



INGENIEROS DE LAS MÁQUINAS TÉRMICAS Y DE  
LAS TRANSFORMACIONES ENERGÉTICAS

**VAPOR INDUSTRIAL DESDE 1957**

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## Need

### Problem

- Water treatment plant by oxidation in an isotank ISO 20' 1C, working in **extreme temperatures of -30°C**
- Scarcity of fossils fuels and client preference for an **electric solution environmentally friendly**

### Place of application

- Tank capacity: 12.500L
- Isolation: 50mm of rock wool and aluminum coating of 0.85mm
- Heating coil: inside the tank and in contact with water
- Outdoor temperature: -30°C



## Solution provided by Giconmes

### Advised solution

- After the analysis and proper calculation with conclude that a **30kW steam generator working continuously was needed**
- The steam generator was **controlled by thermostats** that depending on the tank temperature will provide steam

### Technology used

- **Generator: M-60 – 30kW**
  - Power: double resistor (15kW+15kW)
  - Steam production: c. 40kg/hour
  - Boiler capacity: 55L
  - Boiler material: inox AISI 304

## Other steam application in tanks and containers



**Storage:** steam generators help to maintain the temperature and viscosity of waxes, resins, varnishes, colorants, vegetable oils, etc ...



**Cleaning:** the steam helps to eliminate the element transported in the isotank when the liquid transport needs to be replaced. Specially useful for isotank rental companies



**Unloading temperature control:** if the material to be transported needs to be preheated before unloading, the Isotanks are equipped with coils that are connected to steam generators



**Tank washing:** according to Royal Decree 948/2003 (Spanish jurisdiction), every tank must be thoroughly washed and vaporized before transporting other element chemically incompatible with the previous one

**Application elements**



Steam flows through the isotank coil at 180°C and 5 bar

- Generador eléctrico M-60**
- Electric and automatic steam generator, available with a variable power range of between 20 to 60kW
  - The M60 can be fed from the water network or from an inox water tank
  - The boiler is supplied with a double set of resistors having the possibility to work at two different power levels
  - Steam pressure is of between 0.3 and 8.5 bar
  - The M60 are used for production process that require medium to high quantity of steam

