

PRESS RELEASE

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Hertwich supplies aluminum multi-chamber melting furnace and continuous homogenization system to Exlabesa

Exlabesa expands casthouse capacity in La Coruña



Multi-chamber melting furnace with preheat ramp (Ecomelt PR) from Hertwich (similar plant).

Exlabesa, Europe's largest independent extruder expands the aluminum remelt capacity at its Padrón facility.

In close partnership with Hertwich Engineering, a company of SMS group, Exlabesa put into operation a Hertwich continuous homogenizing plant at its Padrón-based facility in the second half of 2018. Following this investment, Exlabesa has now ordered a PR130 multi-chamber melting furnace, complete with charging unit, which will increase the capacity of the Padrón casthouse to 60,000 tons per year.

The new furnace with a capacity of 130 tons per day will be designed to process a relatively wide range of scrap: production scrap, clean profiles with lengths of up to seven meters, sawing chips, clean and lacquered scrap (shredded or in pieces), ingots and market scrap. To remelt this loose and moderately contaminated scrap, an Ecomelt-PR furnace with preheat ramp, melting chamber and main chamber will be installed. This furnace concept was developed about 20 years ago and since then has proven its worth in many casthouses.

The scrap to be melted is transferred onto a ramp in the preheat chamber by an automatic charging unit. During the charging process the surrounding area is protected from the furnace atmosphere.

In the preheat/melting chamber the material is heated to approx. 500 °C to remove adhering organic compounds. Based on extensive operational experience, this chamber has been designed to optimize heat transfer and reduce preheating time. For a furnace with a daily melting capacity of 130 tons, Hertwich specifies two charging cycles per hour (each with three tons of scrap).

The preheated and decoated material is pushed from the ramp into the melt bath. An electromagnetic liquid metal pump ensures the melt transfer between both furnace chambers and the availability of the required energy for melting in the melting chamber. The melt level in the melting chamber and the melting rate can be adjusted by this liquid metal pump. During the melting process, the scrap remains submerged at all time in order to avoid oxidation losses.

The temperature level in the main chamber from which the melt is tapped for casting is about 1,000 °C, hot enough to burn all pyrolysis gases generated during

scrap preheating. The heating system uses the energy in the flue gases to heat the combustion air. In this way, energy consumption values from 450 to 500 kWh/ton are achievable when melting moderately contaminated scrap.

The installation of the new melting furnace will not impair the ongoing casting operation. Commissioning is scheduled for mid-2020. Once this investment has been completed, Exlabesa will own melting, homogenizing and extrusion equipment meeting the latest state of the art.

Exlabesa is a global company that covers the complete aluminum production cycle including extrusion, coating, anodizing, machining, bending and recycling for a wide range of industrial sectors and fields of application. With a total of 22 extrusion lines (press capacities from 13 MN to 65 MN) installed at seven production centers located in the U.S.A., UK, Spain, Germany (Weseralu GmbH & Co), Poland and Morocco, Exlabesa has the capacity to produce up to 176,000 tons of profiles per year.

SMS group is a group of companies internationally active in plant construction and mechanical engineering for the steel and nonferrous metals industry. It has some 14,000 employees who generate worldwide sales of more than EUR 2.8 billion. The sole owner of the holding company SMS GmbH is the Familie Weiss Foundation.