Lead quenching furnace

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Controls and maintenance

- **Warranty**
  - One month after the commissioning
    - Tighten again the pulleys belts of all the fans
  - Monthly certificates
    - Deoxidation certificates
  - Every three months
    - Control of the air/gas ratio of the burners
    - Cleaning the UV quartz
  - Yearly certificates
    - Recording the temperatures during one year from the heating period
- **Daily**
  - Check the lead level
  - Check the tightness of the junction between the open fired furnace and the lead quenching furnace
  - Check the good immersion of the wires into the wiping tank
  - Presence of water in the cooling axis of pulleys
  - lead pump
    - Check the presence of water of the lead pump cooling circuit
    - check the good rotation of the axis of the lead pump
    - Remove the oxides around the lead pump
    - Check the absence of ashes combustion
    - Check the good circulation of lead at the visit chamber situated near the junction
  - Control of temperatures
    - Coherence between the temperature measured by thermocouples and recorders
  - Control of the lead bath covering
  - Wires crossing
  - Control of the good running of the signal lamps and alarms (klaxon - visual)
- **Weekly**
  - Deoxidation
    - Remove the oxides around the cooling pins and near the well of lead pump
    - Remove the oxides near the junction in the lead discharge chamber
  - Pumps
    - Inspection of the pump's well
    - Cleaning the pumps
  - Thermocouples
    - Check that there is no oxides fixed on the protection tube of thermocouples (part immersed into the lead)
  - Check the UV lamps
- **Monthly**
  - Governors
    - Check the state of BZR governors (Pg=Pm)
  - Burners
    - Check the state of burners
  - Fans
    - Cleaning the filters
    - Check the belt tension
- **Every three months**
  - Cleaning the UV quartz
  - Cleaning the radiators of the eventual air conditioner blocks of the electrical switchboard
- **Yearly**
  - Fans
    - Inspection of the belts, bearings of the fans
  - Inspection of gas and premixing pipings
    - Absence of oil (LPG only)
      - Cracking of LPG
        - Eventually place a low point to collect oil down the main governor
    - Eventual leakage
  - Inspection of thermocouples
    - Compensation cable : good connection (polarity)
  - Control of electrical connections
  - Simulation test of UV safety flame
  - Check the good running of all the safety solenoid valve
  - Check the good running of the TESE safety head
  - Check the state of dipping shoes
- **Every 2 years**
  - Replacement of the lead
  - Complete cleaning of the inlet of the tank as well as pumps' well
  - Inspection of cooling nest and cooling pin
    - Cleaning the tubes
  - Lead pump
    - Eventual replacement of the anticorrosion sleeve
  - Replace the thermocouples
  - Inspection of the dipping shoes
    - Eventual replacement
- **Every 5 years**
  - BZR governors
    - Sending back the BZR to FIB for reconditioning
  - Inspection of the masonry