

Tilting rotary melting furnaces

Mechatherm's range of tilting rotary melting furnaces remains extremely popular. As a result, the company has experienced a wave of orders and enquiries with capacities ranging between 5 tonnes and 20 tonnes.

A new plant (Fig 5) has just been installed in Thailand to remelt scrap pretreated upstream in a milling and separation operation. The plant has a very flexible operation philosophy to deal with various alloys and cast aluminium ingot alloys of many specifications.

The scrap is remelted in either of two oxy-fuel-fired 5-tonne-capacity tilting rotary melting furnaces and then transferred into a centrally-located 15-tonne-capacity tilting



A 15 tonne holding furnace recently commissioned in Thailand

holding furnace where the molten metal is alloyed, temperature corrected and then poured into an ingot casting machine.



Two 5-tonne-capacity tilting rotary melting furnaces recently commissioned in Thailand

All types of scrap can be processed through the rotary furnace and frequent change of alloys is possible with this flexible plant layout. The shop was built in anticipation of installing future furnaces for additional productivity.

Other current orders on Mechatherm's books include a similar capacity melting and holding furnace combination to the one described above for another new plant in Thailand and a new plant being built in Dubai. Each generation of furnace incorporates design improvements with the latest furnaces incorporating a new door-seal design with a cast labyrinth feature to ensure minimum exhaust gas leakage around the door.

The door is then unclamped and pivoted sideways against a heat shield for energy conservation and operator safety. A further order has also been obtained for a 60,000-tonne-per-year aluminium scrap recycling plant in Turkey which is also designed around maximum flexibility to deal with various types and densities of aluminium scrap.

The plant includes two production lines, one line with a 50 tonne capacity side well furnace and 25 tonne static holding furnace, the other line with a 10-tonne-capacity oxy-fuel-fired tilting rotary melting furnace feeding a 25-tonne-capacity static holding furnace. This plant is due to be commissioned in 2007