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## **ROTARY FURNACES**

- *Furnaces purpose :*
  - *Melting aluminium cans, copper, bronze, brass, lead scraps*

- *Furnaces type :*

- *Static rotary furnaces*
- *Tilting rotary furnaces*

- *Capacity of the furnaces :*

- *1-15 mc, for static rotary furnaces, depending on customer needs*
- *1-8mc, for tilting rotary furnaces, depending on customer needs*

## Furnaces description

- *The furnaces are made up of the following main components:*

### Rotating Cylinder:

- *The furnace is made up in its external part by a cylindrical vessel made of iron plate with two truncated cone heads solidly bolted on the outside.*
- *Two turned rings are placed on the cylinder and act as guide and generating roll.*
- *Inside the rotating cylinder and in contact with the iron plate there is isolating and refractory material.*
- *The cylinder is rotated via an electrically driven motor, gearbox, bearings and supports arrangement, all controlled by a variable frequency inverter.*

## Furnace Description

- *Tilting system (for tilting rotary furnaces):*
  - *The whole complex is assembled on a special base in structural steel so as to ensure a rational and rigid standing.*
  - *Spillage of melted metal is done by tilting the furnace with two cylinders, on the axis of the spout. An hydraulic power pack is provided.*
- *Gas Hood and Burner:*
  - *The burner is generally located in the refractory lined door. The door will be connected to the rotating support via a heavy fabricated arm and vertical pivoting assembly.*
  - *Combustion air is provided by a centrifugal blower fan. For oxygen burners, combustion plants are provided by the world main gas suppliers.*
  - *An exhaust collection hood is provided to collect the exhaust gases from the furnace. The hood is located above the furnace.*

# Furnace Description

- *Refractory:*

- *The refractory lining is designed with reference to the temperature and the metal alloy in the furnace.*

- *Electrical Panel:*

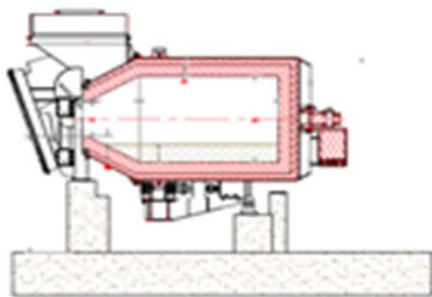
- *Electrical panel controls the furnace and the automatic system of burners.*

- *Manual books and layouts:*

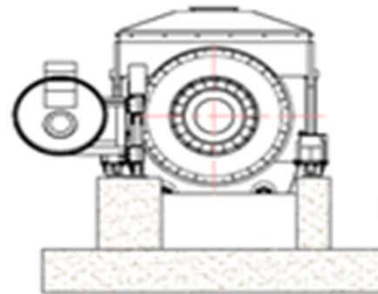
- *Manual books and layouts (written in English) are supplied with the casting machine and the catalogues of all the equipments such as hydraulic, gas and electrical diagrams. A complete list of the spare parts is provided for the best operation of the furnace.*

- *CE certification is included.*

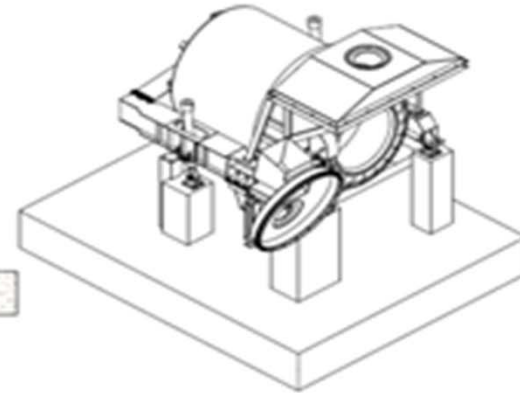
# Tilting Rotary Furnace



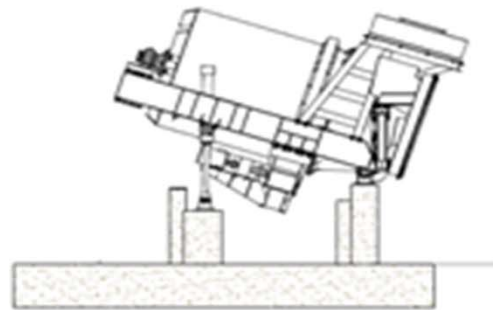
SECTION 2-2  
FRONT ELEVATION  
FURNACE SHOWN HORIZONTAL



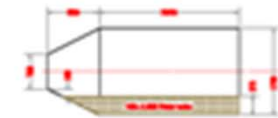
SIDE ELEVATION  
FURNACE SHOWN HORIZONTAL



FURNACE SHOWN HORIZONTAL

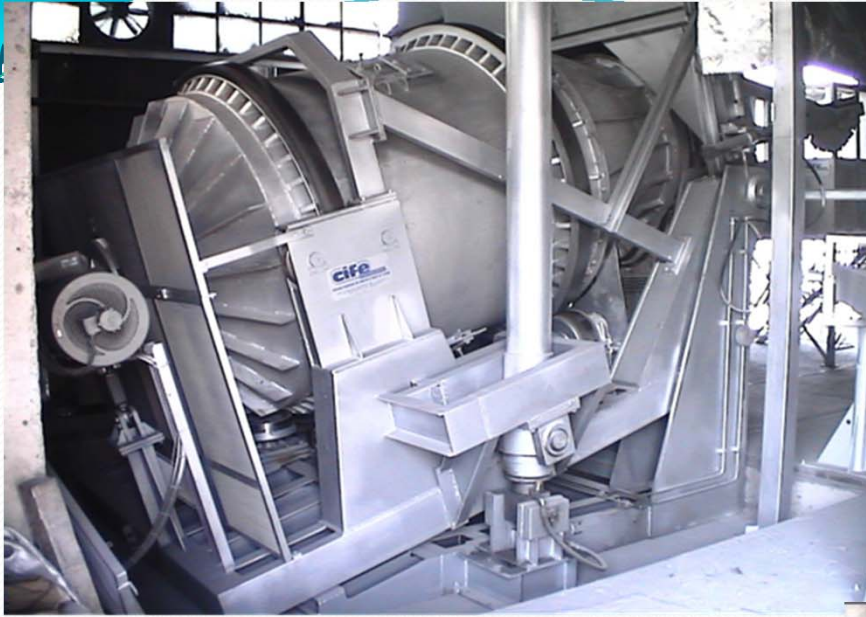


FURNACE SHOWN MAX. 29.3° TILT



BATHING TUB

## *Tilting Rotary Furnace*



## *Tilting Rotary Furnace*





## **VIBRATING LOADER FOR ROTARY FURNACE**

The machine is studied to reduce the time of loading of the furnace and consequently the heat dispersion.

The machine main components :

### **1. Mobile Trolley**

- *The mobile trolley is made up of a strong frame, 4 wheels, 2 of which driving wheels, moving from and towards the furnace.*
- *The movement of the trolley is controlled by an electrically driven motor, gearbox, chain and the 2 driving wheels.*
- *The trolley is completed by an operator's cab situated on the opposite side of the loading area.*

### **2. Vibrating Canal**

- *A vibrating canal is supported by a plastic spring system.*
- *This is the part of the machine which is more directly concerned with the loading.*
- *It is made up of sheet plates electrically welded and receives vibrations from 2 electric-mechanical vibrators with eccentric masses placed on a spur fixed very close to it.*
- *The vibrating canal has a flanged crop end to allow the substitution of its first part which is under greater thermal and mechanical stress.*

### **3. Loading Bucket**

- *Loading Bucket is fixed to the mobile trolley and is made up of a hopper worked by hydrodynamic pushers.*
- *The bucket, once loaded, directly transfer the load into the rocking trough.*

