A holding and treatment furnace

The StrikoWestofen Group has expanded its activities in aluminium recycling. To meet the demands of aluminium recycling, the new holding and alloy furnaces of the H(R) - T type are now being added. These units have a holding capacity of 8000 to 20000kg of aluminium alloy without a melting shaft.

The H(R) - T is available with or without a melting ramp due to its modular design. This type of system is used for holding alloys which have been melted in separate large melting units or rotary drum furnaces and for composition adjustment of alloys and controlled casting of liquid metal in launder systems or continuous casting machines.

The first melting and casting unit was developed for a customer in Turkey in partnership with KMF Maschinenfabriken of Villach, Austria. Other projects are currently in preparation.

One of the product divisions of KMF - Maschinenfabriken manufactures rotary drum furnaces which feature a melting procedure with a low salt and oxide content. Low temperature carbonisation gases released from the melting of contaminated materials are subsequently burnt directly in the rotary drum furnace.

The continually monitored furnace atmosphere guarantees the a high yield. Recycling material such as scrap, chips and dross is melted in a rotary drum furnace in an environmentally-friendly and energy-efficient way. The liquid aluminum is fed via a launder system to the HR - T 10,000/500 holding/alloy furnace supplied by StrikoWestofen, to carry out possible analysis corrections and to store the metal.

In the aforementioned case, the furnace is equipped as a HR - T type with a melting ramp which allows flexibility of operation. Here, the required alloying elements are preheated with a burner, which is mounted above the ramp before they go into solution. It is also possible to melt up to 500kg of aluminum ingots/hr on the ramp. Porous plugs are installed in the bottom of the holding area and have a threefold effect:

- Good mixing of the alloying elements with the liquid aluminum;
- High temperature stability throughout the bath area; and
- Degassing and cleaning of the alloy

Once the metal samples taken from the plant meet the required alloy specification, the plant is tilted by means of the hydraulic unit which is equipped with a proportional valve.

Continuous casting of the liquid metal then takes place, in the above mentioned case on to an ingot casting conveyor. The system can also be used for the production of billets and rolling slabs.

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