

Mechatherm and ALTEK-MDY join forces to supply tilting rotary furnaces



Chris Emes, Managing Director, Mechatherm International Limited



Alan Peel, Managing Director, ALTEK Europe Limited

Two well-known companies, ALTEK-MDY and Mechatherm International, Limited, have joined forces in supplying tilting rotary furnaces. ALTEK-MDY have 20 years experience and over 40 global references in the provision of such furnaces. This know-how will now be complemented by Mechatherm International's 30 years of experience in the design and construction of casthouse equipment and re-melt furnaces.

The tilting rotary melting furnace (TRMF) was introduced in the early 1990's. Since that time, it has become the industry standard in the dross processing sector, due to its wide range of advantages compared to fixed-axis rotary furnaces. During the 1990's, both ALTEK International Inc. and MDY LLC, as separate operating companies, led the industry in the supply of TRMF solutions with their furnace designs and technical/process expertise. The consolidation of ALTEK and MDY into one company in the early 2000's and subsequent re-organisation over the past five years has enabled the firm to focus on Total Dross Management. As a result of two decades of experience in start up, commissioning and customer training, ALTEK-MDY have built up a huge amount of process knowledge relating to best operational practice for the TRMF, across the whole range of aluminium scraps and drosses. The company's data base on aluminium recovery from different scrap types, salt addition requirements and salt types enables TRMF operations to be optimised to obtain the very best possible results.

Chris Emes, Managing Director of Mechatherm International, commented, "This collaboration should be very interesting to both our existing and potential clients. It will combine the long-term experience of Altek and MDY in re-melting drosses and scraps with Mechatherm's innovative engineering principles and support organisation. We aim to provide the very best quality of furnaces, giving the high efficiencies, high yields and environmentally friendly operation required by today's

standards, as well as reliable instruction on the best operating principles".

Alan Peel, Managing Director of ALTEK Europe commented on the new co-operation, "This is a very exciting time for ALTEK-MDY. By partnering with Mechatherm International, a very professional and well-respected company, on this product line, it significantly enhances our strategy to offer total solutions in the area of dross management. With the growing focus on the management of aluminium dross within casthouses, this co-operation will allow us to develop excellent TRMF solutions as part of our Total Dross Management philosophy. Irrespective of which organisation has supplied the furnace, we are both active in the market, providing consultancy services to customers who have TRMF operations, but need to optimise their operation or improve aluminium recoveries."

Mechatherm International have a long and well-established history in providing complete and well engineered (and where required turnkey) casthouse solutions worldwide. The company's first-class engineering and process control team have utilised their 3D design and finite element analysis experience and facilities to provide advanced furnaces and drives, associated with a high level of process control and automation.

With access to global manufacturing resources and experience of project execution across the world, co-operation between the two companies will enable them to offer high specification, very competitively priced TRMF solutions. With the ever growing focus on the impact of recycling aluminium on the environment, both from an emissions, CO₂ footprint and also waste management/land fill point-of-view, the two organisations will be focusing very strongly on this area. One example will be cooperation in the introduction of **low-salt and salt-free** process solutions with the intention of supporting the industry's drive towards zero waste and maximum recovery from aluminium re-cycling processes.



ALTEK-MDY 16 tonne tilting type rotary furnace



Mechatherm International 5 tonne tilting melting furnace

The objective of the partnership is to provide TRMF solutions that allow for a wide range of furnace capacities (including 4, 7, 12, 16 and 24 tonne versions). The designs will include many advantageous features, such as:

- Durable robust designs for scrap re-melt foundries
- Fume treatment plants included if required
- Rapid charge scrap-charging machines

- High-efficiency oxy-fuel or cold air burner systems
 - Drive systems custom designed for different capacities
 - Range of custom-designed control systems
 - 3D designed structures with finite element analysis for low-stress construction
 - Turnkey-installed plant available if required, or supply and supervision
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