



China Zhongwang Holdings Ltd is the second largest industrial aluminium extrusion product developer and manufacturer in the world and the biggest one in Asia and China. Mechatherm were awarded the contract to install a new 16T tilting rotary furnace and a 5T scrap charging machine, located at their Liaoyang plant.

Mechatherm International has recently installed a new 15,000 tonnes per year scrap/dross re-melt facility for Liaoning Zhongwang Group Co., Ltd in China, working in partnership with ALTEK Europe.

The supplied equipment consisted of a 16 tonne capacity tilting rotary melting furnace and bespoke designed 5 tonne scrap/dross charging machine to handle and re-melt the customer's in house created scraps and dross from their expansive ongoing casthouse operations.

The contract was awarded to Mechatherm with the local portion of the project handled by their licensee Changrong Industrial Furnaces, located in Dalian.

---

**"This is a very prestigious project for Mechatherm as China had been reluctant to integrate the use of TRF's in their recycling plants. A very successful installation, with excellent results!"**

**Stuart Allen**  
DIRECTOR OF SALES



The equipment was manufactured in China with some key items supplied from the UK. Mechatherm were responsible as the 'turnkey' contractor for the overall project.



## WHAT ARE THE BENEFITS OF TRF TECHNOLOGY?

- Fast & efficient melt rates
- Improved metal recovery
- Increased throughput
- Lower energy consumption
- Processes all scrap types
- Advanced oxy-fuel technology
- Safe & user friendly

**GLOBAL  
ALUMINIUM  
EXPERTS.**

The furnace is fired by a single 3MW 'oxy-fuel- high output low velocity burner at the door end of the furnace which is automatically controlled to suit production requirements, operating practices and the type of scrap being processed. The melting action is achieved directly through radiant energy and indirectly through transfer of heat into the exposed area of refractory which then becomes immersed below the surface of the bath to heat up the aluminium from underneath. A molten salt flux is used to maximise the aluminium recovery from both drosses and scrap.

The quantity of salt required depends upon the type of salt flux used and the contamination level of the scrap/dross being processed.

Mechatherm were able to guarantee recovery figures of up to 97% on saw chips and between 35%-64% recoveries on dross depending on the metallic content (40% - 70% respectively). As for oxy/fuel consumptions, figures of 40Nm<sup>3</sup>/T of natural gas and 80Nm<sup>3</sup>/T of oxygen were achieved across a complete melt cycle of 3.5 hours.

The re-melt facility shop is also built in anticipation of installing future furnaces for additional drosses from China Zhongwang's sister plant in Tianjin.

[www.mechatherm.co.uk](http://www.mechatherm.co.uk)

**M**echatherm