are well known for their reliability, ruggedness and short cutting times. They can work in full automatic, semi-automatic or manual mode achieving the best performances as well as cutting results.

1 TCM for slabs up to 170x1550 mm
2 Slab TCM
3 TCM for slab CCM

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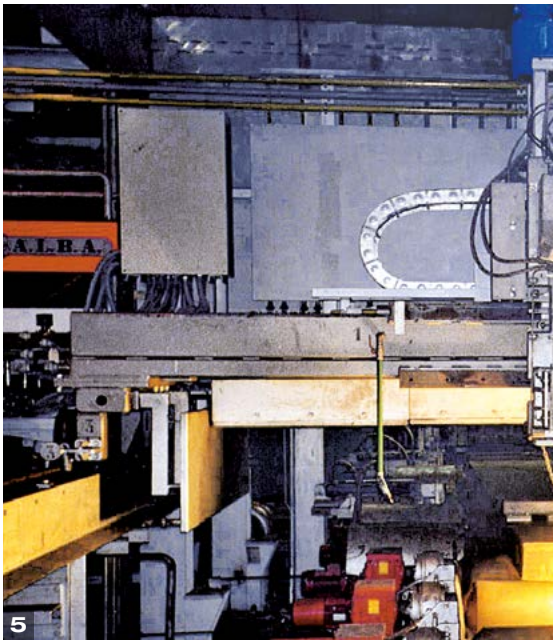

5

The machine is equipped with 2 high performance high speed water-cooled torches type ALBACUT with integrated pilot flames for normal cutting, granulating system, fluid control system, measuring system and all the other necessary equipment and safety devices.
The machine moves on 4 wheels (2 loose wheels + 2 driven wheels).

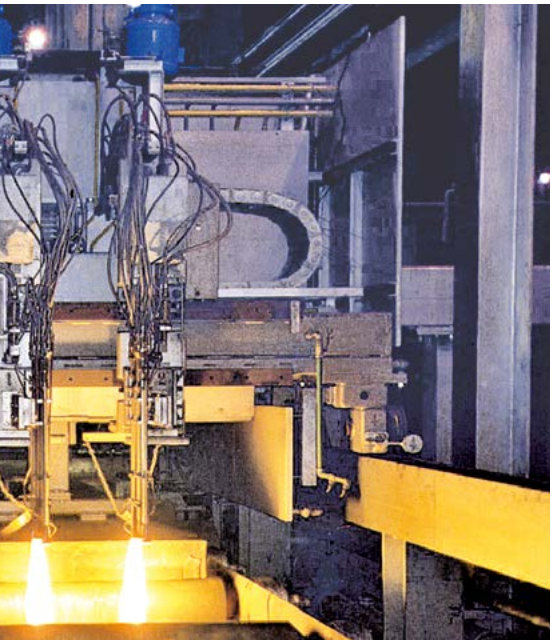
The machine structure, clamping system, torch holding trolleys and torches are water cooled by a controlled flow and protected against sparks by heat shields and provided with automatic centralized greasing system for easy maintenance.

SPECIAL FEATURES
The machine could also be equipped with the following special features as an option, if required:

- measuring rolls for slabs length detection;
- 2 torches for in line sample cutting;
- up/down system for torches automatic high adjustment to different slab thickness;
- iron powder injection system for stainless steel cutting;
- mechanical deburring system.

Under the sequence the cutting machine is clamped onto the strand by means of a pneumatic clamping device. In this way synchronous running of the machine is guaranteed. Then, the cutting cycle will start with the heating phase and cutting. After termination of the cut, the machine will be released from the strand opening the clamp. It returns with independent motors into the starting position to be ready for the next cut.


6



7

Designed and manufactured considering all the necessary conditions in order to avoid risks for personnel and plant during the use and maintenance of the machine, it will be equipped with all the required safety devices according to all international standards.
The machine is based on a proven technology with high reliability and low maintenance and is specifically developed to offer high performances in heavy industrial environments.

The slab torch cutting machine is CE certified and developed according to the UNI EN ISO 9001:2008 quality standard.

4 TCM for extra-wide slabs up to 305x3150 mm
5 TCM for stainless steel slabs up to 250x1300 mm
6 TCM for stainless steel slabs up to 215x1600 mm
7 TCM for slabs up to 250x1650 mm

8

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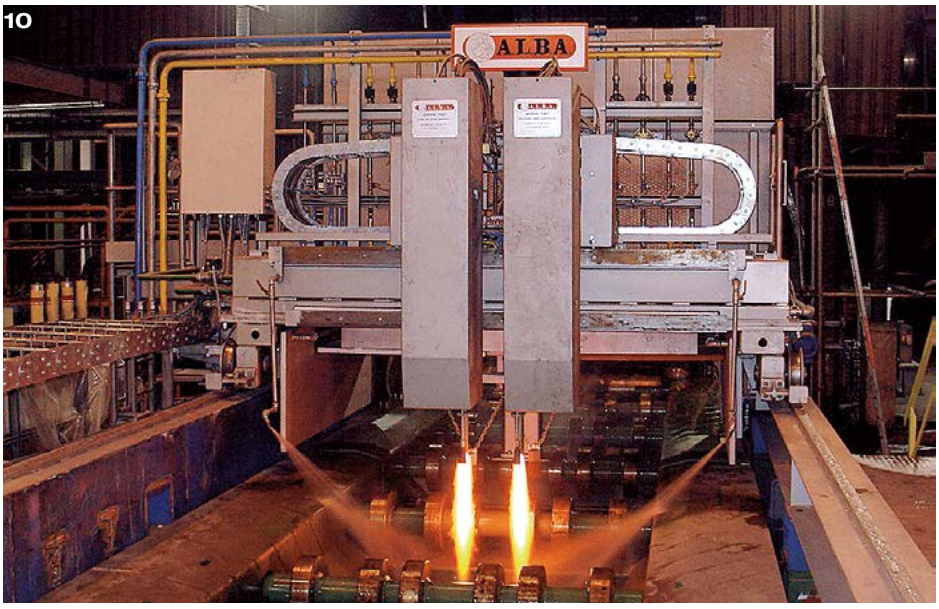

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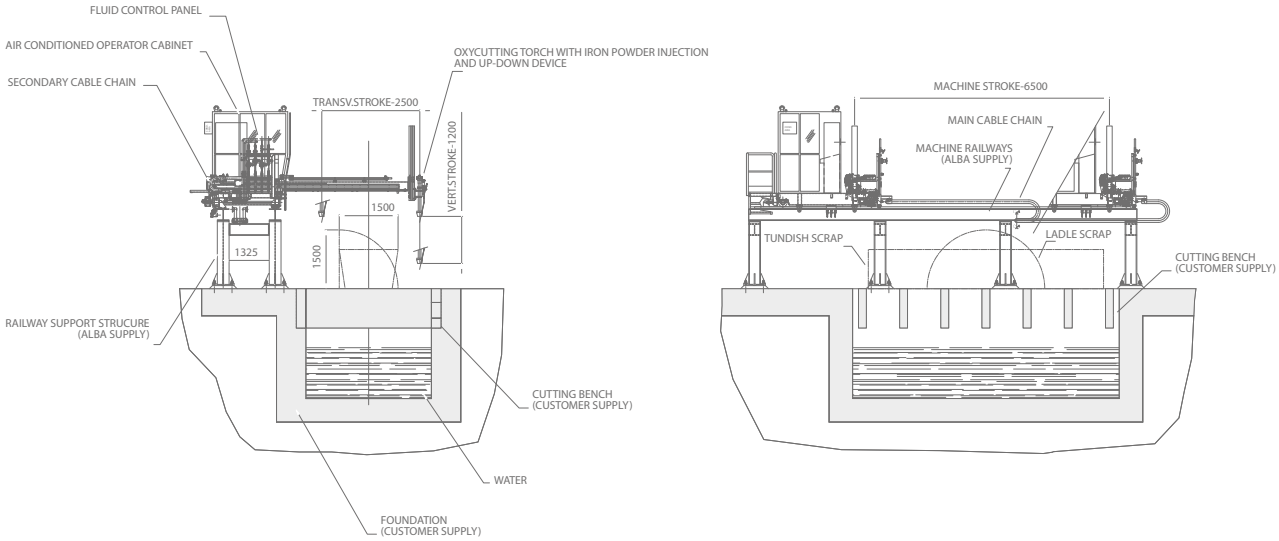
8 Plate cutting machine - Bridge type
9 TCM for slabs up to 300x2200 mm
10 TCM for slabs up to 170x1550 mm

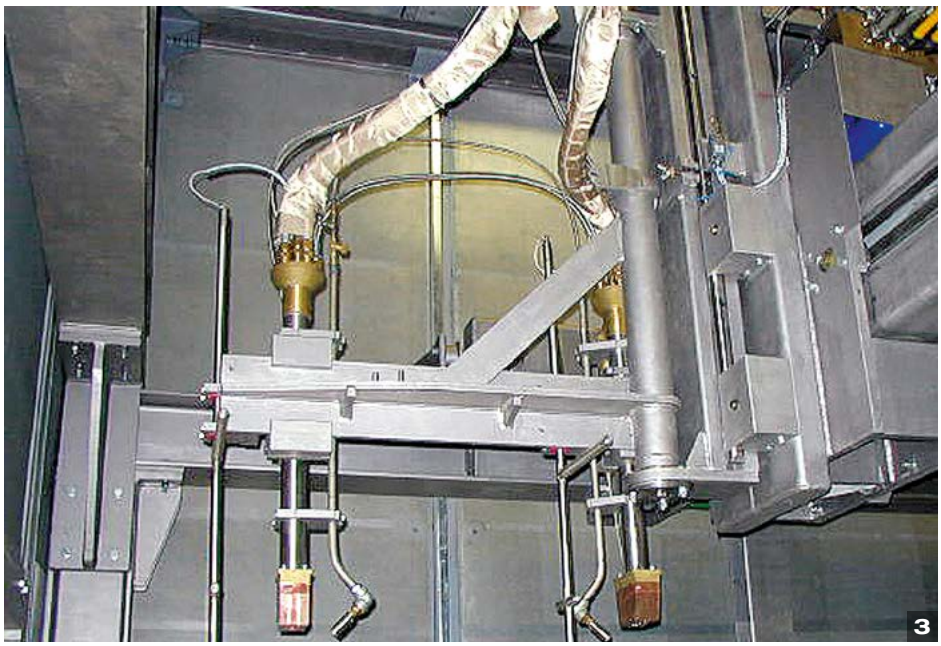
SPECIAL TORCH CUTTING MACHINES FOR HEAVY SCRAP

A.L.B.A.'s special scrap torch cutting machine designed in order to cut scrapped slabs, ladles, tundishes, slag pots, scrapped coils, scrapped rolls and various scrap material into any required dimension and suitable to be charged into EAF are well known for their reliability, ruggedness and short cutting times.
They can work in full automatic, semi-automatic or manual mode achieving the best performances as well as cutting results with very high hourly productivity.

Type:	scrapped slabs / ladles / tundishes / slag pots scrapped coils / scrapped rolls / various scrap
Temperature:	environment
Max thickness:	2000 mm
Dimensions:	variable
Number of torches:	1 or 2
Average dimensions:	according to scrap dimension
Stroke:	~ 10000 mm

1 Twin-torch scrap cutting - 1700 mm
2 Heavy srap TCM – open type – 2000 mm

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4

Machines will be manufactured in heavy electro welded carpentry, machined where necessary, completely isolated in a dog-house equipped with guillotine door and special noise isolating panels to reduce the outside noise level under normal acceptable values (85 dB). A fume aspiration connected with a filtering system could be also included. The material to be cut will be placed on a supporting grid and the machine moves on top of it by means of rails placed beside. The machine will move away from the cutting area for scrap charge/discharge operations performed by crane.

SPECIAL FEATURES

The machine could also be equipped with the following special features as an option, if required:

- a dog-house equipped with guillotine door;
- special noise isolating panels;
- a fume de-dusting system;
- 2 special heavy thickness water cooled torch for 2 contemporaneous cuts;
- movable torch arm for all purpose all shape cut;
- iron powder feeding system;
- close water cooling system with own chilling system;
- on board air conditioned control cabin for better operator control.

The machine will be able to cut scrap pieces up to 2000 mm thickness in a longitudinal or crosswise movement, of any type of steel, pig-iron and slag formation with the use of iron powder if necessary.

The fluids (oxygen, gas, compressed air, water, nitrogen) and the electrical supply will be fed through a cable chain. The air conditioned control cabin will be placed on board the machine structure and includes the operator panel and the electrical board containing the PLC. All the necessary facilities will be also included. The only operator required per shift could control the cutting operation through a well dimensioned window with appropriate protection and armed glasses and work in safety in very good environmental conditions.

5

6

NEW TARGETS IN SCRAP CUTTING PROCESS ACHIEVED

Thanks to the specific design and to our special heavy thickness water-cooled torch type ALBACUT/G2 and ALBACUT/VK we are able to achieve the following amazing results:

- saving in labour cost, with about 80% reduction in nr. of personnel required;
- saving in oxygen consumption, in comparison with the traditional manual cutting process;
- saving in time, with A.L.B.A. higher speed cutting technology and making the scrap preparation process quicker and easier with the possibility to have more cutting stations, more cutting machines and more cutting torches working together and controlled by one operator only;
- working 24/24h continuously;
- incredibly high productivity;
- incredibly high cutting possibility with very high flexibility. Cutting thickness up to 2000mm;
- always in compliance with all the new and more and more severe environmental and anti-pollution rules.

Designed and manufactured considering all the necessary conditions in order to avoid risks for personnel and plant during the use and maintenance of the machine, it will be equipped with all the required safety devices according to all international standards.

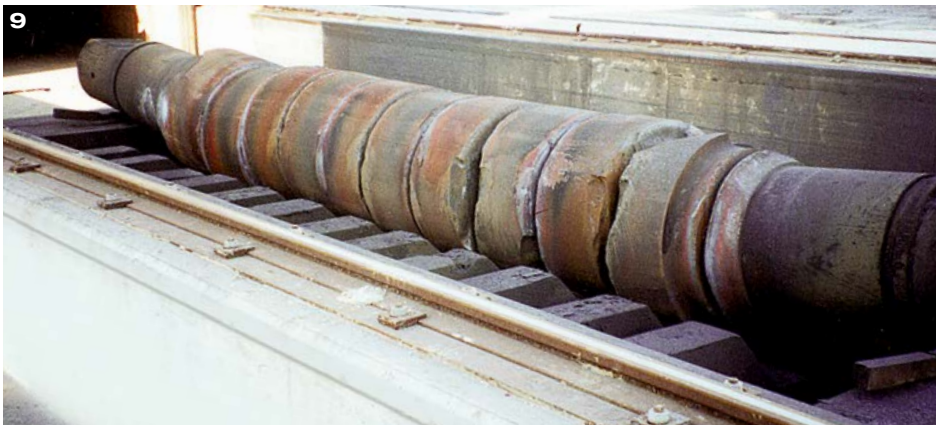
3 Automatic TCM for scrap and mill roll up to 2000 mm - Torches group
4 Complete plant for scrap cut up to 1700 mm
5 Automatic TCM for scrap and mill roll up to 2000 mm
6 CUT slag pot scrap


7


8

The machine is based on a proven technology with high reliability and low maintenance and is specifically developed to offer high performances in heavy industrial environments.

The special scrap torch cutting machine is CE certified and developed according to the UNI EN ISO 9001:2008 quality standard.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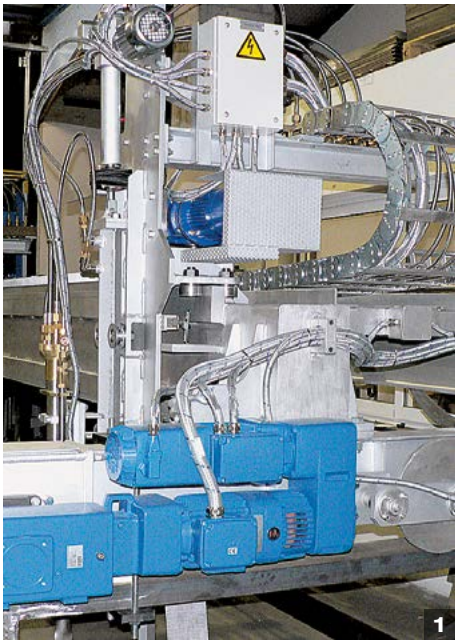
7 Cut used mill roll ø 1500 mm
8 Twin automatic TCM for scrap up to 2000 mm
9 Cut used mill roll ø 1500 mm

SPECIAL ALL PURPOSE TORCH CUTTING MACHINES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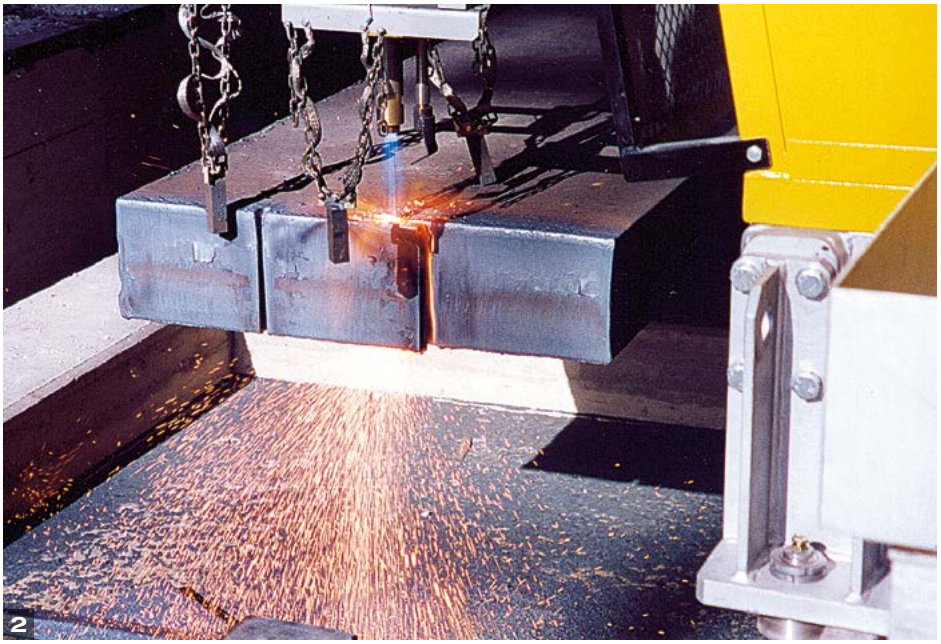
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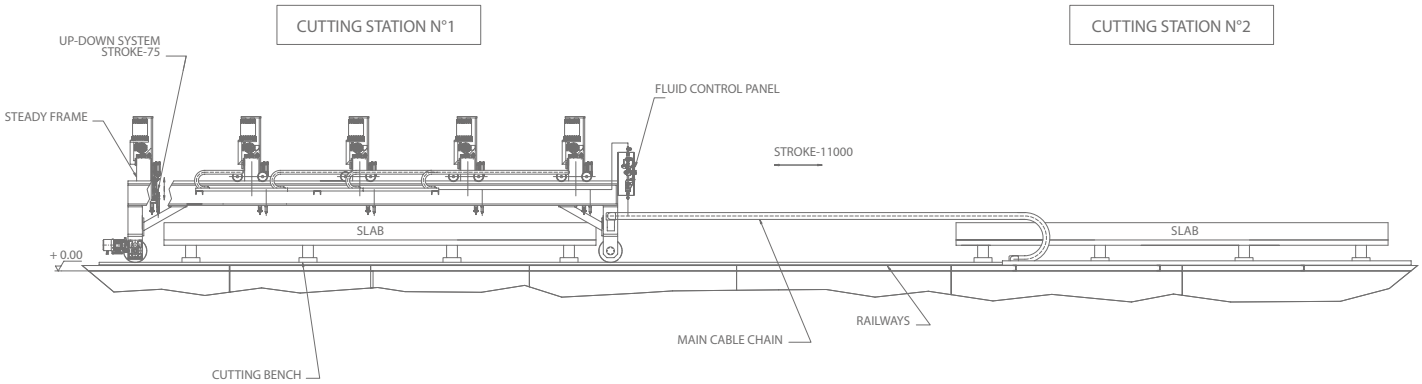
A.L.B.A.'s special all purpose torch cutting machine are specifically designed in order to cut slabs, billets, blooms, beam blank and various profile material into any required dimension for sample cutting, cross cutting, slitting, subdividing, emergency, during the whole casting process and are well known for their reliability, ruggedness and short cutting times.

They can work in full automatic, semi-automatic or manual mode achieving the best performances as well as cutting results in or out of the casting line or anywhere else that may be required.


3

1 Lengthwise-crosswise subdividing machine for slabs up to 300 mm thickness
2 Lengthwise-crosswise subdividing and sample cutting machine for slabs up to 300 mm thickness
3 Sample cutting machine - Bridge type




4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Any of these will be completely customized machines and designed to respond to very specific requirements.

SPECIAL FEATURES

The machine could also be equipped with the following special features as an option, if required:

- 2, 3 or even more cutting torches according to productivity requirements and cutting purpose;
- special noise isolating panels;
- a fume de-dusting system;
- iron powder feeding system;
- close water cooling system with own chilling system;
- independent automation system;
- close and air conditioned operator cabin.

The machine will be able to cut pieces of the defined dimension, performing any of the required movements and cutting any type of steel or pig-iron with the use of iron powder, if necessary.
The fluids (oxygen, gas, compressed air, water, nitrogen) and the electrical supply will be considered in the machine design.
If possible and on request the operator control cabin could be placed on board the machine structure and includes the operator panel and the electrical board containing the PLC. All the necessary facilities will be also included. In this case the operator could control the cutting operation through a well dimensioned window with appropriate protection and armed glasses and work in safety in very good environmental conditions.

Designed and manufactured considering all the necessary conditions in order to avoid risks for personnel and plant during the use and maintenance of the machine, it will be equipped with all the required safety devices according to all international standards.

The machine is based on a proven technology with high reliability and low maintenance and is specifically developed to offer high performances in heavy industrial environments.

The special all purpose torch cutting machine is CE certified and developed according to the UNI EN ISO 9001:2008 quality standard.

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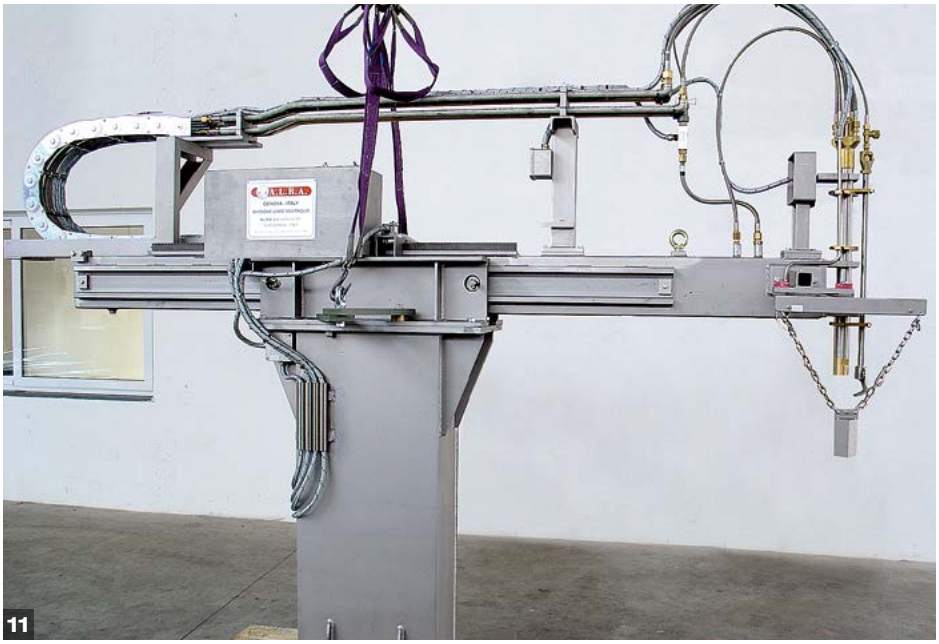
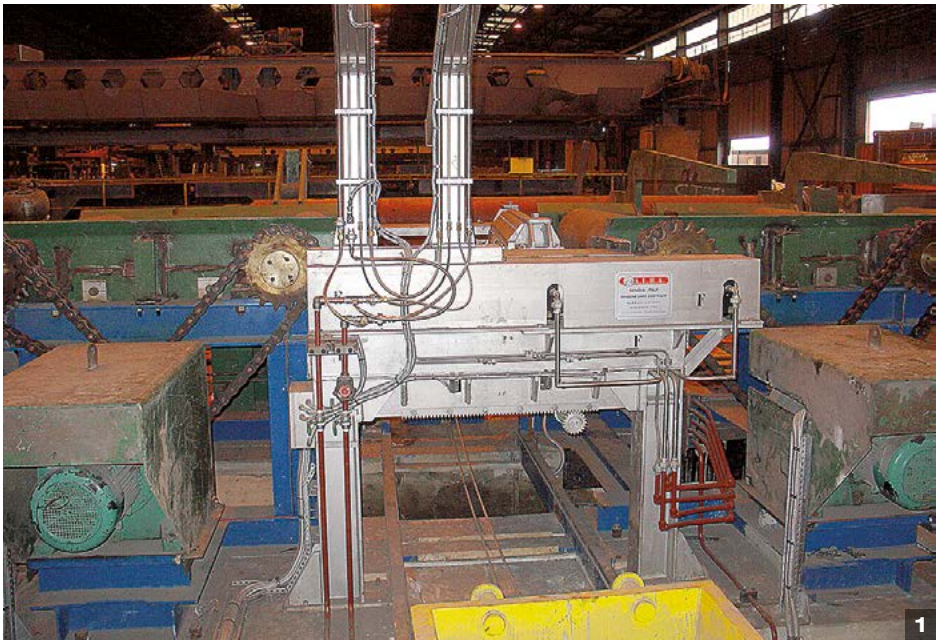
4 Sample cutting machine for blooms up to 500 mm thickness
5 Sample cutting machine for 5-strand billets up to 200 mm thickness
6 Emergency TCM for 800mm rounds
7 Special TCM for rotoforge – stainless blooms up to 600 mm thickness
8 Lengthwise-crosswise subdividing and sample cutting machine for slabs
9 Crosswise subdividing cutting machine for slabs



10 Emergency TCM for thin slabs up to 20x1560 mm
11 Billet sample cutting machine
12 Slitting-subdividing TCM

DEBURRING SYSTEMS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A.L.B.A.'s deburring systems for billets, blooms, rounds and slabs are specifically designed in order to take the burr generated by the cutting process completely out, and well known for their reliability, ruggedness and short deburring times.They can work in full automatic, semi-automatic or manual mode achieving the best performances as well as deburring results.

MECHANICAL DEBURRING MACHINE

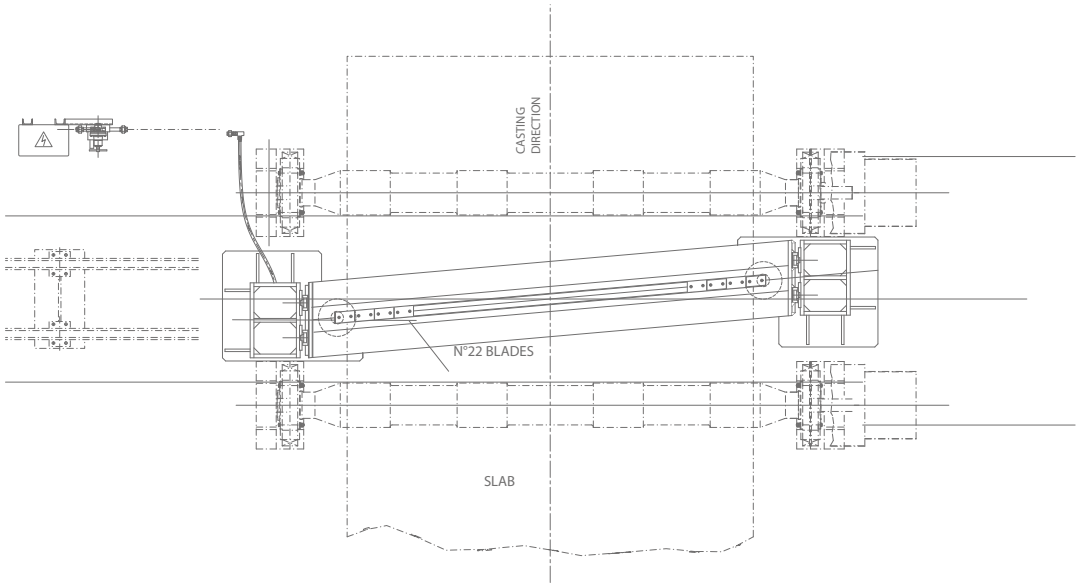
The mechanical deburring machine suitable for blooms, rounds and slabs, placed underneath the roller table is made of water-cooled electro welded carpentry, machined where necessary and consists
of a main movable structure on which the deburring blades are placed. Controlled by a set of light barriers, blades are lifted and lowered and moved forward and backward (casting direction) cleaning the head & tail of the bar while it is moving on the roller table. Blades could work in both directions with an inclination angle reducing the contact force required and making the deburring process easier.

SPECIAL FEATURES

The machine could also be equipped with the following special features as an option, if required:

- an isolated cover box to keep the noise level under control;
- a slag conveying system to be placed underneath the deburring machine;
- according to the weight, dimension and length of the bar, a water cooled pinch roll could be installed to keep the bar in a right position during the deburring process.

1 Mechanical deburring machine for slabs up to 2100 mm width
2 Deburring machine for blooms

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OXYGEN DEBURRING SYSTEM - SAC

The "SAC" system allows to remove the slag as soon as it forms under the billet or the bloom during cutting operations and is designed to be installed in A.L.B.A.'s torch cutting machines.

The "SAC" system works in combination with the main oxy-cutting torch and blows a "laminated" flow of oxygen under the lower surface of the billet while it is cut.

When the cut is finish the head and tail of the bar is cleaned and with a perfect shape ready to be laminated. The deburring torch could move automatically and be kept in a safety position when not in operation.

ADVANTAGES OF SAC SYSTEM

- lower cost compared with mechanical systems;
- easier maintenance;
- lower consumption.


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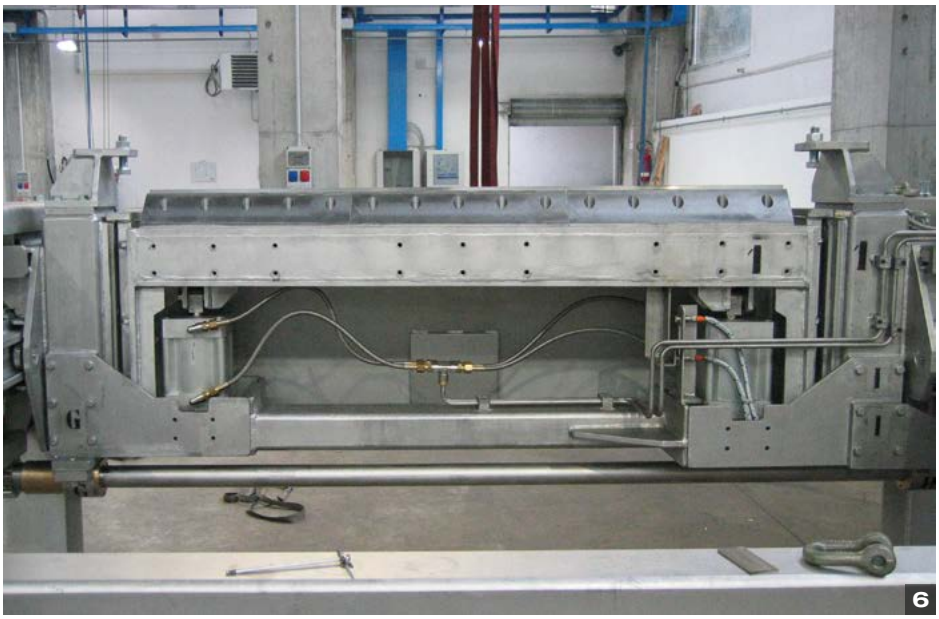
3 "SAC" oxygen deburring system for billets and blooms - Front view
4 "SAC" oxygen deburring system for billets and blooms - Side view
5 Mechanical deburring machine, hammer type, for slabs up to 2100 mm width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Designed and manufactured considering all the necessary conditions in order to avoid risks for personnel and plant during the use and maintenance of the machine, it will be equipped with all the required safety devices according to all international standards.

Deburring systems are based on a proven technology with high reliability and low maintenance and are specifically developed to offer high performances in heavy industrial environments.
A.L.B.A.'s deburring systems are CE certified and developed according to the UNI EN ISO 9001:2008 quality standard.


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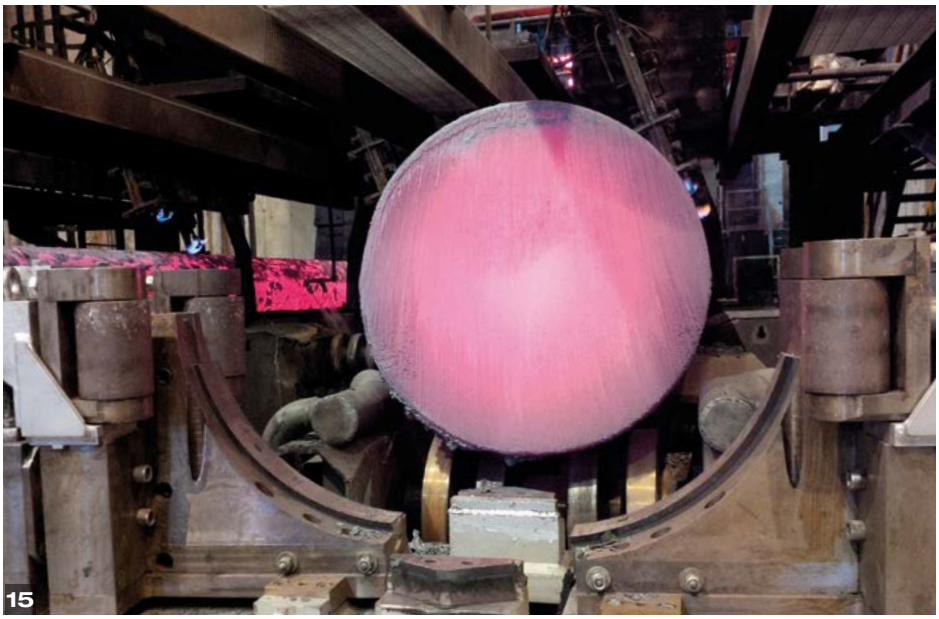
6-7-10 Deburring machine for slabs
8 Deburring machine for blooms
9 Mechanical deburring machine for rectangular and round blooms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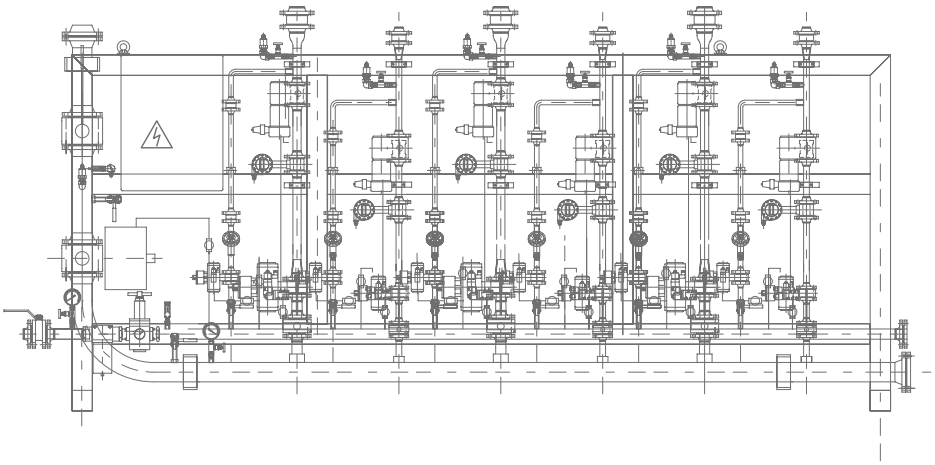
14-17 Deburring machine for slabs
15 Deburring machine for 600 rounds
16 Deburring machine for blooms

FLUID CONTROL STATIONS

1 Control station for TCM with gas leakage detector
2 Fluid control station for AOD
3 Process gas control station for AOD



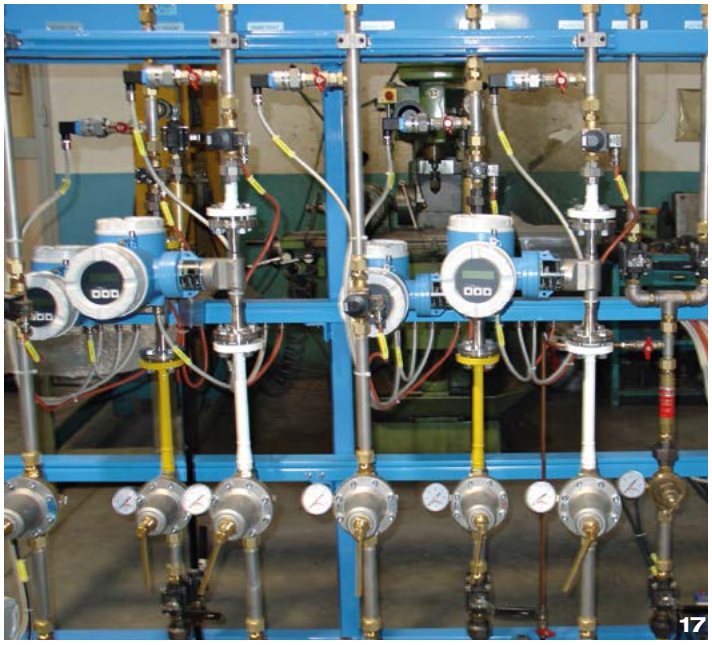
A.L.B.A.'s fluid control stations are designed and manufactured in order to allow every kind of fluid control for Torch Cutting Machines, oxygen blowing systems, burners systems and for any purpose in the steel industry. They can be produced for all most common gases, such as oxygen, methane, propane, acetylene, argon, nitrogen, compressed air, etc. and they can be equipped with all necessary special devices such as pressure reducers, mass/flow-meters, on/off valves, solenoid valves, safety valves, flashback arrestors, pressure switches, impurity catcher filters, dryers, etc.

They are supplied with the right steel supporting structure and they are completely assembled, cabled, checked and tested in our facility.
A.L.B.A.'s fluid control stations are specially engineered to satisfy all customer needs, final work site conditions and comply with all standards and regulations in force.

A.L.B.A.'s fluid control stations are developed according to the UNI EN ISO 9001:2008 quality standard.

4 Oxygen control station for VOD
5 Fluid control station for AOD
6 Oxygen control station for VOD
7 Detail of process gas control station for AOD

8-11 Process gas control station for AOD
9-10 Detail of process gas control station for AOD
12 Gas control station for TCM
13 Argon control station
14 Pump cooling water station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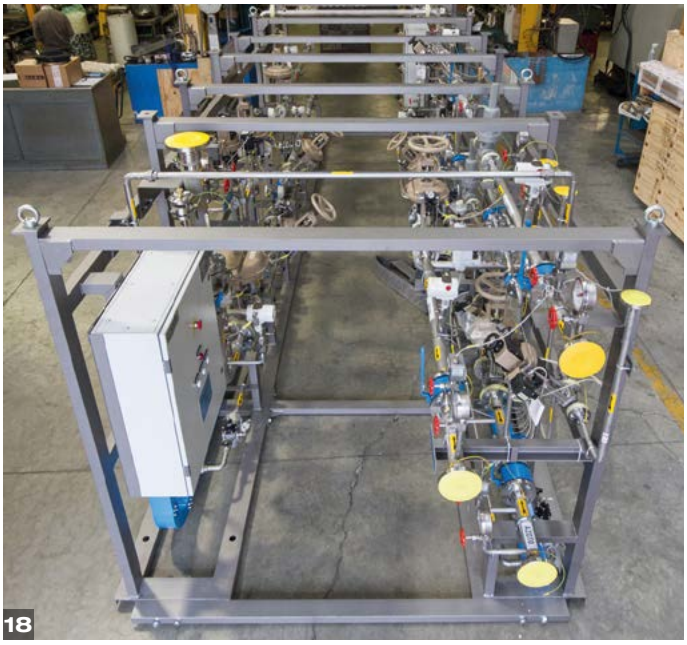
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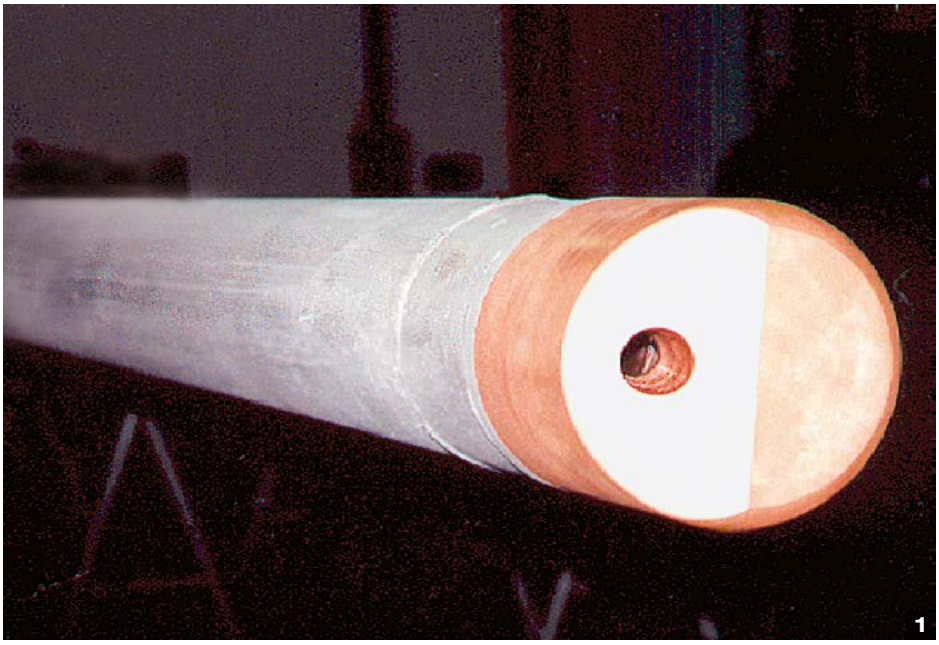
15 Pump cooling water station
16 Gas control station for TCM
17 Gas control station
14 Process gas control station for AOD

OXYGEN LANCES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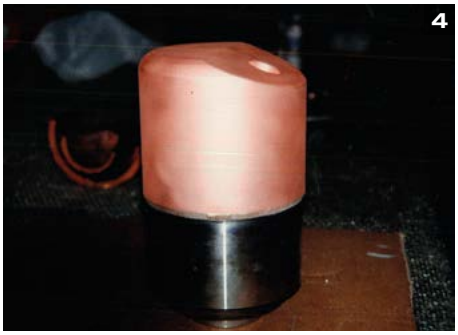
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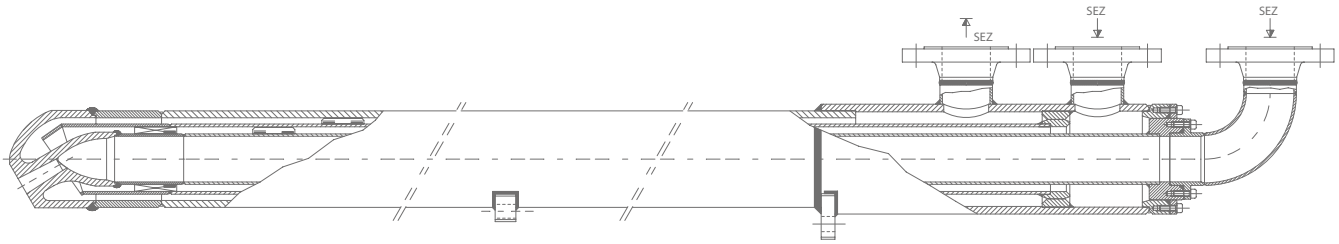
1 Water-cooled oxygen lance for EAF
2 Water-cooled oxygen lance for AOD-converters
3-4-5-6 Interchangeable tips



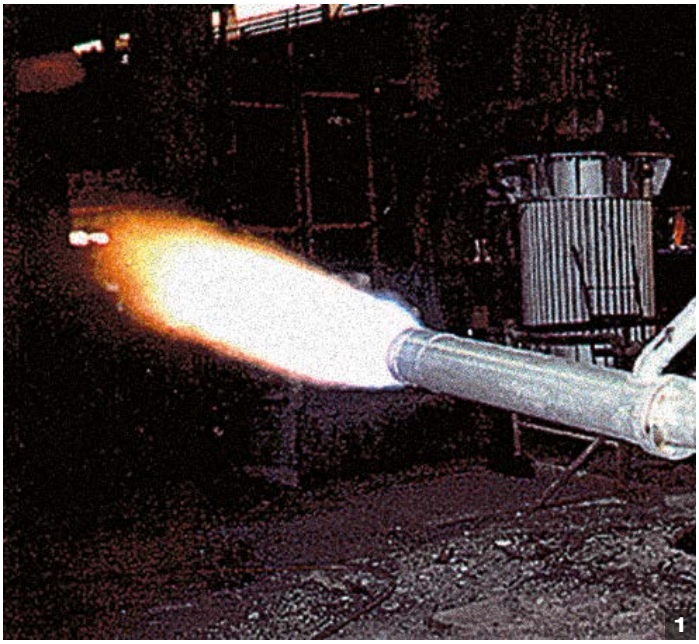
A.L.B.A.'s oxygen lances allow to inject oxygen directly in Electric Arc Furnaces, CD converters, AOD or VOD refining units.
They allow a remarkable increase of furnace temperature, shortening of melting time and acceleration of decarburization and steel refining process.
The complete system consists of a fluid control unit, the manipulator for lance advancing, flexible hoses for lance feeding and a loose lance or a water-cooled lance, depending on the melting process requirements.
The oxygen blowing water-cooled lance can be also coupled with a parallel carbon injection lance, in order to allow both furnace temperature increasing and slag foam production.

A.L.B.A. can supply both consumable lances and water-cooled reusable lances, water-cooled copper lance tips easy replaceable with standard welding practice, complete fluid control unit, and flexible hoses for lance feeding.

A.L.B.A.'s oxygen lances and oxygen-blowing systems are developed according to the UNI EN ISO 9001:2008 quality standard.

7 Water-cooled oxygen and carbon lances for EAF

BURNERS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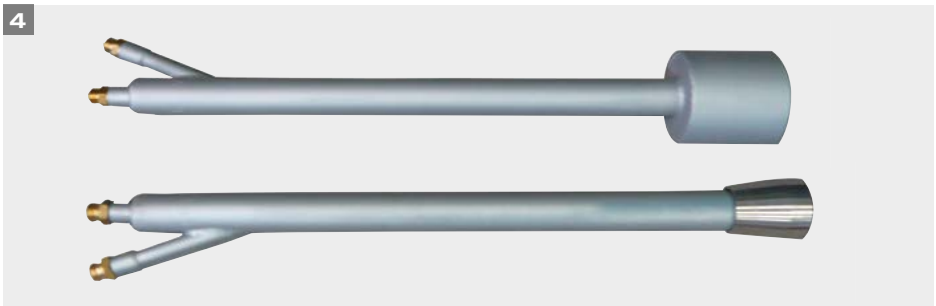
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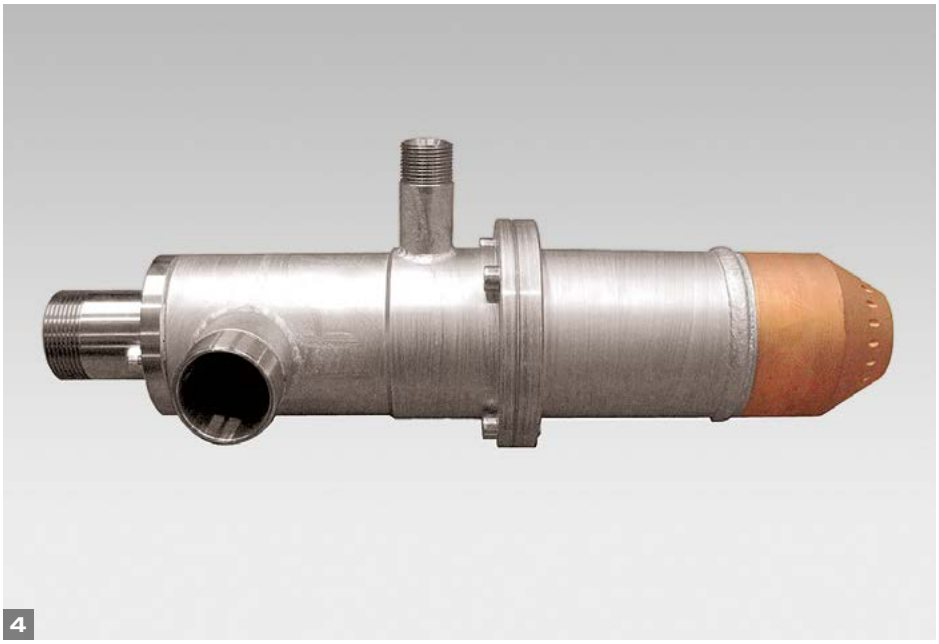
1 Water-cooled "Supermach" supersonic burner for eaf
2 Water-cooled Supersonic burners for eaf - Different types
3 Portable burners system with flame control
4 Ventilated air burner
5 Air intake burner

3



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A.L.B.A.'s burners for EAF are designed and manufactured in order to improve scrap cutting-down (ALBASUN series) and to supply additional heat to the electric furnace (SUPERMACH series).

The water-cooled ALBASUN series burners are engineered to be installed on slag removal doors or on furnace walls and to be operated by a manipulator. They have a gas/oxygen crown outlet and they produce a long and very concentrated flame which allows to improve scrap cutting-down and electric arc stability. They produce an oxidizing and external mixing combustion with thermal capacity from 3 up to 5 MW.

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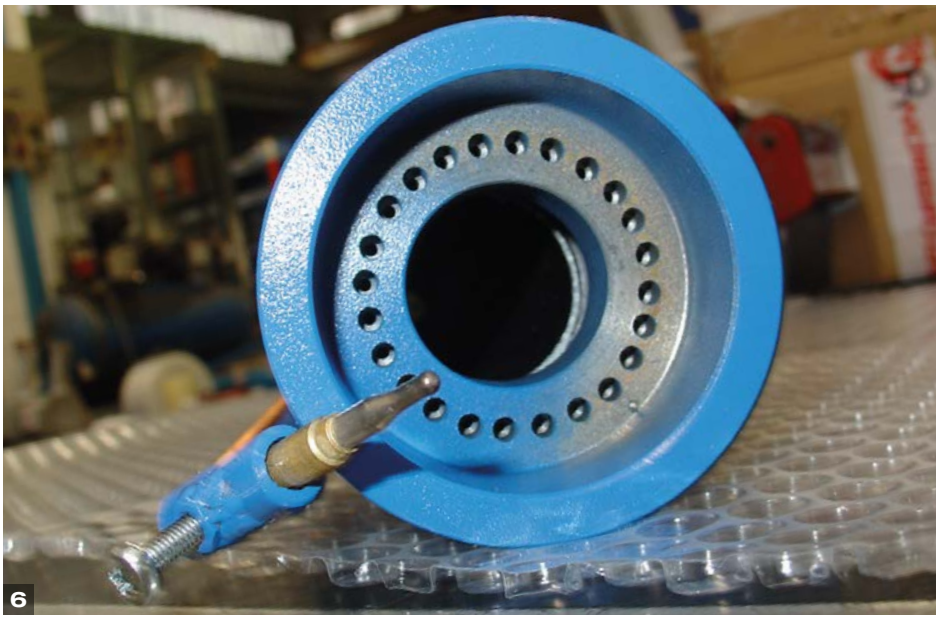
3 "Supermach" supersonic burner for EAF
4 Supersonic burner for EAF
5 Suction air burner



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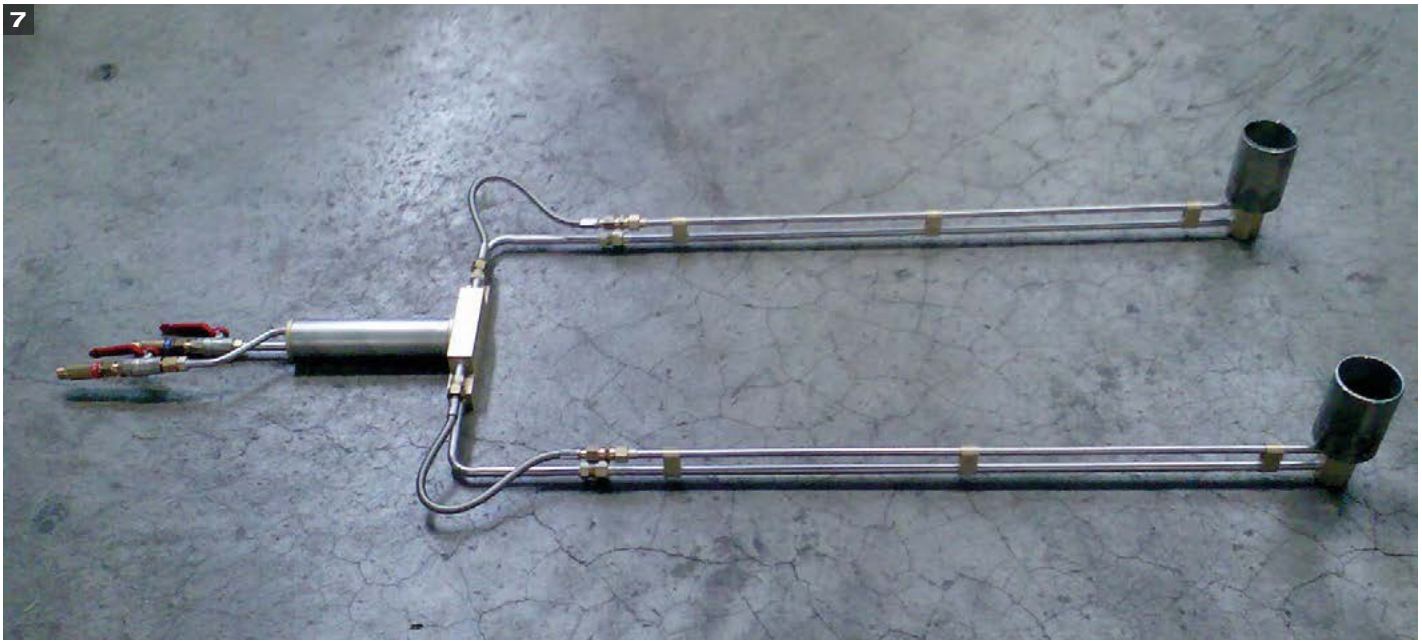

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The water-cooled SUPERMACH series burners are engineered to be installed on furnace walls. They have a supersonic gases outlet speed in order to avoid any possible flashback and to reduce tip obstruction caused by the slag. The high thermal capacity (from 2 up to 9 MW) and the very large flame size for wide surface heating allow a high heat supply to electric furnaces.

The complete system includes the fluids regulating station, the safety devices, special flexible hoses and the control board.

A.L.B.A.'s burners for EAF can be supplied in different thermal capacities, lengths, fluid inlet connections in order to meet the characteristics of each single furnace.

A.L.B.A.'s burners for EAF are developed according to the UNI EN ISO 9001:2008 quality standard.

6 Suction air burner
7 Snorkel heating burner

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8 Scrap cutting-down burner
9 Suction air burner

HEATING SYSTEMS


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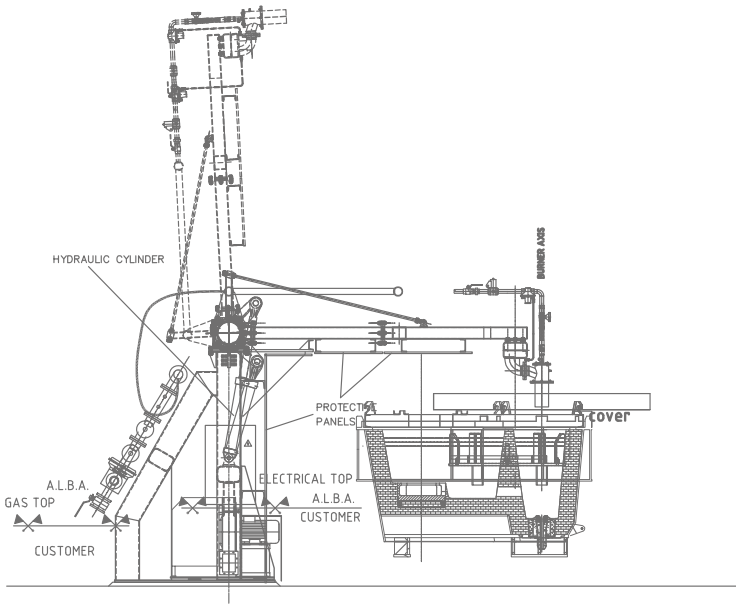
1 Tundish heating system
2 Tundish heating system for multiple strands
3 Manifold heating system for special application

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A.L.B.A.'s special heating systems are designed and manufactured in order to allow heating of large pipes components, flanges, plates prepared for welding process, surface inserts or junctions.
They use "manifolds" modular burners-holders assembled by means of a fulcrum-pin that allows to set up polygons adapting to the profile of the piece to be heated.
Burners for manifolds have a high thermal capacity working with a mix of air and combustible gas (methane or propane) and a reducing flame.

A.L.B.A. can supply the complete heating system which includes a regulating panel for air and combustible gas, flameproof and self-extinguishing flexible hoses, safety valves and flashback arrestors, quick couplings for fast and easy assembling/dismantling, manifolds in different quantity and length according to customer needs.
The system can be also equipped with an electronic control device in order to automatically check and regulate the desired heating temperature.

A.L.B.A. also designs and manufactures heating and drying systems for tundishes, ladles, etc. which include steel supporting structure, complete fluids regulating station, control panel, feeding hoses, and safety devices.

A.L.B.A.'s heating and drying systems are developed according to the UNI EN ISO 9001:2008 quality standard.

3-4-5 Manifolds for large pipes heating

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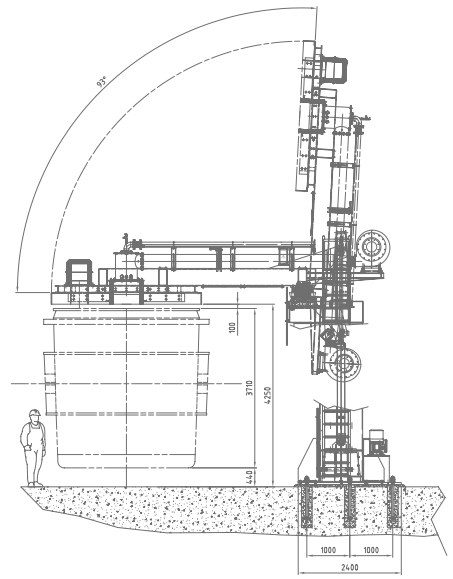
6 Manifold heating system for special application
7 Burners for tundish heating
8-10 Tundish PRE-heating system for multiple strands
9 Horizontal heating system for ladle

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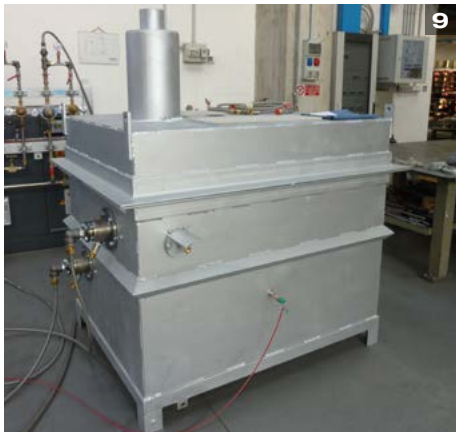
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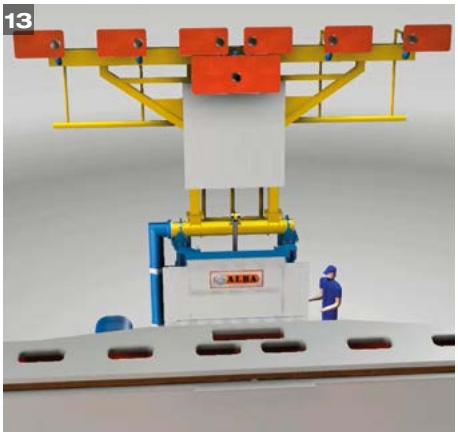
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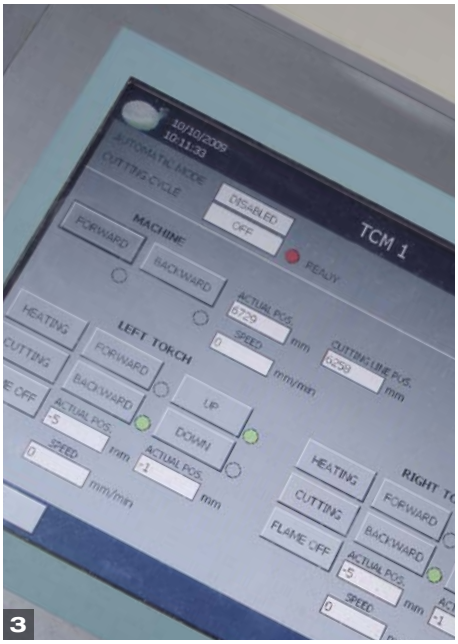
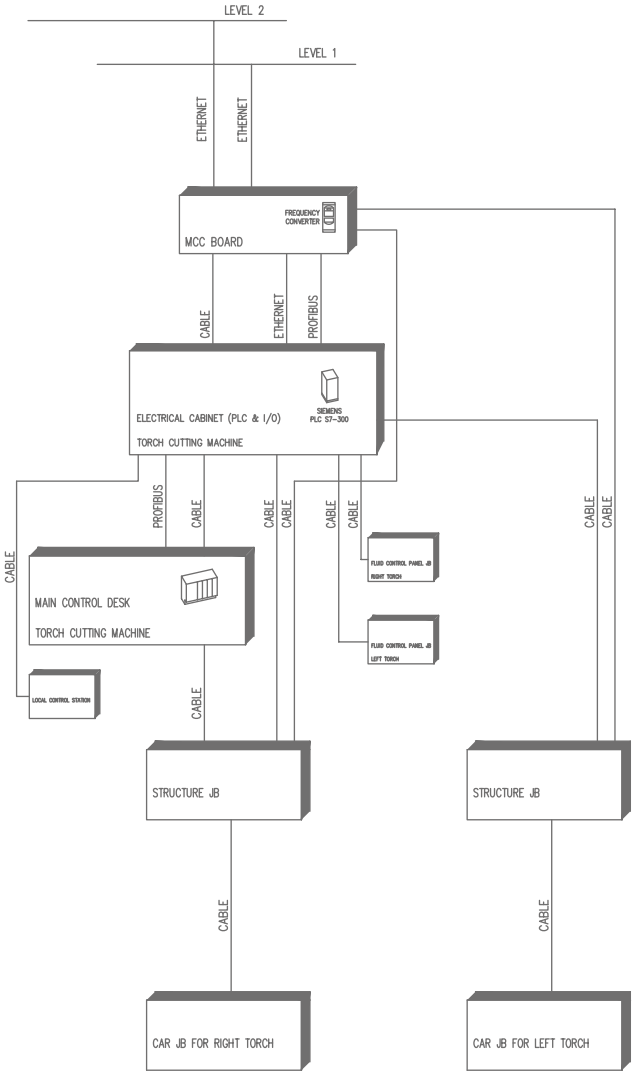
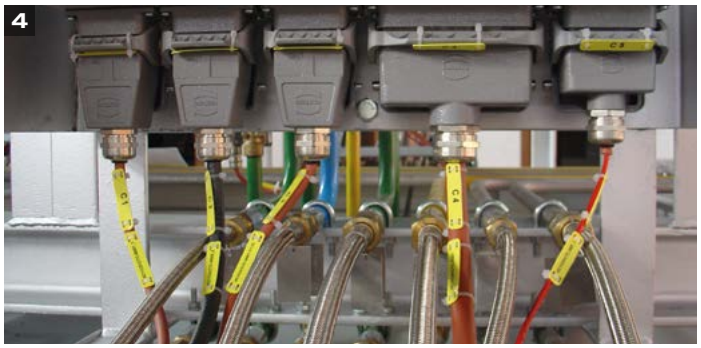
8-11 Tundish PRE-heating system for multiple strands
9-10 Heating oven for snorkel
12-13 Tundish heating system for multiple strands

AUTOMATION



1 Control pulpit for operator control room
2 Complete automation system
3 Touch screen HMI system





4 Electrical connection
5 Complete automation system
6 Complete automation system for TCM & deburring
7 Local control box

8 Control pulpit with operator panel
9 Complete automation system for six strands TCM
10 Remote control pulpit

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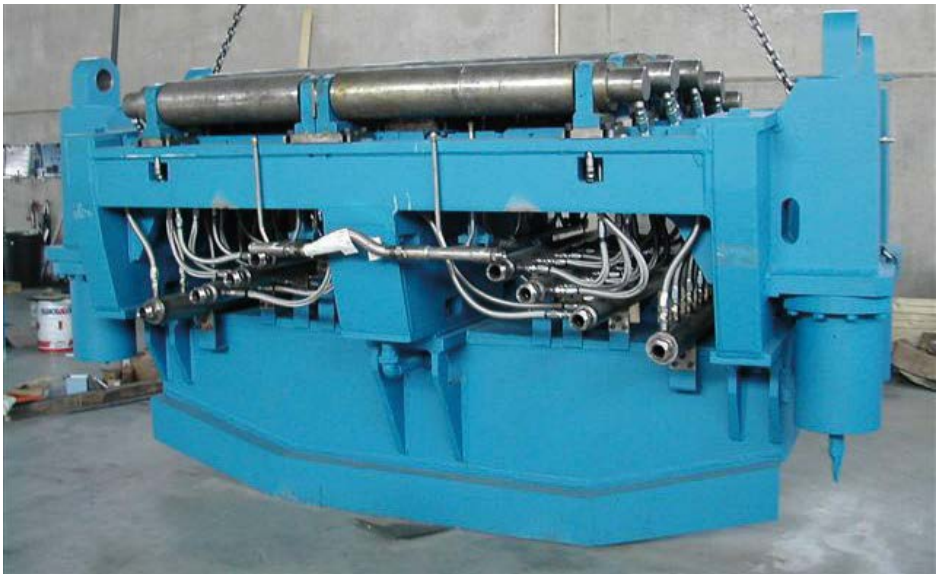
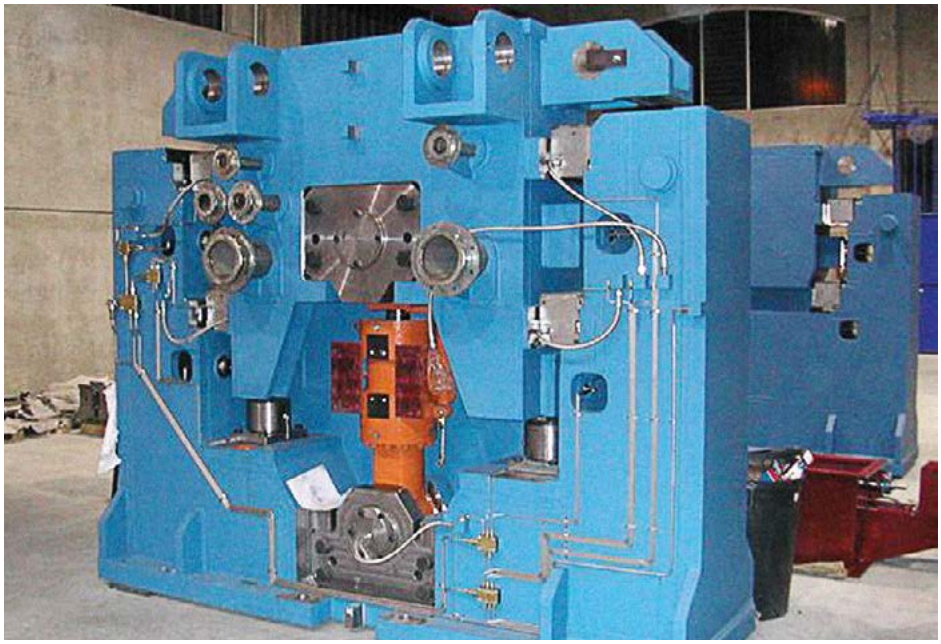
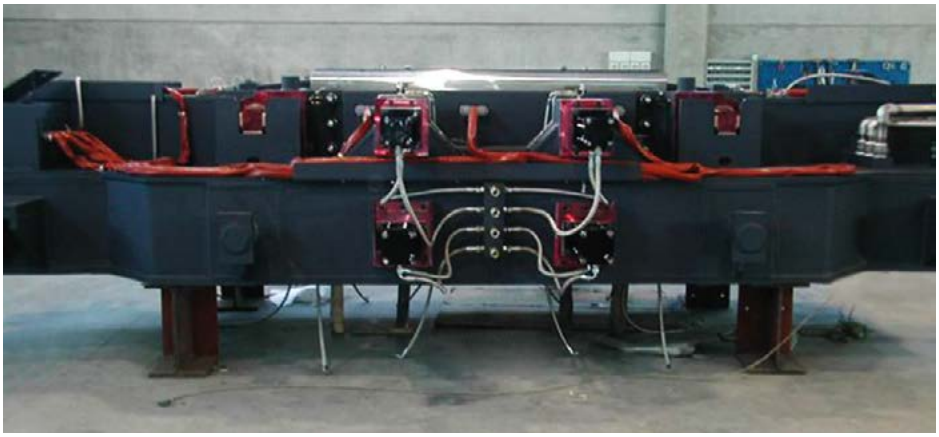
11 MCC cabinet
12 Operator panel
13 Complete automation system

MECHANICAL ON DRAWING PRODUCTION

by ALBA MECCANICA SRL – Cuneo – Italy

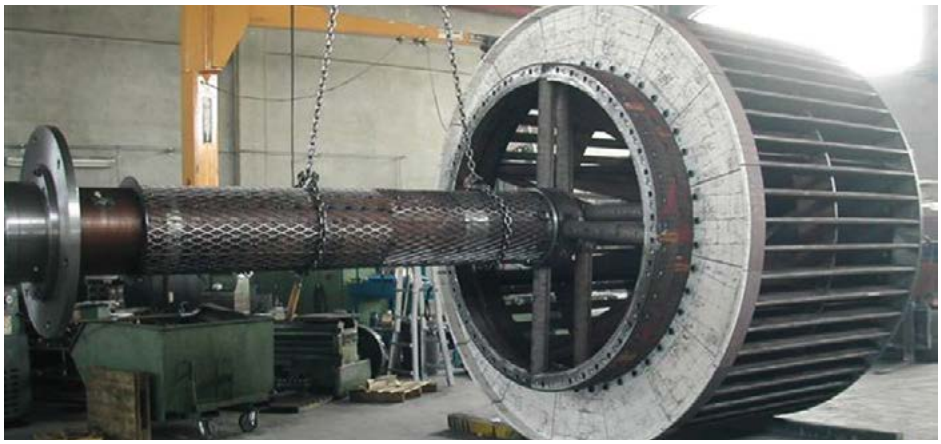


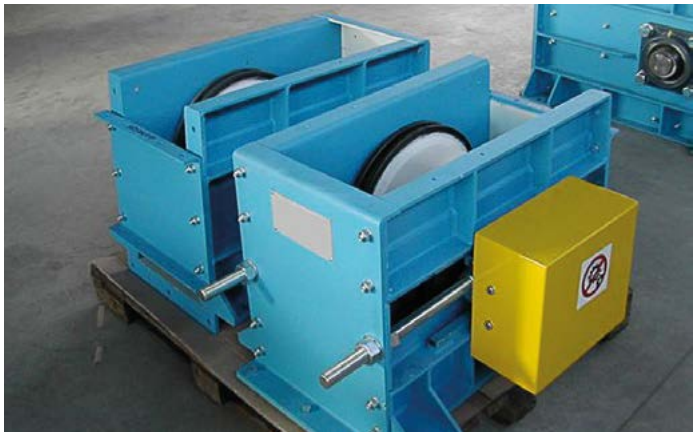


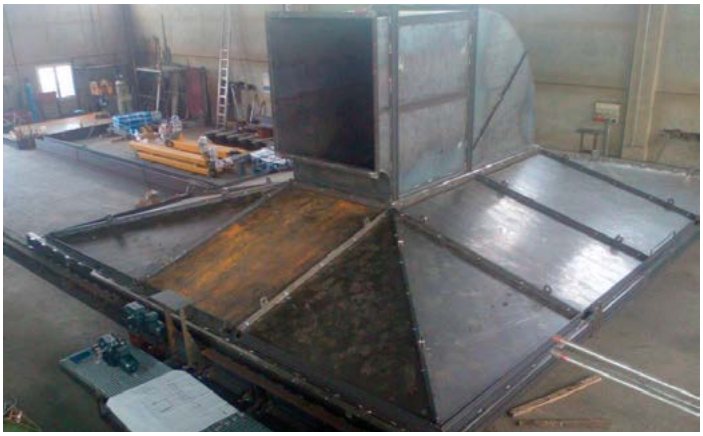


Produzione di particolari finiti a disegno compresi di lavorazione meccanica e trattamenti termici e superficiali, impiantistica e tubisteria, assemblaggio e collaudo, di ogni tipo di carpenteria medio pesante.

On drawing production of any kind of medium/heavy metal carpentry product including construction, mechanical machining with required thermal or surface treatment, plant engineering and piping, industrial assembling and testing.







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