JORDAN ALUMINUM - USA

Jordan Aluminium invests in a state of the art extrusion line

Jordan Aluminum, a Memphis TN based aluminum extrusion manufacturer, awarded PRESEZZI GROUP with the purchase of a COMPLETE EXTRUSION LINE WITH A 26MN PRESS.

Jordan Aluminum Windows and Doors Company has been operating for almost 5 decades on the business of Vinyl and aluminum windows and sliding doors for the residential market. After having a record of sales in 2006 that reach $90m, Jordan Aluminum has been challenging and many of its main customers gone out of business. During 2007 and 2008 the Company suffered a sales reduction of more than 75% and soon the company was near bankrupt.

On 2014 the company decided to do another additional step and decide to invest in a new state of the art extrusion plant. The Company was named JORDAN ALUMINUM EXTRUSION and immediately started to invest in new markets, meanwhile a new anodizing plant was added.

The project as a whole involves a new 35 MN 10” front loading press. The 10” press is fitted with an handling system that takes into consideration the maximum dimensions of the special products and alloys products to be produced...

“we couldn’t be more excited about this investment. With the addition of a new state of the art Presezzi complete system, we’ll continue to strive to serve our region customer base with expanded capacity, ability to process larger shapes, and be able to offer different alloys. In addition, we hope to be able to increase our utilization of our fully automated anodize line installed in 2013.”

Said by Lewie Smith, President of JORDAN ALUMINUM EXTRUSION
PRESEZZI GROUP successfully started up the new front loading 28MN Press and Log heating system in CUPRUM Mexico city division. The new investment focused particularly on the growing automotive market, has as center piece a 28MN 8/9” PRESEZZI Press.

CUPRUM Mexico is the largest extrusion manufacturer in Mexico and in all Latin America. The CUPRUM Group, that includes more than 4000 employees, has three extrusion divisions, located in Monterrey, Mexico city and Guadalajara with a total of 15 presses.

On 2011, after the acquisition of Aluminio Conesa in Guadalajara, CUPRUM decided immediately to invest in the replacement of an old press, maintaining the original furnace and handling system. A careful review, proposed to supply a 20MN compact model and also a Preseuzzi log furnace with hot shear, in order to increase the productivity, and reduce the scrap.

On 2014, due to the increasing demand of extruded profiles in particular for the growing automotive market, CUPRUM decided to invest in a dedicated new state of the art line. After a carefully long review, CUPRUM team decided to award PE GROUP for the delivery of a PRESEZZI 28MN 8/9” (3150LIST) front loading press and a COIM log furnace with hot saw.

The main characteristics of the line are the following:

**PRESEZZI 28MN (3150UST) 8/9” front loading press**

The press can develop a specific pressure of 118,000PSI with a billet of 8” and 93,000PSI with a billet of 9”. The high specific pressure was required in particular for the high extrusion ratios, and the ability to extrude hard 6XXO alloys and low 7XXO, typical alloys for the automotive field.

The length of the billet that can be loaded into the press is 48” (1200mm). The dead cycle time with the longest billet is 14 sec. (including the burp cycle).

The advantage of the front loading is that the dead cycle time reduces proportionally with the reducing of the length of the billet (a billet of 40” will have a dead cycle time of approximately 12sec.)

The press is loaded with all the most important options and futures, such as:

- **The ENERGY SAVING SYSTEM** with only four main pumps that brings the advantage to save energy but at the same time to reduce the number of other components since no auxiliary, container sealing and pilot pumps are used.

- **The Isothermal system** that allows to have a better control of the temperature of the profile at the exit of the press guaranteeing the mechanical properties along the profile at the maximum levels. The Isothermal system has the capability to adjust the proper tapered heating and ram speed, in order to get the same temperature at the exit of the press. This is one of the most important key factors to guarantee good mechanical properties in a delicate field as is the Automotive.

- **The Protection at the exit of the press with the incorporated camera.** PRESEZZI few years ago introduced as an option the possibility to have in all presses, an anti-blast door at the exit of the front platen in order to give to all customers the possibility to avoid accidents to the operators that are used to look into the front platen opening. Mounted on the 2” special steel door, there is a high resolution camera that allow to record the critical break trough of the profile trough the die. The video can be used by the die shop team, to review and adjust the die properly.

- **The Data Manager software** packaged, a dedicated software that allows to send and receive all the proper production receipts to all the equipment, including upstream and downstream area. This software is a “must” when a specific process and quality control is required. From the die manager system, the manufacturer can also recollect all the information of each single extrusion. Such information, like set point of the log temperature and real temperatures, pressure extrusion parameters as speed, pressure, ramps, butt end length, press exit temperature and quenching exit temperature, quenching set ups and aging oven treatment cycle are just few of the data that the system recollect. All this information of course can be used to issue the relative quality certificates.

- **The Die Nitrogen cooling system** is a special automatic device that connect the liquid nitrogen to the die. This system is a “must” when the high face pressure and high extrusion speed are apply to complicate shapes and in particular in high yield alloys like 6082 or low 7XXX.

The high specific pressure and the robust pre stressed frame construction, allows to have faster ramp maintaining very tight shape tolerances along all the extruded profile.

**COIM FURNACE**

The furnace design is capable to heat logs of 8” and 9” with a production of up to 8400lb/h.

The line includes a special system to reject the bent logs and a high performance HOT SAW.

The linearity control was a special request from CUPRUM due to the fact that bent logs are sometimes loaded in the system causing damages to the equipment and stops of the production. The system consists in a multi laser checking system that controls the linearity of the logs as soon the log is transferred from the log table to the pushing line. At this point the system detects a bent log, a reject cycle is activated moving the log into a separate log table for reject log.

The COIM furnace was chosen for the robust construction, the long warranties and the highest efficiency. The furnace is able to guarantee an homogeneous temperature of the log from the skin to the core of the log and a constant temperature billet after billet.

An Hot Log saw was chosen for the advantage to have a clean flat cut that can help to reduce the quantity of air entrapped into the container and avoid blisters. The tapered heating option, integrated in all COIM furnaces, is able to guarantee a tapered heating of the billet with a 0% deflection from the head to the tail up to 80” in a billet of 48”. With the furnace tapered heating option plus the Isothermal system installed on the press and the die cooling system, the productivity of the line jumps to higher levels guaranteeing the highest levels of mechanical properties that the automotive market requires.

For Information: b.donald@presezzieextrusion.com
Presezzi Extrusion Group lands in Australia

The new “welcome”, which speaks Australian, inaugurates Presezzi Extrusion Group penetration into the Australian Continent markets, and a complete “turn-key” 10” extrusion line for the facility of G JAMES in Brisbane will be our business card.

The project as a whole involves a new 35 MN 10” front loading press, delivered by Presezzi Extrusion. The 10” press is fitted with an handling system that takes into consideration the maximum dimensions of the special products and alloys products to be produced with a maximum height of the profiles of 250 mm maximum width of 450mm and a maximum linear weight of 20 kg/meter.

The new line will include the complete upstream equipment, including log vertical storages with 260 ton of capacity, brushing machine, 6 ton/h gas-fired billet heater with powered rolls, log hot saw with chips aspiration and Billet Conveyor to the furnace. The customer will benefit from all the guaranteed added values COIM furnaces, such as the long guaranteed life of rolls and insulating parts, the low energy consumptions, the general high reliability of the equipment and the great accuracy of heating.

The new Presezzi press is 35 MN front loading 10”, the press includes Presezzi’s patented P.E.S. hydraulic system, that can give up to 30% energy saving (depending on what is being produced), a nitrogen die cooling system; a shear to cut the mouth protection. For all the movements of the press a 5 sets of belts, an automatic sample saw installed at the beginning of the cooling belts and a 120 Tons stretcher for profiles till 52m. The stretcher can be either manually or with semi-automatic and automatic control with two men, one man and no man operations.

The new press is equipped with an automatic system for the removal of the head/tail pieces and the cut-to-length table allow a maximum length of the profiles of 16m. The operator at the saw, by means of movable belt at the exit of the cut-to-length table, can decide to reject the defective profiles in the lower scrap belt conveyor that feed a 150Tons scrap shear. By means of two underground belt conveyors, the scrap removal system is able to divide hard and soft alloys and drive them directly in the re-melt area.

An automatic profile stacker for profiles till 16m loads the profile in the die storage baskets. The handling of the spacer bins is completely automatic. The basket handling system will also include all the ancillary machines and conveyors required to distribute the full and empty baskets all around the plant and prevent the need for any forklifts which could represent a safety hazard.

A completely automatic overhead 3 axis bridge crane will be installed for loading of the two ageing ovens and an additional 2 axis cross-over crane with a 18 meter span in the main logistics centre, designed to transfer both long (made by the oven) can be loaded with short full baskets to the various parts of the plant, the automatic storage or the packing lines, as well as returning empty baskets to the presses.

The oven and loading rollers have been designed to allow the maximum flexibility. In addition to the standard input/output doors a further door has been placed in the middle of the oven.

The oven may be operated with this third door open or closed. With third door open the oven can be loaded with up to 16000 mm long profiles and an aluminium load up to 16 tons. With third door closed the oven works as two totally independent ovens. Each of these smaller ovens can be loaded with profiles up to 8000 mm long and an aluminium load up to 8 tons. Each oven can be programmed with its own heating cycle and loaded and unloaded separately from each other.

To achieve this goal the flow of heating air has been modified if compared with traditional double length ageing ovens.

Instead of two fans placed at one end of the oven, a number of smaller fans has been placed along one side of the oven, each with its own burner and radiating pipe. Dedicated air ducts allow the radial circulation of heating air. Radial circulation of air warrants a more uniform heating of aluminium profiles during the heating ramp if compared with traditional double length ageing ovens.

The scope of supply includes the automatic die storage system with 8000 dies ranging in diameter from 261mm to 600mm and also includes all the conveyors to transfer the dies to the die workshop and to the cleaning area. An innovative die host is designed to transfer dies automatically from the die oven area assembly/storage area to the die oven zone for subsequent loading into the press. The same monorail will also be able to transfer dies automatically from the die storage area assembly/storage area to the die oven zone.

The manipulator can be equipped with an additional tools for the lifting of the dies. In this configuration, it can be used in manual mode and move the die from the die tilting to the assembly machines. At the end of the assembly process the manipulator can lift the die-stack and can be switched in automatic mode.

Presezzi Extrusion Group does not only create high performance and reliable equipment but can also supply any specific complementary tools to use with this machinery, such as Data Manager, Data Manager Suite (DMS) is a complete, powerful and flexible software system, born from the twenty years expertise of Presezzi Extrusion, developed by the synergy of technicians expert in programming software engineering.

Since the whole group is able to provide complete extrusion lines, it is increasingly necessary to have a management and supervision system that is able to manage all the machines involved in the extrusion process on a single and easy to use data platform.

The new DMS is a technological product designed for our most demanding customers, who are asking to increase productivity, reduce scrap and simplify the work of operators.

Especially for the Australian leading company G-James Glass & Aluminium, which is continuously involved in the production of a diverse range of products, the DMS becomes a key point to be a forefront company, providing products of over-higher quality while reducing manufacturing costs.

G-James extrusion plant, th only one in its kind, has one of the highest levels of automation and a management tool become indispensable for the optimization of the production process.

The whole plant includes: die heaters and automatic plier, logs storage and heating area, extrusion press, handling table with high efficiency cooling, ageing ovens, basket recirculation and cranes, dies shop and storage, quality control area, and Integration of other existing machines.

Extensive work had been carried out on the project over several years by both the project teams at PE as well as at G-JAMES and had involved numerous meetings and workshops to ensure that all the latest technology and innovations were forefront in order to limit any oversights in the implementation phase.

We involved many qualified engineers and managers on the project in order to ensure that the knowledge acquired over many years of experience, in a highly competitive and technologically advanced market, would be put to good use in ensuring that any investments made would be at the highest level of technology available in the industry.
VIAS - BULGARIA

Bulgarian window frame manufacturer installs first extrusion press

VIAS Ltd is one of the leading European manufacturers of PVC profiles for window frames and fittings. The company, located in Shumen, Bulgaria, recently decided to expand its product scope in order to provide aluminium extrusion profiles for the architectural industry. To that end, VIAS installed its first complete extrusion line.

The company selected Presezzi Extrusion Group to supply the new line, due to the ability of the group to install the entire scope of the project with full integration and automation. Following an extensive and comprehensive project analysis, the new press line was completed, including the installation of a billet and log heating system, a front loading extrusion press with an automatic handling system, an aging furnace, and a complete packing line.

The entire plant incorporates advanced technology that allows VIAS to achieve high product quality and energy savings.

A 7 inch gas-fired log furnace was installed by COIM with a capacity of 3 tph, which is designed to ensure accurate heating, low energy consumption, and very low maintenance cost. It includes a hot shear, log feeding table, log pusher, and conveyor to the press. The 18 MN, 7 inch front loading press is equipped with the patented energy saving system, PE.E.S.S., which can have an energy savings of up to more than 30% depending on the profile being produced. The PE Manager systems automatically manages the furnace temperature, press parameters, and puller force to simplify the operation of the stretcher, automatically adjusting its parameters to new profiles.

The press is fitted with HECS (High Efficiency Cooling System) quenching system with a newly designed pattern of air and water spray nozzles for improved efficiency (approximately up to 30%) and a cut-to-length table with automatic stacker.

The material handling and packing line supplied by Profile Automation included an automatic profile stacker with spacer distributor and the full and empty basket conveyors required for transferring profiles to the double length aging ovens (before Reiter & Crippa, now Melting Technology) and to the powder coating and wood-effect lines. Material handling automation includes two automatic overhead bridge cranes used to automatically load and unload the aging oven with longitudinal flow, as well as an automatic profile destacker and spacer recovery system.

The packing line includes the installation of a loading conveyor and an adhesive film application machine (model 884). The film application machine works at a rate of up to 60 m/min, essentially processing up to eight 7 m long profiles per minute with profile widths up to 300 mm and 200 mm in height. It can also apply film to two profiles simultaneously with a maximum width of 100 mm each. The packing line also includes a spiral wrapping line for sub-bundles with dimensions up to 300 x 300 mm, which are 7 m long. There is an automatic bundle stacking and a linear strapping line for finished bundles with dimensions of up to 800 mm by 800 mm.

The whole packing line, which can reach a production of up to 4,000 kg per hour, is manned by just three to four operators.

The plant is also equipped with a Presezzi-developed monitoring system to track the service life of the entire press line. This allows the service department to check on the current status of the plant via the internet from anywhere in the world, as well as make comparisons to the plant status from minutes, hours, months, or even as far back as years ago. The monitoring system makes it possible for the service department to advise the operator or maintenance staff as to what needs checked or replaced in real time.

The completion of the new press line at VIAS allows the company to expand its manufacturing capabilities and better serve the European market.

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Upgrade of plate stretcher and new plate shear

The new cold plate shear will be installed at the end of one of the existing rolling mills and is foreseen for the products to be stretched with the possibility in the future to cut plate with a thickness up to 160 mm. The cut will be done from the bottom up with special cutting angle on the knives which will assure a very accurate cut focused mainly on the ends deformation to minimize the scrap at the stretcher and for this purpose the gap between the shear blades is automatically adjustable according to the plate thickness.

At the entry and exit of the shear are foreseen rolls, covered with Kevlar to protect the plate and with relevant moment of inertia, that could reach 400°C not to affect the heavy duty shear blades.

Moreover both the hydraulic and electrical system and the rails system actually used for the transversal press are foreseen for future implementation of a bigger stretcher (up to 65 MN) without further foundation works and complete reutilization of all the auxiliary equipment (loading crane transversal press, hydraulic and electrical system).

The electrical control shall allow the complete tracking of each plate data (alloy, heat treatment, stretching force, elongation, production management etc...) and with the jaws grip scrap length optimization according to the thickness of the plate.

The stretcher will be in condition to operate most of the time with one operator.

The plates cutting will be fully automated and to achieve this feature the following characteristics are foreseen:

- New plate shear, with a power of 8 MN for plate length up 13.5 meter, (future 19 meter width 2,800 mm and thickness of 127 mm (future 160 mm)
- New cut to length device with management of the roller conveyor and automatic thermal retraction calculation of the plate after the cut.
- New automatic two axis manipulator to unload the plates from the roller conveyor and stack them in two different position with a lifting capacity of 8 ton
- New hydraulic system with “Energy saving” pumps
- New electrical system (power and automation) with SCADA system for production management

The pumps and motor with relevant frequency converter are identical to the ones installed on the stretcher for energy savings and to minimize the amount of spares in stock.

The extrusion presses, on the main pumps taking into consideration that the real stretching cycle time is by far lower than the handling time of the plate thus assuring a significant saving on energy and cost.

Considering the status of the existing equipment and in order to have a machine that could respond to the latest requirements in the field of product quality and traceability, energy consumption, reliability and productivity, the following equipment is included into the scope of supply:

- New complete stretching cylinder and ram
- New tallstock locking system with addition of docking holes into the existing beams
- Completely new hydraulic system including controls and piping
- New electrical system (power and automation) with SCADA system for production management
- New transversal press with automatic flatness feed back with a capacity of 2.5 MN with the possibility to install a second press in the future
- New automatic loading and unloading of the plates to/from the stretcher with vacuum cups three axis crane with a lifting capacity of 6 tons
- Adjustable rolls inside the stretcher and plate centering on both stretcher heads for complete automatic handling of the plate inside the stretcher

For the hydraulic system, it has been agreed to install Presezzi Extrusion patented system “Energy Saving” already in operation for many years on the extrusion presses, on the main pumps taking into consideration that the real stretching cycle time is by far lower than the handling time of the plate thus assuring a significant saving on energy and cost.

The plate stretcher was built in the 50’s and has been in operation for approximately 30 years in plant located in the USA. The request by the Customer was mainly focused on increasing as much as possible the stretching force to cover a very wide range of products. Due to the request Presezzi has made F.E.M. verification, during the proposal stage, on the main structures (heads, beams, main and auxiliary cylinder, main cylinder frame and tallstock locking, jaws) and the result was that the maximum reachable force could be 35 MN from the original 22 MN by changing the main cylinder completely and also the tallstock locking system and in the same time keeping safety margins on the structure.

This new value was considered acceptable by the Customer for their actual product range and to be able to reach the new hydraulic power the operating pressure has been increased from the original 180 bar to 275 bar.

After the upgrade the plate dimensions to be fully automatically handled will be as follows:

- Max plate length13,500 mm (18,000 mm in manual loading)
- Max plate width 2,800 mm
- Min plate width 800 mm
- Min plate thickness 3 mm
- Max plate thickness 127 mm

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Last December 2015 Reiter & Crippa became part of Presezzi Extrusion, with the creation of a special division operating in the melting technology sector, in the field of the metallurgy of non-ferrous alloys, and particularly aluminium alloys. Our products are engineered with the most advanced technological solutions for heating, insulation and control, to reach the best efficiency in terms of energy saving and metal loss. Below the products we proudly supply:

- Ingot pre-heating, melting and holding furnaces;
- Charging and skimming machines for melting furnaces;
- Homogenization, annealing and ageing furnaces for semis;
- UBC and aluminium scrap decoaters.

The Melting Technology division is now manufacturing complete foundry plants as well as aluminium scrap decoaters. The decoater machine is able to process various types of scraps like UBC (urban waste collection or certificated type), extrusion painted profiles, beverage caps, thermal breaks profiles and others aluminium scraps.

Decoating is the process by which paint, plastic, oil, ink and paper are removed from the surface of aluminium scraps. All coatings contain either organic or inorganic compounds and very often both. When released by thermal degradation and/or oxidation they invariably undergo chemical changes as the complex compounds are reduced to their basic form. For example polypropylene is reduced to carbon monoxide, carbon dioxide, hydrogen and water vapor.

Today there are two main reasons why Aluminium companies have to decoat their scrap:

- **Reduction of metal loss:** if we assume that the current aluminium market price is 1,552 $/t (on February 22nd) each 1% metal loss is worth 15,5 $/t in lost revenue.
- **Environmental Emissions:** our plants ensures the emission limits according to the Best Available Technologies dated February 2013.

With our decoating technology the scrap is heated in a rotary drum where the organic content is removed via convective thermal exchange. In our counterflow rotary drum the hot gas from afterburner, heat exchanger and de-dusting cyclone enters the kiln at the metal discharge end and flows counter to the scrap movement. This ensures the highest temperature and oxygen are in contact exactly where it is needed. Consequently counter flow kilns produce very good quality decoating.

This kind of rotary drums does not require an internal refractory lining but only an external insulation.

In the drum the oxygen level and the gas temperature are continuously controlled via redundant instrumentations in order to minimize metal oxidation and consequently the dross formation in the melting furnace and to obtain the best decoating quality. The oxygen level is fundamental for final scrap quality and emission (TOC concentration) and it's adjusted by adding secondary hot air directly in the afterburner.

Drum internal pressure is controlled by pressure transducers and the “zero-point” valve adjusts the set point: the exhaust gas flow is processed in a second after burner strictly to reduce CO and TOC followed by a quenching unit to avoid the dioxin formation.

With our aluminium scrap decoating machine we can now ensure a very high quality of product, that allows to minimize the melting furnace metal loss.

Some striking figures:

- Metal recovery in melting furnace : 94-95%.
- Surface aspect: LIGHT.
- Temperature: 400-450°C;
- Specific fuel consumption: 30-35 Nm3/t
- TOC emission: 3-6 mg/Nm3

Presezzi Extrusion Group for social Villa d’Este Golf

Presezzi Extrusion Group was the main sponsor of an important event in Villa d'Este (Corno - Italy), where the income was donated to the Hospice “Santa Maria delle Grazie” Monza, important center that helps terminally ill patients.
Our Melting Technology

Presezzi Extrusion (with Melting Technology division) is manufacturing furnaces for aluminium: melting, holding and heat treatment furnaces, as well as aluminium scrap decoaters, automatic charging and skimming machines at the highest technological level.

Besides a 70t Fixed Double-Chamber Melting Furnace, featuring two regenerative burners (North American), one oxygen/NG burner and laser oxygen probe for control of complete fume oxidation, a complete foundry plant has been realized, including: one aluminium scrap decoater 7 t/h, 80t Fixed Furnace with LOTUSS + recirculation pump system + OTS pump for metal transfer, regenerative burners (Bloom) and a complete dedusting and fume treatment plant.

Moreover, an important complete casthouse modernization for the company Arzyz (Mexico) is now in phase of commissioning, including:

- Conversion of n°2 35t melting furnaces to double chamber 50t melting furnaces;
- N°2 dedicated automatic charging machines;
- One dedicated automatic skimming machine;
- N°2 Low Energy Consumption stirrers for holding furnaces designed by the R&D center of Presezzi Extrusion Group;
- One complete supervision system DATA MANAGER;

This new order comes from Arzyz requirements to minimize specific consumption and maximize scrap metal recovering. The new furnaces are equipped with the new “cold chambers” that are provided with two couples of high velocity burners in order to optimize with high turbulence the “decoating” process. A special fan (one for each furnace) brings the unburned fumes with high content of CO to the existent “dry chambers” in order to recover the heat amount resulting from carbon monoxide oxidation, lowering the gas consumption for sows and t-bar melting.

These furnaces and these special machines have been designed by our Technical Department and we fully own the know-how of furnaces at the best state of the art, as the ones described above. Therefore for any kind of furnaces we are able to propose the right solutions in terms of furnace design (stationary or tilting), combustion system, charging system or device, melt transfer system (tap, transfer pump), according to the needs of the process and of the layout.

Actually our internal R&D department is developing a new concept of double-chamber furnace. The calorific value of “decoating gas” is exploited in a special burner (the CO content is controlled with an advanced probe) minimizing fuel consumption (indirectly heating) and oxygen level while a special dumper valve controls the flue gas flow through the opening in the partition. In this way the dirty scrap is processed with low energy consumption and very high metal yield.

The unburned fumes are conveyed in the hot chamber through a special fan in which two Ultra Low NOX regenerative burners operate with a controlled stoichiometric ratio (oxygen probe).

In the past years also a 30 ton tilting holding furnace, to feed an aluminium billet casting line, and a 4 coil annealing furnace for a strip plant, were supplied.

Further, we can supply complete billet or slab casting plants as well, thanks to our internal expertise in the field and to our cooperation with primary manufacturers of casting equipment.

Our projects manage complete “turnkey” installations worldwide as well as part supply contracts whereby our customers may only require engineering design or critical components.

Presezzi Extrusion Group for Social

Presezzi Extrusion Group is participating in requalizing the whole area of the Hospice “Santa Maria delle Grazie”, in Monza where terminally ill patients are nursed with love and patience.
FOR COPPER

Descaler System Special Device

In the extrusion plants of copper billets (and some of its alloys), the heating of the billet to elevated temperatures causes the surface oxidation which damages the quality of the final extruded products.

In order to keep a high quality of the extruded products, a special device with a high pressure water system that removes the surface oxides is used before the loading of the billet into the press. This device is called “DESCALER”.

The working principles of the “descaler” device are the following: while the billet rotates on two special rollers, the water by means of a high pressure system is sprayed on the outer surface of the billet by means of special nozzles. As an example we show photos of the descaler unit and billet before and after treatment with descaler.

FOR COPPER

Efficient Billet Heating for Tube Production

Since 1978, the brand COIM means worldwide excellence and expertise in energy efficiency, accuracy of heating, robustness and reliability. COIM Gas-Fired Billet Heaters are universally known by the most important extruders of Brass, Copper and Copper Alloys as the most performing, efficient and reliable on the market. COIM exclusive heat recover system allows to reach the top level of energy efficiency and the lowest gas consumption, wide over the performances of competitors. Meanwhile, COIM heaters guarantee a very good homogeneity of the billet heating, both between surface and core, and along the length. The generous dimensions of the equipment, the high quality of the installed components and a very well balanced heating system allow also a drastic reduction of maintenances’ frequency and costs, with the longest guarantees about lifetime of refractory, heat resistant rolls, burners.

The high performances are reached thanks to the continuous investments in the Research & Development department of Presazzi Extrusion Group, and today COIM is ready and proud to introduce its revolutionary solution for the billet heating for copper tube extrusion.

COIM’s R&D department has been working for a lot of years for a solution to this matter. The result was the revolutionary GAS FIRED BILLET HEATER with CARRIERS.

Not the billets, but the carriers (with the billet on it) are pushed one after the other, moving on the idle rolls. The immediate advantages are that the copper oxide falls from the billet into the carrier (and comes out of the furnace, before being cleaned by an automatic system). The billets cannot stick anymore. Moreover, the rolls are now far from the flames and they don’t touch the billet: this means lower costs of maintenance.

Wire 2016

Presezzi Extrusion Group awaits you here

We are pleased to announce that we will be exhibiting at WIRE DUSSELDORF 2016 (www.wire.de) from 4th-8th April, 2016 at Dusseldorf Messe. Visit us on Booth N° 16B50.
Profile Automation confirms itself as a notable supplier in the Middle East Area, for the packing and handling sector. In fact, another important order for a complete packing line has been delivered and already started up for the customer Al Taisser, with head office in Riyadh (KSA).

The packing line consists in an innovative system of loading and unloading of the baskets that, thanks to its special 2 levels layout, allows to optimize the spaces and to reduce the waiting time of the operators. The very packaging part is composed by a profile wrapping line for high levels of production and by a semi-automatic strapping line, particularly effective for its reduced dimensions and for its functional simplicity.

The system of loading and unloading of the baskets is composed by 2 levels of catenary, one higher and movable and one lower and fixed, by one hydraulic platforms for the lifting of the baskets towards the upper floor and by two more hydraulic platforms that allow to keep the profiles at an ergonomic highness, thus facilitating and accelerating the operators work.

The wrapping line is equipped with a loading table that automatically feed the wrapper and the taping machine for the front end and back end of the packs. At unloading, a special bundle stacking machine, is able to form the packs with the insertion of a cardboard that protects the lower part during the forklift grip. At unloading of the wrapping line the packs are weighed and piled up before the final phase of packing. An innovative overhead linear strapping machine allows, with just one operator, to load and fix the wood blocks.

The head of the strapping machine is programmed on the position of insertion of the wood blocks where the operator, by pushing a button, can switch on the strap to later weld it with a pneumatic strapping machine fixed on the movable cart.

This kind of system, particularly simple and easy to use, allows to get great results in terms of production, maintaining to the minimum the initial investment cost and reducing considerably the labor costs.

Not only billet heaters for Coim

Not only billet heaters...

COIM is highly specialized in automated and fully automatic vertical storages for logs or pre-cut billets. A long experience was gathered in many years of working with the so heavy weights of copper alloy billets. Among other projects, COIM had supplied to Eredi Grutti (Italy) a huge vertical storage for brass logs with a total capacity of 60,000 ton !

Several custom-designed vertical storages were supplied in Italy, Switzerland, China, with particular care of the software logics of stock, connecting the Customer’s ERP with the Data Manager of the storage and of the extrusion line.

Two main projects were commissioned to COIM for 2016: G.JAMES (Australia) will equip the new COIM feeding line with a vertical storage for Aluminum logs, while Buntmetall (Wieland Group) chose COIM’s vertical storage and software to manage their stock of pre-cut billets, before the new COIM gas billet heaters of their new extrusion line in Amstetten (Austria).

Not only billet heaters...
Data Manager Suite is a computer system born from the twenty years expertise of Presezzi Extrusion Group in the field of plants for the aluminum extrusion. Today the Italian company is able to provide complete extrusion lines including the storage of the finished product, from this came the need to provide a system of management and supervision that was able to manage all the machines involved in the extrusion process on a single data platform.

The new born Data Manager Suite is a technological product designed for our most demanding customers, who now have the PE Group as the only interlocutor both for the part of PLC automation and for the part of supervision and database.

The product was developed by the synergy of technicians expert in programming software engineering and we believe this is the winning formula for a modern product of high quality that can meet the needs of the end user, thus giving access to an advanced system easy to approach.

The Data Manager Suite is a unique product that it’s used both by operators on production lines and by the office staff. The ERP system receives the work order, from that point on is able to process the data, to set and optimize the production until the filing of the pack finished in the warehouse, always taking care the traceability of the material in all process steps and archiving the production parameters used.

The extrusion of aluminium profiles parts from billet that can be classified by size and different alloys, the Data Manager Suite has a section dedicated to the management of the raw material. It allows you to control all the flows and enter the data obtained from the analysis performed with the quartz meter.

The module allows to organize the levies for the production of homogenous lots according to the type of product, thus ensuring the characteristics unchanged over the entire production lot; the person responsible for the load of the billets can thus have real-time availability of the billets in stock taking care to select and load in the oven the most suitable casting for the production.

A large part was developed for the matrix management, this section affects the entire extrusion process and therefore it is an instrument of support for more figures within the company. All new matrices are inserted inside the Data Manager Suite by the technical office where all the technical data concerning it will be declared (weight, size, number of lights, type of matrix, given supply, etc.); the new matrix receives from the Data Manager Suite the default parameters needed for pre-automatic operation of the plant, these parameters will be useful for the initial entry into the machine; when the item will be put in process, all data are sent to the PLC.

If during the initial startup of the machine the production parameters are improved, the system is updated in real time and save the new settings of the process for future productions. Data Manager Suite is able to optimize the length of the billets during the production and guarantees the repeatability of the process, thus avoiding production waste, in addition this tool is of fundamental importance to have the correct material traceability and a necessary tool for those who manage the quality of the product.

Straightening and cutting are also supported by the Data Manager Suite. On the pc you can have a table with all the productions extruded, it is therefore possible to select the order that you want to put in work and all machines can set automatically.

During cutting, the number of bars to be put in baskets is declared, instead the bars that will be discarded will be put into a specific table where you can specify the reason for rejection. Each basket containing one or more orders can be automatically sent to the aging furnace which can set automatically time and temperature on the basis of a compatibility table of treatments. At the exit from the oven aging the baskets can be sent to the packaging workstations or to surface treatments, such destinations are established during insertion order.

Even the matrices workshop is supported by our system, there is indeed a section dedicated to the maintenance of the matrices, inside you can enter descriptive notes regarding corrections made thus ensuring a clear archive and divided by dates of interventions, declare the state of the matrix (maintenance, out of use, etc.) so that the matrix is always traceable within the plant, is monitored in over the state of the nitridding with the possibility to use an automatic calculator that avoids sending in production a matrix over the remaining capacity, this avoids breakage and early wear. In addition to these instruments the manager of the workshop can know in real time how many productions the matrix has already done, see the current weight of the profile and then figure out whether the tool is to be replaced because it is worn or if it can be used for other extrusions.

There is also a section dedicated to the locations of the matrix in the warehouses, this facilitates the search of the tool, avoiding waste of time and then have a clear mapping of places available, in addition to the locations you can place in the table all the parts that make up the matrix package (filler, ring, etc.); in the presence of automatic warehouses the PLC communicates directly with the Data Manager Suite by keeping updated positions in real time. Data Manager Suite gives, in addition, the ability to create production reports that allow you to learn about the performance of the line or the yield of a given matrix, the downtimes are motivated with its causals making it an instrument that is very useful for the department maintenance.

We can thus summarize the potential of Data Manager Suite in the following way:

- Production improvement and higher product quality
- Repetatability of the process
- Traceability of the billet till the finished product
- Possibility to search for possible causes for production problems
- Minimization of downtime on company employee
- It supports the operators on the machines, with the automation of the plant on the basis of previous data
- Flexible plan of production
- Clear traceability of the progress of the order
- Evaluation of the efficiency

On 2-6 May 2016 we are participating at The 11th International Aluminium Extrusion Technology Seminar & Exposition ET '16: Innovation for Tomorrow
OUR LATEST NEWS

PRESEZZI EXTRUSION AGAIN IN THE USA!

Profile Precision Extrusion awarded Presezzi Extrusion for the design and manufacturing of a new 11MN front loading press with piercer. The new press will allow to extrude more tight tolerances and the piercer will allow to extrude small seamless pipes for special markets. This press will be the most technically advanced machine, dedicated to the Precision Miniature Extrusion market.

Presezzi Extrusion was chosen over other manufactures for a number of reasons such as:

• Long standing history between Presezzi and Profile.
• Superior forged construction of main components.
• Ability to maintain the precision tolerances of our extrusions.
• Technical innovations on die changing, shearing and energy savings.
• Capability to manufacture seamless tubing.

The company Profile Precision was founded in 1994 and acquired the Profile Precision Extrusions in 1997. PPE operates from its 40,000 sqft. plant in Phoenix Arizona and it is the leading manufacturer of small, precision aluminum extrusions and extruded tubing for the medical, aerospace and industrial markets. In addition to extrusions, it offers also CNC machining, anodizing and custom cutting fabrication services.

SUCCESSFULL DRY TEST PERFORMED IN PRESEZZI EXTRUSION!

It has been carried out successfully the Dry Test of the 36 MN 9” Front Loading Press purchased by Brazeway Inc. The policy of the Group is to design and implement systems of excellent quality and always in step with the most advanced technologies.

The machine is of excellent quality, characterized by high performance and reliability, high level of automation and low energy consumption.

The machine was completely pre-assembled in Presezzi’s workshop to fully test each component.

AGAIN NETHERLAND, AGAIN LDM

Summer 2015 - Six years after COIM first supply to LDM Brass in Drunen (Netherland), European leader manufacturer of copper based extruded products, they signed a new order for a Gas-fired Billet Heating plant for their 31.5 MN extrusion line.

The furnace is planned to be commissioned in 2016.

The new furnace will produce 12.5 ton/ of brass and copper alloys. LDM confirmed their confidence in COIM competence to heat special alloys, such as Aluminium-Bronzes and Brass with silicon, increasingly demanded by the market but at the same time very difficult to be heated with accuracy and homogeneity.

COIM will also supply the complementary equipment to upstream and downstream the furnace, including a vertical billet storage and the revamping of an existing billet saw.

BUNTMETALL (AUSTRIA - WIELAND GROUP) SELECTS COIM

We’re proud to announce that Buntmetall (Wieland Group) chose COIM for the supply of the new gas-fired heating plant for copper billets, to be installed in 2017 in the facility of Amstetten (Austria).

Buntmetall itself represents a new, important reference for COIM, but the new contract gives continuity to the long-term relationship between COIM and WIELAND GROUP (world leader in copper extrusion) which Buntmetall is part of and which had already installed 5 billet heaters in their facility in Germany.

COIM will install two big heaters with a total capacity of 27,000 kg/h and the scope of supply will include a vertical storages for pre-cut billet with a total capacity of 1,100 billets of different alloys and diameters. A custom-designed software will manage the data of the heaters and storage, with direct connection with the Customers’ ERP.

PRESEZZI EXTRUSION AGAIN IN SAPA GROUP

Sapa Group, for its site of Suzhou in China, has confirmed again Presezzi Extrusion as supplier for the installation of a 27 MN 8” Front Loading Press for the extrusion of micro pipes.

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 in such area.

All the machines made by Presezzi Extrusion are equipped with the most advanced automation systems and the very tested Energy Saving System (PE.E.S.S) that allows an excellent control of the extrusion speed also during very low extrusion speeds.

The Presezzi policy is mainly focused on the design and the construction of top quality machines, always in step with the most advanced technologies on the market. This is the trump card that rewards Presezzi and his Customers.

MELTING TECHNOLOGY FOR THE FIRST TIME IN MEXICO!

The company Arzyz has entrusted to Reiter & Crippa, now Melting Technology division of Presezzi Extrusion Group the casthouse modernization with the aim of minimizing the specific consumption and maximizing the scrap metal recovering. The order includes the conversion of two 35 melting furnaces to 50tonne, double chamber melting furnaces. Each furnace will be equipped with a cold chamber for the pyrolytic process, with two high-velocity burners able to operate with a large excess of air (300%). A special fan will direct the unburned fumes to the “dry chamber” in order to recover heat and further reduce consumption for melting sows and t-bar melting.

The job also includes two dedicated charging machines equipped with load cells, a skimming machine and two Low Energy Consumption stirrers designed by the R&D center of Presezzi Extrusion Group.

Aluminium China
Presezzi Extrusion Group awaits you here

We are pleased to announce that we will be exhibiting at ALUMINIUM CHINA 2016 (www.aluminiumchina.com) from 12th-14th July, 2016 at Shanghai New Int’l Expo Centre N1-N3 where we will present all our latest news.

Visit us at Booth N° 1F40
Thanks to all our customers

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