



# LEAD OXYDE PRODUCTION

## Description

### Lead melting pot - 2 ton capacity

The melting pot is designed for floor installation, the dimensions are 1,2x1,2x1(h), without the aspiration hood and gas burner.

Heating is provided by a gas burner (200.000 Kcal/h), LPG, with automatic ignition.

Complete with thermocouple for temperature control.

Gas consumption: max about 9Nm<sup>3</sup>/h - Pressure: max about 40mbar

The lead melting pot is equipped with a lead ingots feeder.

This unit is composed of a robust chain conveyor, for the storage and the transportation of the lead ingots to the lead pot (length approx. 3 m, width 0,6m), a chain conveyor for the introduction of the lead ingots into the lead pot, a tackle to lifting the ingots (capacity 320Kg)

The lead melting pot is equipped with a lead metering and delivery system

The system is without return of lead to the pot. The lead feeding is controlled by a pneumatically operated poppet valve, synchronized with the casting m/c.

The duration of the flow is adjusted by means of a timer.

The feed line is insulated and electrically heated, with thermostatic control.

The system is composed of a lead rotary pump, poppet valve, lead feeding pipe.

### Lead cylinders casting machine

Fully automatic operation (only one operator required for supervision).

Output: 8 tons per 8 hours working shift with cylinders weighing about 50 grams each, no scrap production.

90 cavities (moulds) are machined on the rotary table.

The lead cylinders are ejected vertically from the top of the table by proper ejectors and are deflected into a chute leading to the buckets elevator, which feeds the storage bin.

The system is completed with:

- rotary table
- water cooling, about 400 litres/h
- electric control board.

Manufacturer: COSMEC

Construction year: 1997

### Cylinders bucket elevator

Bucket elevator for feeding the lead cylinders into the silo.

### Lead cylinders silo

Lead cylinders silo, 30 tons capacity, with motorized opening bottom and geared motor and a vibrator, with a screw conveyor to feed the mill

### Lead oxide mill

The mill has a max. output of 6 tons of lead oxide during 24 hours of continuous operation (based on prevailing European climate conditions). Output is referred to standard oxide specifications:

PbO 68÷72% - acid absorption 200÷260mg/gr.

Mill comprises:

A) Rotating unit (drum) for powder production:

- main geared squirrel-cage motor
- water cooling

B) Baghouse

Fully automatic bag filter for collection of the lead oxide powder and cleaning the exhaust air (lead emission at the filter outlet below 0.5 mmg/cu.m). The filter includes:

- filtering bags made of special temperature resistant fabric main suction fan from the mill. The flow is adjusted by one remote controlled shutter.
- automatic counter flow cleaning system. The system cleans in sequence one row of bags at a time.
- extraction of the oxide carried out by means of a screw conveyor, equipped with a rotary discharge valve and arc-breaking device

C) Electronic weighing apparatus for the control of the rotating drum load (5000 Kg limit), load cell type.

D) General electric control panel.

#### Oxide storage system

The standard system includes:

- A) n° 1 screw conveyor, collecting the oxide from the filter outlet;
- B) n° 1 bucket elevator;
- C) n° 1 screw conveyor, with reversible transport direction, feeding the powder to either silo D.;
- D) n° 1 lead oxide silos, capacity about 30 ton. Silos are provided with vibrating bottom, level indicators and filter bag;
- E) n° 1 silica gel air de-humidifier for the silos D.;
- F) n° 1 screw conveyors for powder extraction from the silos;
- G) n° 1 screw conveyor, connected at the two ends to the conveyors F. and delivering the oxide to a central outlet.

Manufacturer: COSMEC/SOVEMA

Construction year: 1997/1990