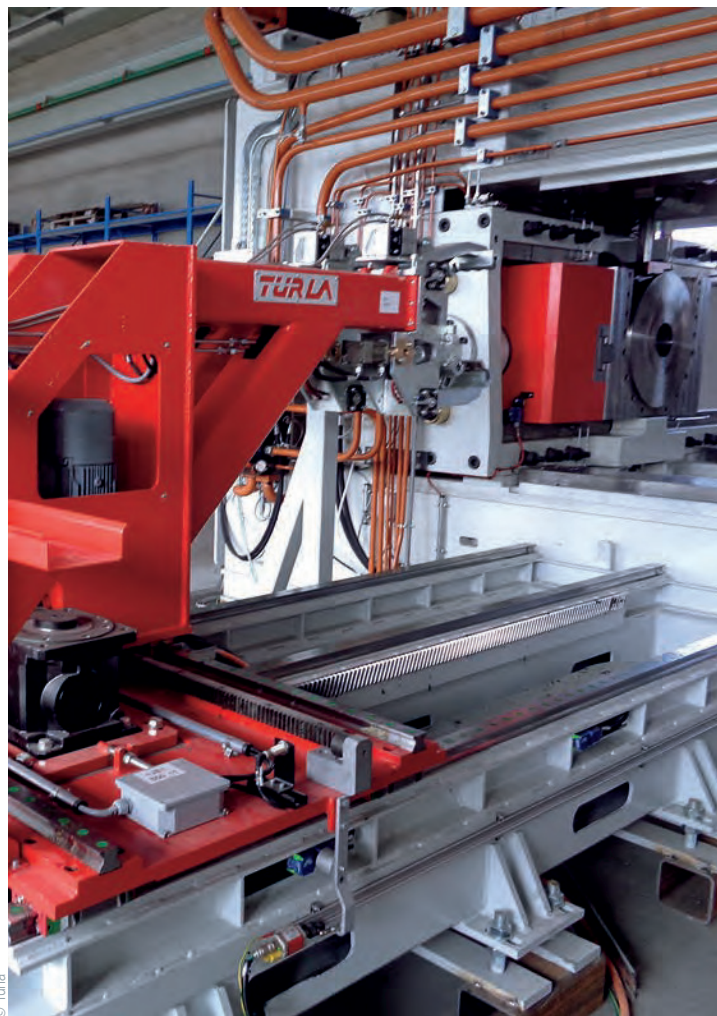


# INTERNATIONAL ALUMINIUM JOURNAL



## **SPECIAL: ALUMINIUM EXTRUSION INDUSTRY**

**Turla Press Open Week**

**Danieli Breda improvements  
in aluminium extrusion**

**The importance of accurate  
temperature measurement  
for aluminium extrusions**

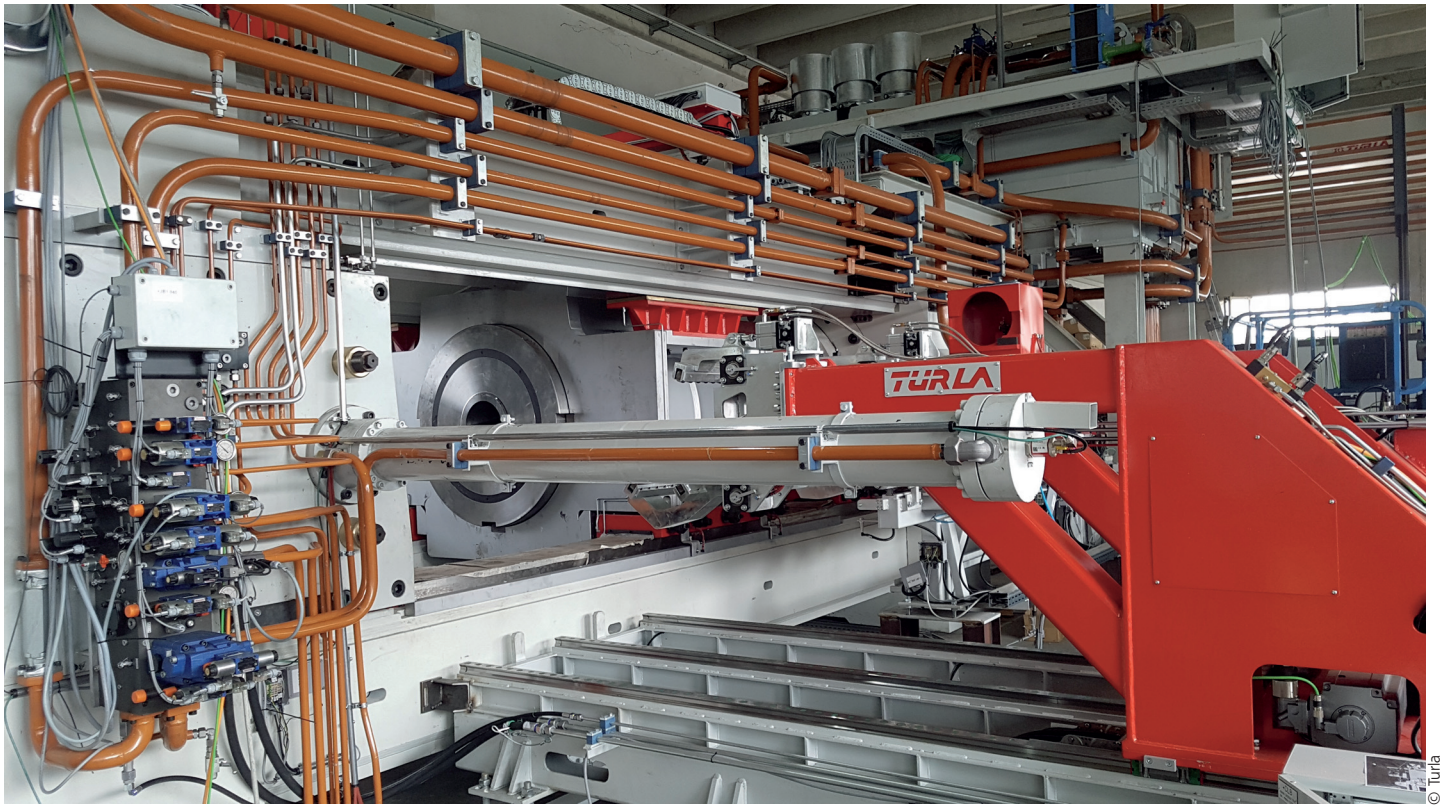
**Digital Cell for more effi-  
cient die-casting process**

**Hazelett celebrates 100  
years of continuous casting**

**Modern sorting technol-  
ogies ensure achieving  
ambitious recycling rates**

© Turla

## Turla Press Open Week 2019



50-MN extrusion press designed by Turla

From 17 June to 7 July Turla organized the Press Open Week 2019 at its facilities in Paderno Franciacorta in Italy. At this event the company introduced its latest two extrusion presses manufactured for the Spanish market – two 50-MN machines for 12” billets, to be delivered to Extrual in Albacete and Inalsa in Zaragoza.

Extrual and Inalsa have both been active in the manufacture of window systems and industrial applications for many decades. They are currently planning significant investments to further strengthen their position as important players in the growing market of profiles for industrial, automotive, trailer and railway applications. To be successful in these markets does not only depend on the size of the profiles; the adherence to narrow tolerances for thin wall thicknesses is also becoming increasingly important.

For these applications, it is essential to rely on machines with solid and robust construction that will last over the years, especially given the large forces transferred from profiles to machines during the extrusion process. It is also essential to precisely choose the features of the cooling system, puller, cooling table and stretcher that guide the profiles

properly through the process. It is also critical to focus on machines capable of performing the correct heating and cooling process to achieve the best results in mechanical properties and geometric tolerances.

The two systems displayed during the Press Open Week include:

1) Turla STeP5 block heaters, which ensure a very precise heating operation due to their independent zones with optimal heating of the core of the billets. This family of log heaters, manufactured by Turla since 2008, has been specifically designed for maximum productivity with minimum gas consumption, low environmental impact and a long service life of the rollers and the refractory material.

2) 12” hot log saws. Sawing technology has improved considerably over the last fifteen years and is now definitely replacing shearing technology. It is the ideal partner for front loading extrusion presses due to the accuracy and quality of the cut. The problem of swarf generation is solved by ever thinner blades, and the advantages of cutting very thin slices of aluminium billets today counterbalance the loss caused by the swarf.

3) Turla intensive air / water quench systems, which achieve the cooling performance by an extremely fine control of air and water spray cooling through the use of inverters

on main pumps and proportional valves and pressure transmitters near the nozzles.

4) 200-tonne stretchers working with lamella fingers to optimize the stretching of large and medium profiles without great deformation.

5) HD finishing saws for profiles up to 350 mm (14”) high.

6) Basket management systems for profiles up to 24 metres in length.

7) Ageing furnaces with cross-flow control and temperature control systems in full compliance with stricter standards.

The two 50-MN extrusion presses were of course the main players at the event. The presses have been purposely designed for the manufacture of large profiles with thin walls, and are therefore able to provide very precise force control with minimal deflection of the system. Both presses are equipped with the latest technological features, all designed to provide Turla customers with machines that help reducing operating costs.

Special mention should be made of:

- Low energy consumption ensured by the Turla Eco+Logic 2.0 system that uses servomotors and inner gear pumps.
- Minimal need for foundations, particularly cost-effective for presses, but also for many other components such as stretchers and

other heavy machinery.

The advanced data acquisition and management (Adam) system was another point of great interest to the visitors of the Press Open Week. This data collection and processing system is truly important in markets where product traceability is of paramount importance and where production is not merely made to warehouse the final product but made for order-related profiles where the history of each individual billet is absolutely necessary for complete process control and recording.

The Press Open Week was therefore a great opportunity for established and new customers to learn more about all the new Turla technologies and features being introduced in the machines of these two projects – features that would have been impossible to see when visiting an extrusion system already in operation at its final location. In fact, at an event like

Press Open Week, customers can observe all those factors that guarantee the mechanical, electrical and software performance for which the machines are built.

also an ideal opportunity for customers to exchange ideas about the extrusion market.

The machines were assembled at the highest Turla standard. All important machines are tested dry at Turla, so that all important functions are well tested before delivery. This activity is no extra cost, but a guarantee that the entire system is assembled after delivery and achieves the requested performance in a shorter time with lower costs for Turla and definitely higher revenue for the customer.

With the Press Open Week, all customers had the opportunity to observe the expansion of the Turla facilities. The new building will be used exclusively for the assembly of presses with extrusion forces of 50 MN and more. For these presses it is very common to manage single pieces of 150 tonnes and more, and this definitely requires new facilities, services and machines (such as cranes) specially created for this purpose. ■



The hydraulic system for the 50-MN press

This event gave all participants the opportunity to gain a broad and complete understanding of the Turla technology, but it was