

# RAPID MELTING ENERGY SAVING ALUMINIUM MELTING FURNACE

## ( E R MODEL )

This furnace design is developed from our experience and technical know-how of melting aluminium in excess of 150,000 tons per year. Built specially for aluminium casting and aluminium die-casting industries, this furnace is capable of producing very high quality melts. The furnace comprises a preheating chamber, a holding chamber and an automatic material charging machine ( skip elevator ) . Its compact design not only saves space and energy, it is also safe to operate too. The temperature of the molten metal can be regulated and a level indicator/probe allows the surface level of the molten metal to be monitored. For handling convenience, an optional automatic conveyor driven dispenser can be incorporated to transport molten metal from the furnace holding chamber to individual holding pots located elsewhere.

Some of the remarkable features of this furnace include:-



### ***SUPERIOR ALUMINIUM MELT QUALITY***

Special burners carefully selected by DAIKI ensures that hard spot formation and gas absorption problems are minimal. This translates into higher quality melts as molten metal that flows into the holding chamber has very little oxidation.

### ***CALM SURFACE OF MOLTEN METAL AND LOW OXIDATION LOSSES***

The surface of the molten metal is always calm because the installed burners are designed to be non-turbulent. As such, it is possible to expect oxidation losses to be lower than 1%.

### ***LOW NOISE POLLUTION***

The furnace operates at a relatively low noise level of about 80 phon ( db )

### ***EASE OF CLEANING***

A lot of thought has been put into the design of the furnace to ensure that there are no dead corners in the furnace chamber. This prevents hard clumps of oxidants from sticking onto the

furnace refractories and makes the chore of cleaning very easy.

### ***LOW MAINTENANCE COST***

Built for rugged operations, the cost of maintaining the furnace is low. From records kept to date, it is possible for this type of furnace to be maintenance-free for more than 2 years.

### ***LOW ENERGY COST***

High thermal efficiency results in low energy cost. Under optimum condition, fuel consumption can be less than 550,000 kcal/metric ton.

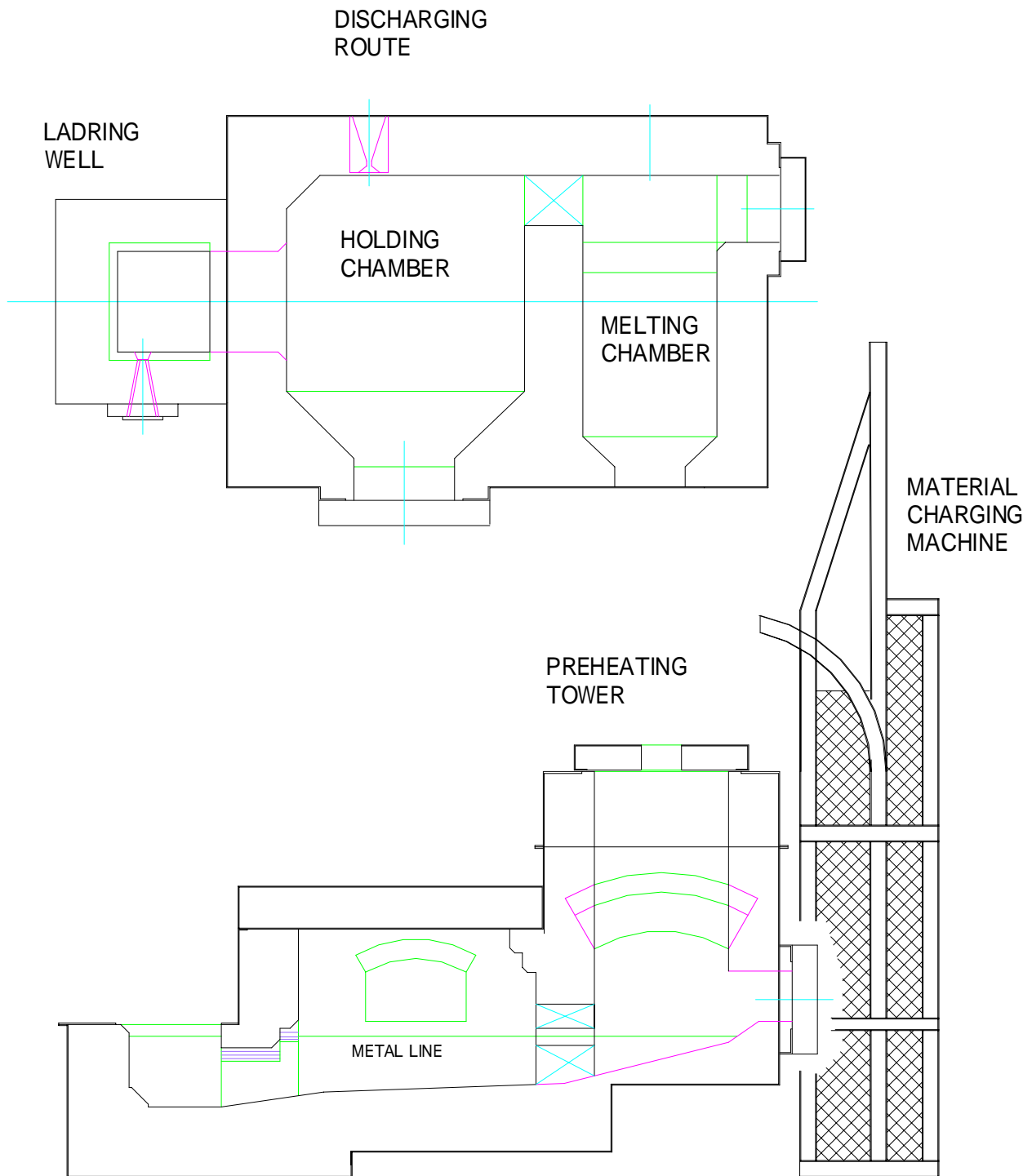
### ***CHOICE OF FUELS***

The furnace can be designed to run on the following fuels:-

Town/City Gas, Natural Gas, Propane Gas, Butane Gas  
Heavy Oil grades A and B, Light Fuel Oil, Kerosene, etc.

## **ER Model Furnace Specification**

	ER-500	ER-700	ER-1000	ER-1500	ER-2000	ER-2500
Melting rate ( kg/hr )	500	700	1,000	1,500	2,000	2,500
Holding cap. ( kg )	1,300	1,600	2,000	3,000	4,000	5,000
Melting burner cap. ( k c a l / h r )	400,000	500,000	600,000	900,000	1,200,000	1,500,000
Holding burner cap. ( k c a l / h r )	200,000	200,000	200,000	300,000	400,000	500,000



### CONTROL EQUIPMENT & ANCILLARY EQUIPMENT

- 1.AUTOMATIC IGNITER
- 2.SAFTY DEVICE
- 3.CONTROL MELTING TEMPERATURE
- 4.CHEKING MATERIAL LEVEL
- 5.SKIP HOIST TYPE ( CHARGING MACHINE STANDARD OR ELEVATOR TYPE CHARGING MACHINE )
- 6.AUTO TRANSPORTER

**DAIKI ALUMINIUM INDUSTRY CO., LTD.**