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EMP STRENGTHENS PRESENCE IN GERMAN MARKET

The past 12 months have been extremely active for Pyrotek's EMP Technologies Division and, in particular, the German market has provided a significant number of orders. Significantly, a total of four EMP system orders have been won for supply to Hydro in Hamburg and to Alunorf. In this article, Richard Starczewski, Sales Manager, Pyrotek EMP Technologies in the UK, outlines the business background together with the equipment involved.

The potential closure of European primary plants as production moves to new geographical areas has left downstream activities vulnerable for guaranteed metal supply and one consequence has been some strategic investments in new remelt/recycling facilities with associated investment in melting furnaces.

The benefits of furnace circulation, and particularly those provided by the EMP system are well known, including advantages in metal circulation, charging and transfer with melting furnaces. With an increasing tendency towards installing larger furnaces with capacities of 100 metric tonnes and above, has come the requirement for pumping systems with increased mass flow capability, and even the application of two EMP systems on a single furnace.

Two such recent projects involve the EMP systems for Hydro Hamburg and Alunorf, supplied together with equipment from the OEM furnace builders Thermcon Ovens B.V. and LOI Thermprocess GmbH.

In the case of the Hydro rolled products plant in Hamburg a 125 metric tonne, two-chamber melting furnace has been installed, equipped with two 6 inch EMP pump systems, each equipped with a LOTUSS Vortex chargewell.

Hydro is further investing EUR€14.3 million in a new aluminium recycling furnace in Germany, with an output capacity of 50,000 t/yr. The twin-chamber furnace will be part of a new recycling centre at Alunorf in Neuss, a joint venture between Hydro and Novelis. This furnace to be supplied by LOI Thermprocess GmbH will be equipped with two 6 inch EMP pump systems, again each featuring a LOTUSS Vortex chargewell.

Alunorf applied to local authorities for permission to build and operate the new facility alongside the existing complex for aluminium rolling and remelting, the world's largest of its kind.

The first metal is planned for production by 2010. Hydro plans to feed the recycling centre with a mix of used product returns and process scrap both from customers and also its own fabrication facilities.

"Due to its various application benefits, the demand for aluminium is continuously growing. Today, most aluminium fabricated in Europe is already recycled metal. By adding further capacities, we open up new life-cycles forever, using only 5% of the energy required to produce primary aluminium," says Oliver Bell, head of Hydro's Rolled Products sector.

"The new recycling centre at Alunorf will strengthen the viability of this plant and it will further improve the leading performance of our aluminium cluster, which comprises the primary plant in Neuss and our rolled products facility in Grevenbroich," adds Bell.

The EMP system provides a highly effective stirring solution for aluminium in a static furnace bath while allowing various scrap and other elemental additions to be loaded in a uniquely efficient way. The system incorporates patented EMP technologies within a closed loop comprising an EMP pump, based on a linear motor and an EMP chargewell.

The goal is a capacity of 150,000 t/yr and the total investment by the joint-venture partners will be around EUR€36 million on the project that will incorporate world-class environmental technology.

In addition to these installations, an order was won in January 2008 from a major recycling company in Germany for three EMP systems to be retrofitted on existing furnaces in two of the customer's plants.

This trend of activity seems set to continue in the German market, and recent orders for three EMP systems have been secured together with German OEM furnace builders for installation outside Germany in 2009.