Presezzi Extrusion Group

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Presezzi Extrusion Group
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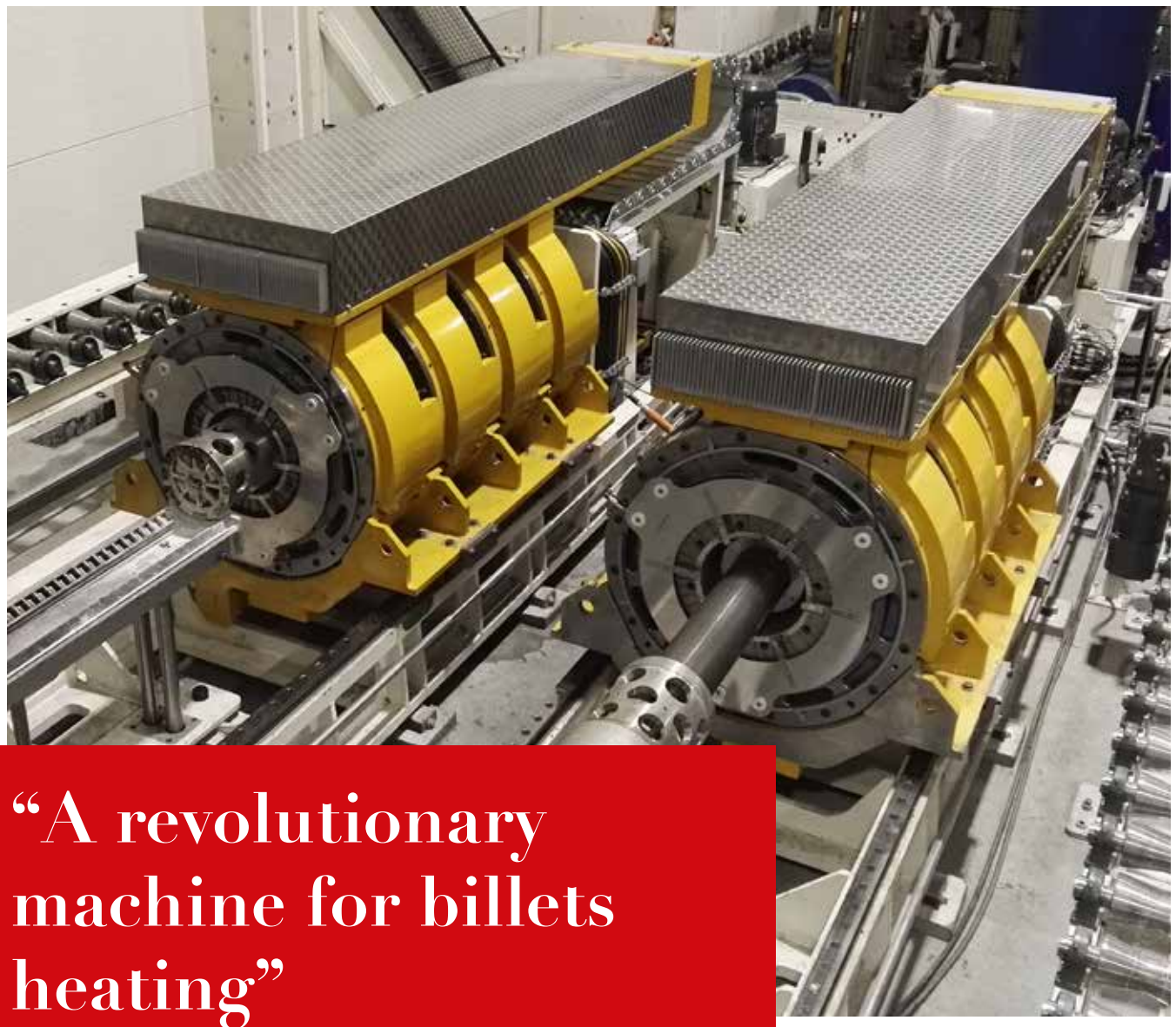
www.presezziextrusiongroup.com



"A revolutionary machine for billets heating"

ZPE « Zero Pollution Energy » patent-pending - is the new revolutionary heating system for aluminium billets developed entirely by Presezzi Extrusion.
High energy, cost savings and low emissions are the key factors for the best results in terms of technological innovation in the aluminium extrusion industry.
The Zero Pollution Emission (Z.P.E.) is the result of years of research and engineering work, followed by testing performed in collaboration with one of the most famous universities in Milan. We now proudly announce that Presezzi Extrusion has achieved a great success where other manufacturers have tried and failed!
The ZPE is a magnetic oven solution suitable for aluminium alloys and for non-ferrous alloy billets. It is system for which a patent is pending with an energy consumption of 165 kWh/ton. When compared with the other traditional induction solutions, our magnetic oven leads to energy savings of up to 40 %.
The first two permanent-of these magnetic type ovens has been sold and installed in Japan to the extruding company Kato Light Metals Industry Co., Ltd.
Japan is known as one of the most technologically advanced countries in the world even in the aluminium industry and the ZPE has proved to meet all the customer's expectations as well as fulfilling all the Japanese technological standards.

In production since 1st April 2016

N°2 ZPE
Billet Ø 6" / 8"
Max. Billet length: 800 mm
Capacity: 40 billets/h
Consumption: 165 kwh/Ton
Temperature Uniformity and
Repeatability: ± 3 °C
Max. Taper: 100 °C/m
Power supply: 420 V - 60 Hz

In Kato Light Metal Industry (Japan) the installation consists of two magnetic ovens suitable for both 6" and 8" diameter billets, with a maximum output capacity of 40 billets per hour.

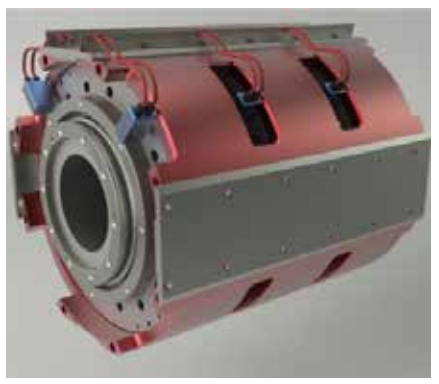
The ZPE heaters have been installed as to replace an existing induction furnace, and as an additional point of interest includes a vertical loading system, a solution developed by the Presezzi Extrusion Engineering team due to the limited space available for its installation.
With the ZPE heater the customer was able increase productivity from 30 to 40 billets per hour, with a significant reduction of energy consumption.
Furthermore, the ZPE does not require the installation of a dedicated transformer. This allows the further reduction of the space required for installation and a big saving in the overall investment cost if compared to a traditional induction heater.
After the success of the installation in Japan, due to the excellent results achieved in terms of energy saving and uniform heating, several leading aluminium extruding companies are now showing interest in the ZPE system and Presezzi Extrusion is looking to obtain new orders.
For instance, the company Benteler acquired our ZPE heater to replace an existing induction furnace after comprehending the benefits and the higher performance offered.
The project will be completed in two steps. As a first step one ZPE will cover the productivity of 16 billets/h; a second oven to be installed later will increase productivity to 32 billets/h.

Start in production August 2017

N°1 ZPE
Billet Ø 11"
Max. billet length: 1000 mm
Capacity: 16 billets/h
Consumption: 160 kwh/Ton
Temperature Uniformity and
Repeatability: ± 5 °C
Max. Taper: 100 °C/m
Power supply: 400 V - 50 Hz

The heating of the billet is obtained thanks to the magnetic field that is created during the rotation of the permanent magnets, assembled on the rotor of a coaxial motor.

The force lines (magnetic flux) that are created by the magnetic field, penetrate deeply into the material, thereby obtaining the heating effect.
Depending on the length of the billet, the project foresees a different number of heating sections to cover the whole length of the billet. Each section is independently controlled to ensure both linear and tapered heating of the billet

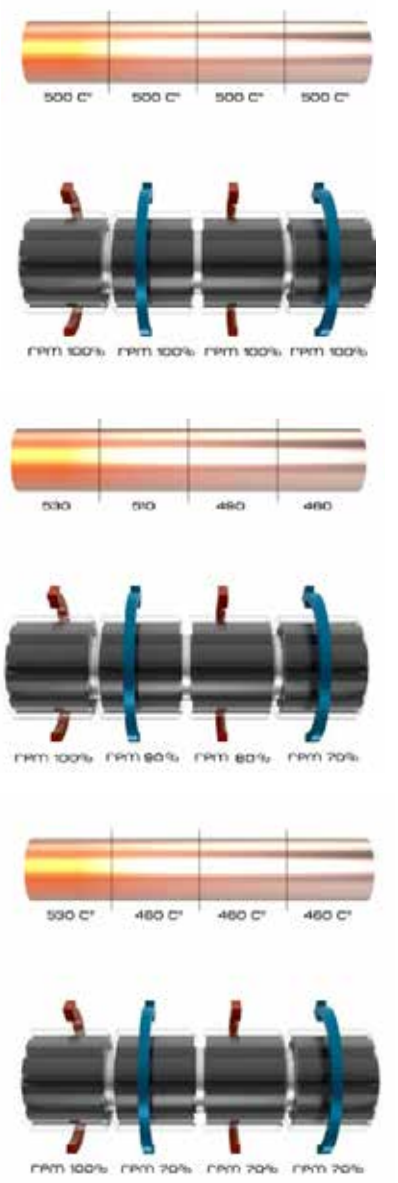


On the top a representative example of a ZPE oven with three heating sections

Each section has its own motor which is controlled by a frequency converter. Acting on the rotation speed it is possible to obtain different temperature results in the same cycle time. The ZPE system makes an accurate calculation and control of the heating process and takes into account the type of alloy and the starting temperature, automatically calculating the exact process time and speed with real-time adjustment to obtain the desired temperature.

According to the total length of the billet, the number of sections employed for the heating process may vary so one or more sections may remain off preventing energy from being wasted.

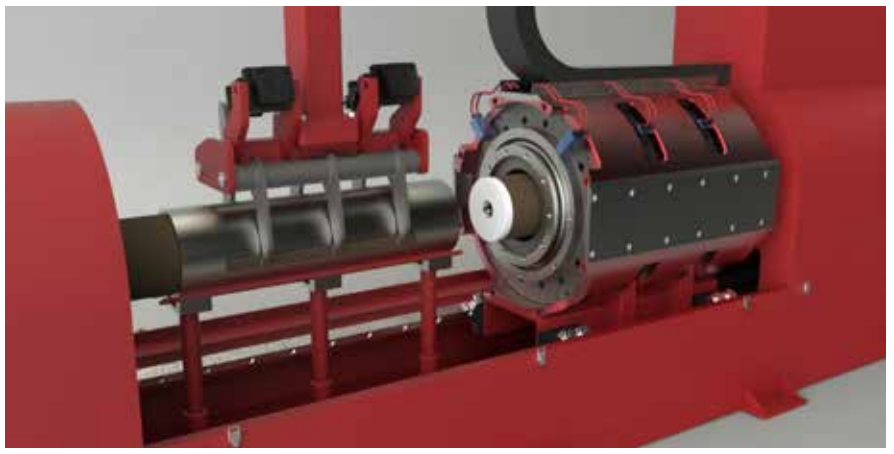
Example of several heating possibilities



The process time calculation is extremely accurate. In any case, the ZPE features several thermocouples that are installed to prevent the overheating of the billet and to ensure a real-time measurement and control of the temperature of the billet

In the ZPE all components that are exposed to the magnetic field, are made of non-magnetic material, so as not to compromise their functionality.

The magnetic field generates calorific power and a rotation force that is transmitted to the billet. To avoid any possible movement of the billet the ZPE has a specific locking system, managed by a load cell and a linear transducer. When the billet is loaded into the oven it is locked by a mechanical support and a movable stopper which adapts its position depending on the billet length.

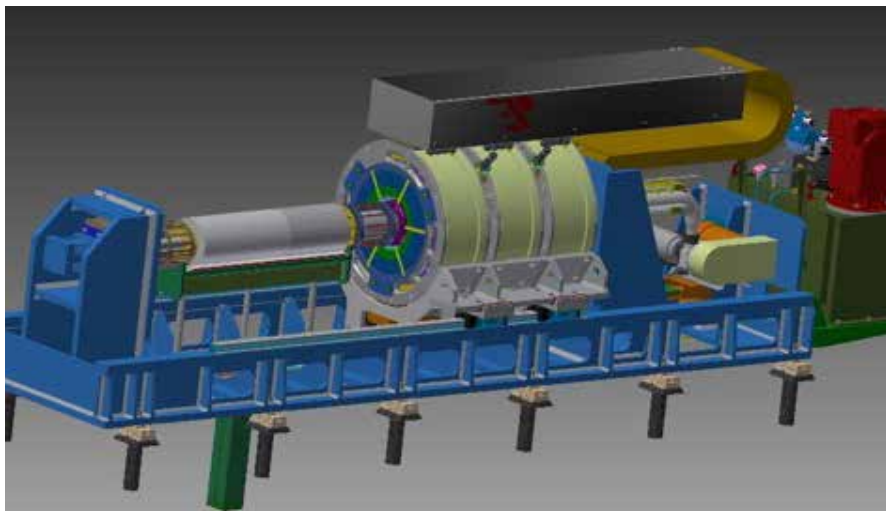


When the billet is well locked, the oven sections first slide into position to cover the length of the billet and then the heating starts.

The ZPE has various safety systems to prevent the loading of deformed billets, overheating of the magnets and possible melt down of the billet, etc..

As a further advantage in terms of safety for the working environment and a big difference if compared to a traditional induction furnace, the ZPE has no negative influence on the working environment: the magnetic field is limited to within the footprint for the equipment so the operators can operate around the ZPE system in total safety.

For Information:
Andrea Scaccabarozzi, Technical Sales
a.scaccabarozzi@presezziextrusion.com



GETTING CLOSER TO OUR CUSTOMERS

The need for better communication and the transfer of information more clearly and faster are the basic elements for our After Sales Service activities. The first contact with our after sales support operation comes about through the Internet with a system aimed at providing Tele-Assistance guaranteed to ensure the best customer care available.

When a problem occurs, the first step to be taken is that of understanding exactly what has happened - an essential factor in order to make a correct analysis of the situation and decide what approach is the best to adopt in order to resolve it. It is also essential to facilitate communications between our After Sales Service department and a customer. It is for this reason that we have created the "PE PORTAL" - a web portal that allows the customer to interface with our Customer Service department and communicate in real-time with our team of experts. With this new system (a free website accessible from any pc or tablet), requests can be made directly to the PE Group. The "PE Portal" is easy and simple to use and replaces the traditional e-mail approach, used previously between customers and our Customer Service Department. When any type of after sales service or support is required from our team, it is enough to access our "PE Portal" and choose what kind of support is necessary:

- Mechanical, electrical or software requests
- Requests regarding technical information
- Requests for general information, requests for spare parts and offers

Once a request has been inserted, this is sent directly to the relative technical department which then makes an initial analysis of the request.

With the "PE PORTAL" the customer has a direct line with our team of experts, using a real-time connection, and can keep track of all the requests which have been made.

A year after the official introduction of this service system, we can honestly now say that WE ARE CLOSER TO OUR CUSTOMERS THAN EVER BEFORE.

LOG AND BILLET WASHING AND BRUSHING

Under certain circumstances, an extruder can find himself obliged to use aluminium logs or billets which are could be covered in sand, dust, soil particles as well as residual oxides on the outer surface. All these elements, if not completely removed, can be carried over on the billets and into the extrusions with damaging consequences on the final product. As well as impairing the quality of the product, in the long term these contaminants can also have negative effects on the components inside the furnaces. COIM designs and constructs particularly solid and efficient automatic brushing machines for logs which ensure the complete removal of surface residues and the efficient removal of the resulting fumes and dust (using ATEX proof suction systems). As an alternative, logs and billets can be cleaned using an automatic washing machine, which employ extremely high pressure water jet nozzles, using heated or cold water, recycled water in a closed loop system with filtering.

Both the brushing machine and the washing machine are installed in line along the billet pusher axis on the billet oven, so as not to interfere with the oven cycles, with the brushes or nozzles as the case may be, distributed in a circular "crown" arrangement around the whole circumference of the log, providing uniform cleaning on the whole outer surface.

For further information please contact:
g.barbieri@coimsrl.net

A new complete aluminium foundry plant

The company EKO-SWIAT awarded Melting Technology (Presezzi Extrusion division) with the order for the design and manufacturing of a new complete aluminium foundry. The new foundry comprises a 40t static melting furnace equipped with the innovative Low Energy Consumption Stirrer for metal recirculation, a 35t static holding furnace, one automatic charging machine, one dross cooler system and a fumes treatment plant designed to meet the latest EU environmental limits (Best Available Techniques (BAT) Reference Document for the NON-FERROUS Metal Industries dated February 2013). All the plant will be designed and constructed with the aim of reaching the best performance in terms of productivity, reductions in metal loss and energy savings.

The clean and dirty scrap will be loaded into the melting furnace via a dedicated automatic charging machine. The charging machine will be designed to ease and speed up the loading of scrap and primary ingots into the furnace to optimize production and to reduce heat leakage to a minimum. The oxy-air-fuel burners use independently controlled streams of gas, air and oxygen to overcome the conventional limitations of oxygen use. It produces a flame with high temperature, luminosity and velocity, increasing both radiative and convective heat transfer.
The use of oxygen as a substitute for air allows a very efficient combustion process to be obtained thanks to the elimination of N2. With Oxy-combustion the melting cycle is faster thanks to the increase in the rate energy is absorbed by the metal.
Decreasing the percentage of solid inside the aluminium bath there is a significant reduction in the capacity to absorb energy by the metal contained in the furnace. Under these conditions, the application of an oxygen burner can lead as a superposition of thermal energy that the metal cannot absorb and which then is dispersed through the fumes and the furnace walls. During refining, holding and fluxing phases, the two burners can operate with air so as to save energy thereby reducing the specific consumption.
The furnace will be equipped with a refractory lined chimney where an automatic gate valve and a new concept air-blade are installed, controlled automatically by the internal pressure of the furnace. The shutter material is reinforced refractory metal fibre so as to ensure reliability and durability.

The recirculation of the molten metal in the melting furnace will be ensured by the new Low Energy Consumption stirrer. This innovative stirrer does not require water piping, pumps or a water treatment plant, neither does it require its own insulation transformer, furthermore ensuring better efficiency than any other conventional electromagnetic system due to the fact that there is no heat loss by Joule effect. The combination of rotation and crosswise movements contribute considerably to the drop melting decrease (maximizing the scrap metal return) and to the minimization of the specific energy consumption of fuel. The aluminum bath, before each transfer in the holding furnace, will be homogenized thermally (variation of 2-3 °C between start and end of transfer) and chemically (the heavy elements will become homogeneously distributed over the whole bath volume avoiding the stratification phenomenon). All the melting furnace's dross will be treated with our "PE ARGON DROSS COOLER".

This system is the most efficient, safest and environmentally sound of all the cooling methods. The recovery of aluminium with the "PE ARGON DROSS COOLER" is always higher than with other methods: this can be explained by the fact that thermiting is stopped as soon as the inert gas is applied. The "PE ARGON DROSS COOLER" can process up to 1.000 kg per cycle and has the following features: it is ccompletely safe because no water is used either for the cooling of the dross or with the equipment, it is environmentally sound therefore no emissions of dust or fumes, provides for easy working conditions is therefore operator friendly, treats all kinds of dross (black and non-reactive or white and reactive).

In summarizing, the new plant will offer the following advantages to the company EKO-SWIAT:
- The possibility of increasing the percentage of contaminated material in the load mix;
- Reduced CO, TOC, NOX, Acids and particulate emissions;
- Reduced specific gas consumption;
- Increased melting performance and reduced metal loss;
- Increased metal quality;
- Dross with higher sales values.

For Information:
Giovanni Battino, Technical Sales
g.battino@presezziextrusion.com

NOx EMISSION? NO PROBLEM WITH COIM!

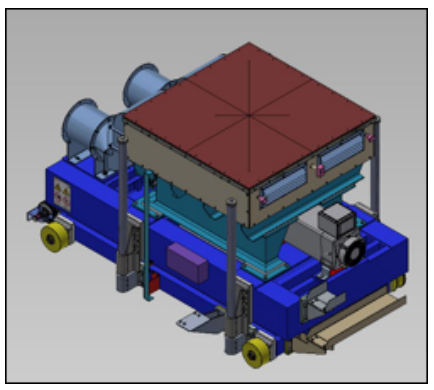
Manufacturers of gas furnaces today must face increasingly restrictive requirements, in many part of the world, regarding the emission levels of CO, NOx and PM 2,5-10.
Europe, the USA but also many countries in Asia are rightly asking that all industrial companies, including extrusion companies, to reduce their emissions and to provide furnaces with BAT (BAT - Best Available Technology) to guarantee that these new, challenging emission targets are complied with.
The COIM technical department have invested a lot of resources in this matter, looking for the best applications, for the most modern reduction techniques for CO and NOx emissions, in collaboration with the most important producers of burners and combustion components.
Concerning the ever more stringent requirements to reduce NOx level emissions, over the last 10 years, COIM has installed only SELF-RECUPERATIVE BURNERS on its ageing and annealing furnaces.
Self-recuperative burners are not unfortunately applicable to gas-fired billet furnaces, which must work with several, small conventional burners installed along the heating chamber, to allow the homogeneous heating of the billets.
Nevertheless, as mentioned and demonstrated by customers' tests, the values obtained are significantly below both the permitted levels and the BAT levels provided by self-recuperative burners.

ENERGY SAVING IN GAS-FIRED BILLET HEATERS

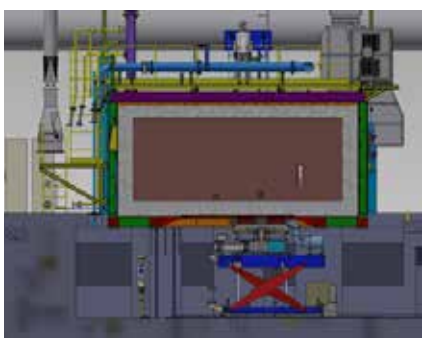
The COIM gas log and billet heaters COIM are widely accepted as the highest performing ovens for the energy saving point of view thanks to their low consumption of gas.
Starting from the 1980s, COIM has developed its own technology for recovering the thermal energy deriving from combustion and contained in the exhaust fumes in various "stages".
Before being discharged into the chimney, the fumes generated by a modern billet heating furnace must transfer the best part of their calories to the log / billet (in the so called "pre-heating zone" of the oven) and back into the incoming air used in the combustion itself, which is thereby already pre-heated before being mixed with the gas. In the COIM ovens, the process described is carried out in a particularly efficient manner, with a thermal efficiency coefficient lying between 75% and'80%. Even the electrical power consumption on COIM gas heaters have been shown to be particularly low.
The COIM technology over the years has been the subject of numerous attempts to be copied or imitated, which have been carried out moreover shoddily in as much that an overall view of the technology of the lines was not considered and which, in any case, must be custom designed and built every time. A technological concept cannot be copied if you do not possess the entire concept!
From a different point of view, the fact that many competitors use COIM as a technological reference point in order to try to improve. their product only serves to reinforce the fact that COIM represents a reference point for the industry on the market.

"Save Energy and recover metal: our Goals for costumers satisfaction"

Melting Technology, division of Presezzi Extrusion, designs and manufactures equipment for aluminium melting field, heat treatment and scrap decoating. Over the last three years, Melting Technology has decided to develop internally with its R&D department and a collaboration with Milan Polytechnic, two different technologies which allow the customers to minimize the specific melting energy consumptions and maximize the aluminium recovery from dross. The research process has been long but at the end, a successful result has been achieved. The L.E.C. Stirrer is equipped with a hydraulic



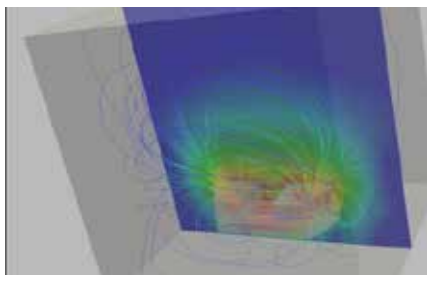
scissor lift platform that allows a lifting and lowering movement and a motorized trolley provides the lengthwise motion. The hydraulic platform use ENI ARNICA S FR-46: a biodegradable synthetic lubricant Factory Mutual (FM) approved as fire resistant hydraulic fluid, suitable in industrial plant where it is present the risk of fire hazard and environmental pollutions. ENI ARNICA S FR-46 is formulated with organic ester and specific additives (Classification ISO-L-HFDU).



The Presezzi Extrusion Low Energy Consumption stirrer is the most flexible and cost effective magnetic stirrer available for the aluminium industry. This stirrer is 100% air-cooled and does not require a water cooling system, water treatment plant, electric power to be applied to copper coils or an insulation transformer. The main features of the Low Energy Consumption stirrer are:

- Possibility of CW and CCW rotating;
- High-intensity of magnetic field;
- 75% less power used than conventional electromagnetic stirrers;
- A decrease in natural gas consumption (by up to 15%);
- Reduced electrical consumption (by up to 15%);
- Reduced dross formation (by up to 20%);
- Melting time reduction: an increase in the furnace melting rate (by up to 20-25%);
- Redundant control and safety thermocouples both on magnets and on a-magnetic plate;
- Fully customizable and programmable working cycles (All the customers will be able to create their own receipts accordingly with their scrap quality);
- Combination of rotating and translation movement which involve the entire bath volume ensuring rapid chemical and thermal homogeneity;
- Movements that don't damage the refractory liner (increase lining life);
- Air cooling through 2 dedicated fans (this stirrer does not require water piping, pumps and treatment plant, as well it doesn't require insulation transformer);
- Limited ordinary maintenance operations (reduced maintenance)

Without stirring the submerged scrap would take a very long time to melt down as it relies on conduction and convection heat transfer. Stirring the bath breaks this limitation and the heat transfer is greatly increased by convection effects. The Low Energy Consumption stirrer creates a strong flow mixing the melt in the vertical & horizontal directions. This new stirrer ensures better efficiency than any other conventional electromagnetic system (there is no heat loss by Joule effect), moreover the costs of installation and maintenance are negligible. The economic impact of this new stirrer on business costs is about 4 times less than the conventional electromagnetic stirrer. The combination of rotation and translation movements contributes considerably to the drop melting decrease (maximizing the scrap metal return) and to the minimization of the specific energy consumption of methane gas. Summarizing, this flow has many benefits like increase melting capacity, speed up alloying process and reduce dross generation. As shown in the below figure, the high intensity of magnetic field creates a strong movement up



to the bath maximum level (1.000 – 1.200 mm). The aluminium bath, before each transfer in the holding furnace, will be homogeneous thermally (variation of 2-3 °C between start and end of transfer) and chemically (the heavy elements such as Fe and Mn become homogeneously distributed over the whole bath volume avoiding the stratification phenomenon). The difference between roof temperature and bath temperature increase, leading to a better utilization of the energy from the burners and reducing dross formation: colder bath surface is less oxidizable. Furthermore, gas consumption and dross formation are minimized. Drosses are always generated whenever molten aluminium is processed and contain valuable aluminium alloys in metallic form.

These drosses, by weight between 1 and 8% or higher of total production, are skimmed from the furnaces into pots whilst hot, and then need to be cooled in some manner. Due to thermiting, the cooling time may take many hours to cool below 400°C, the temperature at which thermiting ceases depending on the cooling process.
Various cooling methods are in existence: the vibrating table, the rotary drum cooler, the dross press, and last but not least the "PE ARGON DROSS COOLER". Each method strives to minimize the losses of aluminium metal due to thermiting.

It will be shown that the "PE ARGON DROSS COOLER" is the most efficient, safest and environmentally sound of all the cooling methods. The recovery of aluminium with "PE ARGON DROSS COOLER" is always higher than with other methods: this can be explained by the fact that thermiting is stopped as soon as the inert gas is applied. The "PE ARGON DROSS COOLER" is capable of saving up to 25% more precious Aluminium in-house by quickly cooling down Al-rich dross either from reverbatory furnaces (single or double chamber melting furnaces) or dry-salt slag from tilting rotary furnaces.

The "PE ARGON DROSS COOLER" can process up to 1.000 kg per cycle and should be placed near the furnaces to minimize the oxidation time before cooling. The "PE ARGON DROSS COOLER" has the following features:

- Completely safe because no water is used either in the cooling of the dross or with the equipment;
- Environmentally sound, therefore no emission of dust or fume;
- Provides for easy working conditions, therefore is operator friendly;
- Treats all kinds of drosses (black and non-reactive or white and reactive).

The "PE ARGON DROSS COOLER" consists in a base with a movable hood (with electric hoist) which is lowered to provide a seal once the container is placed inside. Immediately the hood is sealed, there is an injection of argon gas for 5-8 minutes in order to displace all the air (oxygen) as rapidly as possible Following the first purge, the argon flow is reduced for the remainder of the cycle. A special fan is provided to cool the space between the internal part and the steel structure. In the internal part, the use Corten A allows the cooling process to be speed up: the dark internal surface allows an increase in the heat absorption rate. The cooling cycle is considered complete once the temperature of the dross falls below 400°C, the temperature below which thermiting will cease. A small and simple programmable controller handles the "PE ARGON DROSS COOLER" operation.
Compared with dross press machine the PE Dross cooler has the following features:

- No water cooling needed (safe);
- No dust and no fumes during cooling (no filter needed);
- No safety risk to the worker;
- No need to have a worker dedicated to the machine;
- Very easy and cheap maintenance.

For Information:
Giovanni Battino, Technical Sales
g.battino@presezziextrusion.com

KME Germany CHOOSE COIM FOR THEIR NEW BILLET HEATERS

A long-term and trusted relationship is what links the company COIM with the KME Group, worldwide leader in the production of brass alloy bars, tubes and sheets.
Since 1999 KME has chosen COIM as its preferred supplier for billet heating and ovens - used for heat treating - normalizing /annealing bars and tubes.
Since then, COIM has installed 10 new plants for the Group in Italy, Germany, France and Belgium, to replace obsolete or existing furnaces or to be used together with new extrusion presses.
The latest, very important project implemented together will become a relaity at the end of 2018 with the installation of a new, revolutionary line for gas heating copper and copper-nickel billets to serve one of the most important and strategic production lines for this extremely important German-Italian group.
We are referring to the "TRAYS" line, developed as a prototype for the company Mueller Copper Tube (USA) in 2013, and presented officially to the Copper Council in Istanbul in 2015 and which has now been industrialized definitively and defined as a product of excellence - used for preheating copper and copper-nickel alloy billets. This line ensures a considerable reduction in running overheads as well as significantly lower maintenance costs with respect to those required to run "classic" gas fired or induction heated lines.

For further information please contact:
g.barbieri@coimsrl.net

MAYNE Coatings invests in a Extrusion Line

From "inspiring facades" with Longobard division to state of the art aluminum extrusion company, Mayne Coatings keeps expanding its business in the architectural profiles field and much more.

Thanks to the high business demand and a positive forecast, Mayne Coatings Corporation has recently decided to make a big step forward and invest in a new completely automatic aluminum extrusion plant.
In its facilities, the Group reached this goal through the high quality of its product from the coating system and wood finish grain to an outstanding customer service that helped the group to became a Canadian leader on products for interior and exterior design from residential to commercial business serving in particular the North America market.
After reaching this important milestone, the Group has decided to invest in a new green field extrusion line.
For this important project Mayne coatings decides to collaborate with Presezzi Extrusion Group which shares the same design innovation and Energy Saving philosophy of the Canadian group.
The completely new extrusion line is based on a 26 MN extrusion press for 8" billets that will be in full operation at the beginning of 2019.
Performances, but also quality and safety have been always a priority in the PRESEZZI GROUP and this approach has been very well recognized by the MAYNE COATINGS technical staff and management group that hasn't limited the number of options available and has worked closely with the PRESEZZI Technical Sales department, in order to find the perfect layout solution to their needs and particular products.
The extrusion press is equipped with the PE E.S.S, a standard feature in Presezzi presses, that can allow up to more than 30% of energy savings, compared to other more standard hydraulic systems in the world. Included options are the shearing of the profile between the die ring and the bolster that reduce manpower and maintain a cleaner working environment and also the movable protection at the press mouth with integrated camera that allow the safe view of the profile breakthrough without an operator having to go near the press.
The upstream equipment for the press is completely designed and supplied by COIM, part of the PRESEZZI GROUP, and is based on a logs heater that has the maximum productivity of 3.500 kg/h and the best gas saving performances available in the market today. The hot cut of the log will be done by a hot shear with a special design that reduce the deformation of the billet to the minimum offering a valid alternative to the more common hot log saw available up to now.
The plant is designed for a future expansion with a common log vertical storage system and automatic cranes to reduce the intervention of the human beings as much as possible when additional extrusion plants will be installed.
At the exit of the extrusion press, a fixed saw is installed directly on the press platen to allow a safe cut of the first extrusion head in order to easily allow the clamping by the puller.
Intensive multi-zones water and air quenchings, will allow MAYNE COATINGS to extrude any kind of aluminum alloys for architectural, industrial and even automotive profiles.
In order to bring down the temperature of heavy extruded profiles that require only air cooling, an additional upper cooling system is provided, comprising by a movable hood, intensive cooling under the lead out and run out tables.
MAYNE COATINGS didn't want to compromise performances and for that reason the supplied system that handles the profile during the extrusion is composed by a flying cut system with two pullers lateral type and a flying hot saw machine able to perform multiple cuts along the same extrusion without stop the process even at very high extrusion speeds. The handling table includes N°4 sets of belts, a 60 Metric Tons stretcher for profiles up to 62 meters in length that moves the profile on a finishing saw machine.
The operator positioned near the finish cut saw machine, performing the quality check will decide when to reject a defective profile onto a scrap belt conveyor that will automatically feed a 100-ton scraps shear, without having to handle the profile manually.

From standard basket systems to a "NO BASKET AUTOMATIC SYSTEM"

One of the most particular features of the line, is the handling of the profiles after the finishing saw.
An automatic profile stacker for profiles up to 9.2 meters in length loads the batch of profiles onto dedicated trays, specially designed for this important project. The main function of the trays is to remove the use of the standard baskets and spacers, commonly used on most automatic extrusion plants.
Depending on the height of the extruded profiles, the stacker stacks up a different number of trays, in different positions. The pile of trays, that will create the basket-load is moved by different sets of chains and is loaded into a special continuous oven for the ageing treatment.
When the ageing treatment is over, another machine destacks the trays and the batch of treated profiles is moved in another parts of the plant to be stored or for the surface treatments, painting and wood grain finish.

1978 – 2018
40 YEARS OF EXCELLENCE

COIM SRL is the company in the Presezzi Group which is specialized in the design and construction of high efficiency log and billet heaters, as well as special furnaces for heat treatment and completely automatic log and billet storage systems.
This year 2018 COIM has celebrated its 40th. anniversary.
Forty years lived with a passion and dedication to the industry, tenaciously following the vision of the founders who, in 1978, decided to propose a new type of oven to the aluminium, copper and brass extrusion market, which combines an extremely solid and reliable construction together with what could only seem like a gamble: significant energy savings.
A gamble which revealed itself as a winner right from the very beginning: faced on the one side with the challenge of winning the struggle against the ongoing and unreasonable increases in energy costs for the extruding companies, and on the other side with the excellent capacity - proven right from the start - for the company to supply ovens to the industry which combined efficiency and solidity from both the engineering and construction points of view.
Over the years, COIM has not only maintained its initial promise made to the market, but has transformed these objectives into the company mission statement, striving to persistently improve the performance of its ovens.
At first in Italy (in the 1980s), then in Europe (in the 1990s,with the conquest of the very demanding German market), and finally with the rest of the world starting from 2000, the name COIM has transformed itself in the extrusion markets as a synonym for excellent reliability, perfect heating qualities, very low operating costs as well as minimum overheads on maintenance costs which have been reduced to a minimum. In one word, a synonym for excellence.
COIM represents today the technological benchmark company for log and billet oven manufacturers, who find themselves having to compete with technology which has been developed and improved over a 40 year period and from experience gleaned on every type and shape of extrusion and every alloy. The problem also exists of the continuous attempts in the market to imitate the COIM furnaces (which are unfortunately becoming more and more frequent) and which always turn out to be extremely damaging and time wasting for all concerned, and serve to prove once again that the COIM furnaces are recognized not only by its customers but also by its competitors as the benchmark manufacturers for log and billet ovens.

Thanks to its becoming part of the Presezzi Group in 2013, the culmination of a previous and un-official joint venture and friendly business relationship which had already lasted for more than 10 years, COIM has managed to considerably increase and expand its sales markets as well as its production capacity. This intelligent and strategic choice, to maintain the company independent – even while remaining inside an efficient and well organized and administered group - has ensured the continuation and further strengthening of the company mission, consolidating the company COIM as the absolute market leader for log and billet furnaces for copper and brass while at the same time further expanding the market for COIM in the aluminium extrusion industry, thanks to the leading sales role played by the Presezzi Group and for the opportunities thereby offered for installing lines upstream from the press in turn-key lines supplied by the Presezzi Group.
The end result is over 50 new lines in the last five years, not only including "standard" upstream lines on the presses but also special billet ovens for hard aluminium alloys, furnaces for particularly refractory brass alloys, innovative furnaces for copper-nickel billets, special forced convection ovens for various heat treatments for extruded aluminium profiles as well furnaces for heat treating solid bars and tubes in copper alloys. Additionally supplying completely automatic log and billet storage systems, provided with the Data Manager Software system connected to the rest of the line as well as to the customer ERP system, innovative systems for the washing and descaling the billets, made to measure solutions for billet handling ...
A result which rewards the enthusiasm and reputation of the company and by the group as a whole, and is destined to be persevered in the future as the company mission, with all the determination and goodwill which has been the driving force behind the company for the past 40 years.

The new challenges for the future? First of all: a further reduction of toxic fumes (Co, NOx e PM 2.5-10), in any case already certified as being significantly below the regulation limits with the COIM furnaces; the implementation of data management and tracing software with considerable added value, which can even be connected to the company computer network or ERP system, in a 4.0 perspective (even from this point of view, COIM and the PE Group have been in the forefront for many years in developing advanced and customized software solutions for every part of the extrusion lines).

PRESEZZI EXTRUSION
A pioneer in Energy Savings

A SCRUPULOUS AND SKILLED DESIGNER AND CONSTRUCTOR OF NON-FERROUS EXTRUSION PLANTS MUST NEVER FORGET TWO FUNDAMENTAL ELEMENTS NECESSARY TO MANUFACTURE A PRODUCT OF EXCELLENCE: PRODUCTIVITY AND EFFICIENCY. PRODUCTIVITY ENSURES THE QUALITY AND DIMENSIONAL CHARACTERISTICS OF THE FINISHED PRODUCT, WHICH CONFORMS TO THE SPECIFICATIONS OF THE CUSTOMER, AND EFFICIENCY ENSURES PRODUCTION STANDARDS OVER TIME AND A REDUCED CONSUMPTION OF RESOURCES IN ORDER TO ACHIEVE THE OBJECTIVES.
BUT HOW TO OBTAIN THE STEADY IMPROVEMENTS IN PRODUCTIVITY AND EFFICIENCY TO CREATE A PRODUCT IN LINE WITH MODERN MARKET REQUIREMENTS?

It is only possible if you invest time and resources in research and development, pool know-how without giving up experimenting and incorporate new technological features in plant and machinery, and last but not least ensuring fast and competent after-sales support for the customer. For these reasons Presezzi Extrusion, right from the start, has invested constantly in R&D activities and in a constant and attentive monitoring as well as improving its after-sales service.

R&D aims to ensure the evolution of the machines and production lines in terms of further improved productivity and quality, short and long-term reduction of energy costs as well as time and costs for maintenance and after-sales services. For Presezzi, investing in R&D has always been of high priority, involving the best internal resources and qualified research institutes, and always in regard to energy savings, ERP LI programmes for total plant and production management, excellent quality of the extruded product and a reduction of the production costs.

The PE Energy Saving System

2007 was a turnaround year for Presezzi Extrusion as the company started to develop a new type of hydraulic system for their presses. All presses designed and built until 2007 had (without exception) pumps with variable flow rates paired with servovalves and standard type electrical motors.
In 2009, after 18 months of intense R&D to meet customers' demand for significant energy savings in the production process while maintaining and/or improving production performance and the quality of the extrusions, Presezzi developed a solution termed the PE Energy Saving System (PE. E.S.S.). This system is based on two foundations: savings and technological innovation. The savings concept does not only include energy saving, but also the machines through a smaller number of components required for their operation, making the manufacture and installation of the press leaner and less subject to production stops and downtimes for maintenance.
Thanks to a close collaboration with a leading Italian extrusion company active in the field of hard alloys, the first prototype unit was built. It confirmed the initial intuition and successful technological development and proved a significant energy saving value through field tests.

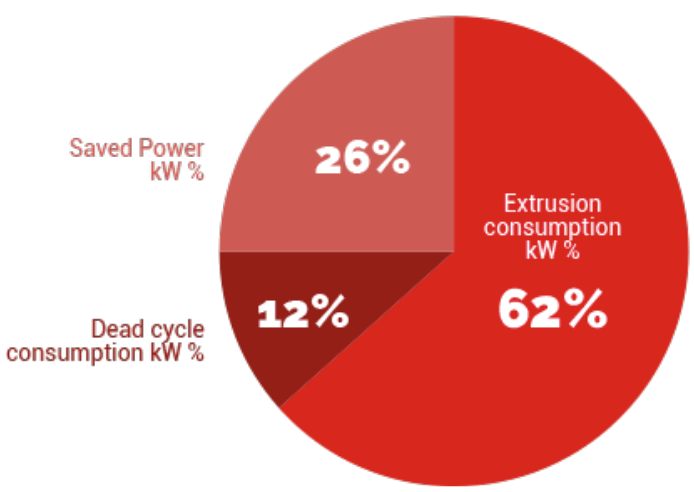
The first press equipped with this innovative energy saving system was a 33-MN front loading press in 2009. Since then most Presezzi presses have been equipped with the PE. E.S.S. This refers to more than 80 presses which enjoy high esteem by the customers.
In comparison to an extrusion press fitted with a conventional up-to-date hydraulic system - what exactly reduces the energy consumption of a PE. E.S.S. press by 26% (on average, depending on different types of product)?
In conventional systems all pumps are continuously operating with traditional drive systems; they consume energy even if it is not needed which is a pure waste of money. The PE. E.S.S., however, only uses the amount of energy that is really required; the energy consumption is significantly reduced by putting the hydraulic pumps in stand-by mode when the press is not operating or does not require a specific cycle of the extrusion process.
To understand the advantages of the PE. E.S.S. means to understand what is actually taking place during the extrusion process.
The hydraulic system in a traditional press is usually dimensioned to reduce dead times and normally uses only 20 to 30% of its capacity for the extrusion process. During the extrusion phase of a traditional press, the quantity of oil required to obtain a regular and constant speed is distributed by the hydraulic pumps using a system which regulates the flow rate in the pumps, managed by the servovalves. This means that apart from the energy consumption brought about by the pumps dedicated to commanding the servovalves, in conditions where the main pumps are underused they carry on turning, thereby wasting energy and continuing to heat up the oil.

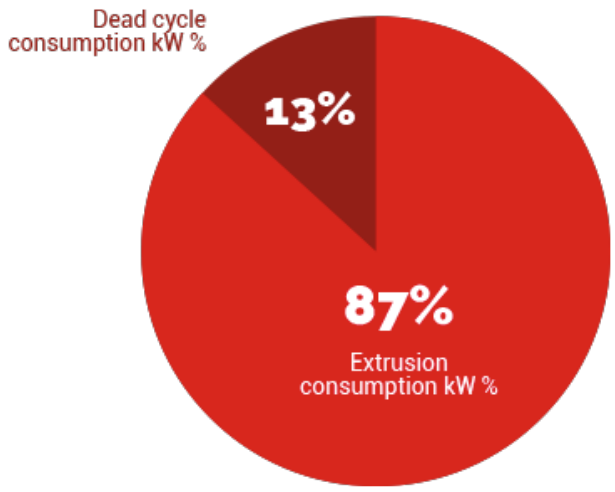
The PE.E.S.S. system allows the press to generate exactly the right quantity of oil that is really required by the system to obtain the force and speed necessary for the extrusion process. The low inertia motors are controlled by inverters and by the fixed displacement pumps connected with them and the volume of oil distributed is exactly the amount required for all press movements for each and every operation.
The advantages these types of low inertia motors offer are considerable and this system allows much higher performance values than that of a conventional system with servovalves and pumps with variable flow rates.
According to the requirements, the pumps are turned on and off automatically and their rpm speeds are adjusted accordingly. Those pumps which are not required during the extrusion phase remain completely idle. There are no dedicated or auxiliary pumps that distribute the oil to various other functions or the need to pump excess oil out of the system. Further savings are gained during press stoppages or die changes.
The energy savings compared to those on a traditional press can be calculated at around 25 to 30%, depending on the type of product to be extruded and the type of cycles to be executed.
The PE.E.S.S. can also be installed on existing presses. In recent years, Presezzi has successfully carried out numerous revamps. After analysing the type of press and its characteristics, the old hydraulic unit is replaced with the PE.E.S.S. system, with all the necessary modifications and replacement of parts like piping, the electrical system, electronics and software.
The advantages which can be achieved by using this system are, in brief:

- Reduction of the power required and the dimensions of the motors
- Less oil required
- Less expensive pumps can be used which make the system more economic to run, with lower spare parts turnover and significantly reduced maintenance requirements
- The installation in the pump room requires less space and generates less noise during operation

Summary

Since 2007 Presezzi Extrusion has developed constructed and successfully installed a system which is characterized by a new design, philosophy and the use of low inertia electrical motors. Before 2007, no one used these, kinds of motors for this application. It's fai to say that Presezzi Extrusion is a frontrunner in energy savings and technological innovation
This innovative technological feature which has been developed to allow the company to maintain a leading position in the market. This is acknowledged by the customers through the development of solutions that are state of the art and meet the ever rising demand for increased productivity in the aluminium, brass and copper alloys sectors.





Our Latest News

1 October 2018

ABC Aluminum Baja California keep growing

ABC, Tijuana Mexico based plant operation, due the growing market of architectural profiles of heavy shapes for facades and new industrial markets that require aluminum shapes with precise tolerances and high mechanical properties, decided to invest in a new complete automatic extrusion line.

Based on the positive previous experience with a PRESEZZI 2600UST 8" press, the ownership decided to continue the partnership with PRESEZZI, awarding PRESEZZI GROUP with an order for a full extrusion plant.

The new line will have as a central piece a 4000UST front loading machine for 10" billets up to 56" long and will be in full operation by the end of 2019.

4 September 2018

New order for Presezzi!!

Hammerer Aluminium Industries in Austria, has awarded Presezzi Extrusion a contract to supply a 40 MN Front Loading Press equipped with 10" tooling.
This press is equipped with the most advanced automation systems and innovative system for energy saving. The request perfectly matched with the technical and technological level of Presezzi Extrusion staff, who has also been able to meet the specific requirements, due to the fact that Presezzi constantly learns from its customers, being very receptive and attentive to their requests and suggestion. That is why Presezzi is reliable on a long-term cooperation, not only from the machinery point but also in terms of service, and tailored made ideas.

31 January 2018

Constellium Extrusion Decin has chosen once again Presezzi Extrusion

The company Constellium Extrusions Decin, world leader in the extrusion of hard alloy, has chosen once again Presezzi Extrusion as the supplier of the 66/40 MN direct front loading extrusion press.
The request perfectly matched with the technical and technological level of Presezzi Extrusion staff, who has also been able to meet the specific requirements, due to the fact that Presezzi constantly learns from its customers, being very receptive and attentive to their requests and suggestion.
That is why Presezzi is reliable on a long-term cooperation, not only from the machinery point but also in terms of service, and tailored made ideas.

27 September 2018

Alu-Menziken has assigned an important order to Melting Technology

The company ALU-MENZIKEN has assigned an important order to the company Melting Technology (a division of the Presezzi Extrusion Group) for the supply of 2 dross coolers with the aim of maximizing the metal recovered from the dross resulting from the melting process for aluminium scrap. The Presezzi Extrusion dross cooler is the most efficient, safest and environmentally sound of all the cooling methods actually available on the market: this can be explained by the fact that the thermiting process is stopped as soon as the inert gas is applied.

The Presezzi Extrusion Dross cooler has the following state of the art features:

- Completely safe because no water is required
- Environmentally sound therefore no emission of dust or fumes
- Provides uncomplicated working conditions and is therefore extremely operator friendly
- Can be used to treats all kinds of dross

The Presezzi Extrusion dross cooler consists of a base with a movable hood which is lowered to provide a seal once the container with the hot dross is placed inside it. The hood is immediately sealed and then there is the first injection of inert gas in order to displace the oxygen present as rapidly as possible. Following the first purge, the inert gas flow is reduced for the remainder of the cycle. Special materials will be used for the construction of the hood to increase the heat absorption rate and the special design of the dross container allows a faster heat dissipation from the dross to the internal ambient under the hood.

Each dross cooler designed by the R&D center of the Presezzi Extrusion Group will be able to treat approx. 6.400 kg/day.

17 January 2018

New order for Turkish market!

Following the 10 inch press and furnace investment from Presezzi Extrusion Group, Akpa Aluminyum As from Turkey has chosen again Presezzi Extrusion Group as the supplier for their new 8 inch front loading press , together with a COIM feeding line (logs furnace with hot shear and billet transport plier).

The request perfectly matched with the technical and technological level of Presezzi Extrusion staff, who has also been able to meet the specific requirements thanks to the considerable experience and patented technologies. All the machines made by Presezzi Extrusion Group are equipped with the most advanced automation systems and energy saving, this press too will be equipped with the very tested Energy Saving System, and will be empowered with the flawless COIM furnace.

The machines will be manufactured with the highest quality levels %100 in Italy and will have as its most important features the efficiency and accuracy of operation. The design, hardware and software and all the details will be Italian or of European origin.

That is why Presezzi is reliable on a long-term cooperation, not only from the machinery point but also in terms of service, and tailored made ideas.

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ALBERTO DA SILVA BARBOSA & FILHOS LDA

PROFILE PRECISION EXTRUSION

HALCOR METAL WORK S.A.

STEELMET S.A.

NOVELLINI INDUSTRIES SRL

ETEM S.A.

ESTRAL S.p.A.

P.R.I.M.A. S.R.L.

MI.PR.A. S.p.A.

PROFIL ALUMINIUM S.A.

ALUMERO FINEX EXTRUSIONS B.V.

REYNOLDS ALUMINIUM

HYDRO ALLUMINIO ATESSA S.p.A.

CE.LL. S.p.A.

FUTURE SCAFFOLDING AND ALUMINUM INDUSTRIES LLC

ALUMINIO TEXCOCO SA DE CV

EXTRUDER CONSULTING

PRIMA - ALUMEC

ASAS

H.T.A. S.p.A.

EXTRUSION DE SAX SL

PONZIO SUD

E-MAX

ALUMINIUM DU MAROC

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MUSKITA

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HAMMERER ALUMINIUM

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