

## Salmec wins finishing line contract in Venezuela

Madrid-based Salmec Ingenieria SA and its Italian parent company Salico Group have been awarded a contract for the supply of all the finishing lines for the new aluminium rolling plant currently under construction by the Government of Venezuela at Caicara de Orinoco upstream along the banks of the Orinoco River. Aluminium coils of 2,200 mm strip width will be produced via the twin roll casting process then subjected to thermal treatment and rolling processes.

The plant is scheduled to start production in the first quarter of 2012. The scope of supply includes:

- tension leveling line
- slitting line with packaging section
- cut-to-length line with packaging section
- electrolytic degreasing line
- coils packaging line

All the lines include the most advanced and modern technologies available in each field. The tension leveling line employs a heavy duty leveler combined with the two bridles and proprietary algorithms for elongation control for the highest degree of flatness. The slitting line will feature fast and automatic devices for tool change in the slitter heads and separator shafts. Recoiling tension will be provided by our unique tension carriage that ensures no damage to the most sensitive aluminium surfaces for all thicknesses and at maximum line speeds.



A project meeting at the site of the new rolling mill in Venezuela  
A meeting in May 2010 with the equipment suppliers, including representatives from Salmec

On the cut-to-length system, the patented "sheetronic" eccentric shear cuts the aluminium strip in sheets with the most stringent tolerance values and highest productivity. The vacuum stacker works on the "zero inertia" principle, ensuring perfectly stacked packages of sheets without any marks on the surface or on the edges of the sheets and operating at maximum speed even for the thinnest and softest alloys.

In the electrolytic degreasing process, diluted sulphuric acid at high temperature will produce strip free from any trace of smut, graphite, oil or aluminium fines. The line is completed with an embossing section. All utilities including the water treatment plant, demin water plant, boiler and fumes washing station will be delivered by Salmec. Coils will be packed in a dedicated packing line where the coils will be automatically paper and plastic wrapped through the eyes, corners application, top lid application, weighed, strapped, etc. ready for export under tropical weather. Coils will be delivered on a horizontal axis or in "eye to sky" position.

Reader Reply No.153

## An automated MQP Batchpilot furnace weighing system is now available

The Batchpilot furnace weighing system can now be upgraded to a fully automated system by adding software to enable automated measurement initiation and a customised integrated data handling package.

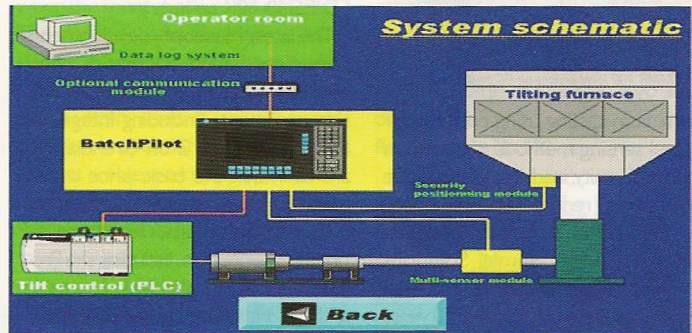
The Batchpilot system is used for measuring furnace heel and transferred weight with an accuracy of +/- 200 kg. It works by measuring changes in the hydraulic pressure in the furnace main cylinder with the furnace tilt angle. It has the facility to detect build up of dross on the furnace lining and to compensate for this in determining an accurate heel weight. The new software is designed to reduce operator dependence, eliminate manual data input errors and provide an integrated data handling facility with graphic interface for storing and analysing historic measurement information.

### An established solution

The Batchpilot system was first introduced into a casthouse on an industrial scale in 2005 at the Corus Duffel aluminium plant in Belgium. Tens of units have since been installed successfully in over 20 casthouses worldwide, proving to be a valuable means of increasing production capacity and reducing costs. The world renowned Aluminium Norf GmbH plant in Germany wished to optimise the number and sizes of slabs being produced per cast as a means of increasing production capacity. They instigated a comprehensive programme of work aimed at examining the potential for using the Batchpilot system as a means of achieving better control of metal transfer weight and metal weight in the furnace. The findings were that furnace weights of around 45 tonnes could be measured accurately and as a result, for the first time, three slabs could be routinely produced per cast. As a direct result of the introduction of Batchpilot systems throughout the casthouse, the Alunorf GmbH management confirms that overall plant production capacity has been markedly increased. To date they have fitted eleven of their casting pits with Batchpilot units.

### Batchpilot system upgrade options

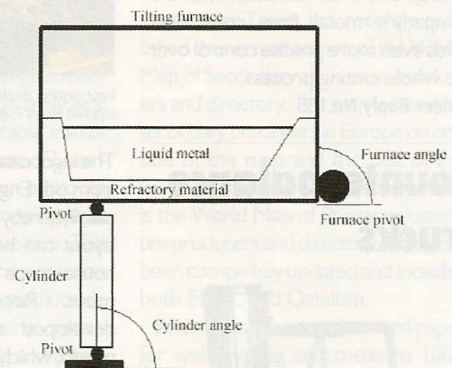
In the standard Batchpilot system a weight measurement is initialised by the operator from the Batchpilot HMI control panel during the production process. Measurement of furnace weight is operator dependent and relies on the operator transferring the correct information from the Batchpilot screen to the plant batching system. In the automated system the operator dependence has been superseded by a software package which enables either remote initiation of the measuring



Batchpilot control system schematic.

operation such as exists at Alunorf, or a completely automatic initiation of the measuring operation as has recently been installed in several casthouses. This feature is available with the very latest Batchpilot systems.

In addition to initiation of the measuring operation the second major upgrade is a significant change in how data generated from Batchpilot can be handled and stored. Originally data was taken manually from the Batchpilot screen. This was first improved upon by adding a communication module into the system which transferred raw data to the customer who then had to decide how to handle the data. What can now be supplied is a full software integration service by MQP data handling engineers. This can provide integrated output data generated by the Batchpilot system in a file format that can be read by the plant batching system.



Operating principle of the Batchpilot system.

MQP engineers can work with customers to develop a customised solution to meet their data handling requirements, which typically includes provision of a data base and unique graphic interface to enable historic data to be viewed, analysed and stored.

From this point onwards the MQP approach will be that Batchpilot systems will be fully customised from an IT point of view and tailored and supplied to specific customer needs.

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