

Bonnell Aluminum, USA

New 50-MN press line due to start up in Q4

Bonnell Aluminum has announced plans to install a new 5,500-ton (approx. 50 MN) state-of-the-art extrusion press line at its Carthage/Tennessee plant; the line is due to be commissioned in the fourth quarter of 2009. With the new line, Bonnell Aluminum, North Ameri-

ca's premier aluminium extrusion supplier to the non-residential building and construction market, will be capable of increasing its product range to 16-inch (406 mm) wide profiles, thus opening up new design opportunities for architects and the building industry.

Bonnell Aluminum has been operating in the North American extrusion market since 1953. The company, a subsidiary of Tredegar Corporation, is headquartered in Newnan/Georgia. It operates three extrusion plants (Newnan/Georgia, Carthage/Tennessee and Kentland/Indiana) with 12

Prezezzi Extrusion – growing force in high powered extrusion presses

Since its first contract for a new 16.5 MN extrusion press in 1993, Prezezzi Extrusion has so far supplied more than 70 extrusion presses with loads up to 65 MN to leading extruders all over the world. The company is located near Milan in central northern Italy, an area renowned for its excellence in technology and engineering. Today 'Prezezzi Extrusion' stands for first-class technology combined with reliability, flexibility and competitiveness. Standard FEM engineering combined with sound manufacturing concepts has resulted in a press design featuring forged steel for the main press components and pre-stressed tie rods that is backed by ultrasonic and magnetic particle testing of machine parts.

In addition to its own workshop for manufacturing, the company also

makes use of several highly specialised workshops in the area. All presses are assembled and tested in Prezezzi's own workshop prior to shipment. This ensures short erection and commissioning times at the customer's site.

Prezezzi Extrusion has developed a new machine/man interface which facilitates operator activities, allowing total management of the press, which can also be extended to the complete extrusion line. There is provision for possible remote control from a production control centre, collecting, storing and processing data according to each user's specific requirements. Via an HTTP protocol it is also possible to make data blocks available to any authorised user connected via the internet.

Such sophisticated technology makes the company highly competitive in projects relating to high-quality value-added extruded products. This has resulted in the company recently receiving a number of important orders for showcase projects not only for standard sized presses but also for presses larger than 35 MN. Typical examples are a 45 MN short-stroke front-loading press for Metalba in Italy and a 55 MN indirect press for Eural Gnutti, also in Italy. A 55 MN front-loading press for Nanping Aluminium Co. in China features high flexibility both for large soft alloy profiles and hard alloy bar. At the end of 2009 the company will be commissioning a 50 MN back-loading press at Bonnell Aluminum in the USA (see main article).



Prezezzi workshop at its Vimercate site close to Milano

Prezezzi Extrusion



The OMAV product range includes stretchers, as shown here

extrusion lines and a total capacity of some 80,000 metric tonnes. All three plants are equipped with wet-paint and anodising facilities. In the Carthage and Newnan plants, the company also operates casthouses capable of producing extrusion billets from 6 to 10 inches (152 to 254 mm) in diameter.

The new line means Bonnell Aluminum will be able to produce aluminium extrusions up to 16-inch wide in lengths up to 40 feet (approx. 12 metres). This will allow customers to design larger extrusion profiles, resulting in buildings with increased span distances. The new 50-MN press will provide Bonnell Aluminum's customers with extruded profiles of greater circle size, tighter dimensional tolerances, and better surface finish integrity than what is currently offered in the market. With its market focus approach, lead times for extrud-

ed products will be less than conventional large press lead times. All these improvements will help strengthen the company's position as a supplier of architectural profiles.

The new press line will be supplied and commissioned by two well known equipment suppliers from Italy: Presezzi Extrusion will supply the press and OMAV will be responsible for the billet feeding and profile handling equipment. Asked why he had chosen these two suppliers, Rick L. Miller, process optimisation manager at Bonnell Aluminum, replied: "In order to ensure a smooth and quick start-up of the new line, we have chosen Presezzi Extrusion and OMAV as we know that both companies have co-operated perfectly on previous projects, and we are thus avoiding potential interface problems." He added: "Another important reason for our decision was the fact that both companies engineer

and manufacture the equipment in their own plants and deliver it shop tested." A further consideration was the fact that, Bonnell has already had dealings with OMAV as a supplier to its existing press lines.

The new press line will operate with billets that are 12 or 14 inches (305 and 356 mm) in diameter and which will be heated in a gas fired heater comprising five direct-control zones plus extra burners for taper heating. The hot saw at the furnace exit is controlled for billet optimisation.

The extrusion press will be a short-stroke back-loading press with high extrusion speeds and a short dead cycle in order to combine proven reliability with high productivity.

The handling system will be specifically engineered to extrude products for prestigious exposed architectural applications, a capability currently not offered by any other North American manufacturer in this large size range.

On the exit side of the press the profiles will be cooled by OMAV's well-proven forced air quench. The entire handling equipment is designed for double length profiles with a lateral double puller and a positionable saw with an efficient exhaust system for chips. The highest possible attention will be paid to surface finish, i.e. to keeping profile surfaces free of scratches and other defects. This also applies to the automatic stacking and destacking devices in front and behind the ageing furnace which can either load the profiles layer on layer or, if required, as independent layers.

B. Rieth, Meerbusch

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