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
  - 1-8 mc, 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
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.