

NITROGEN SYSTEM

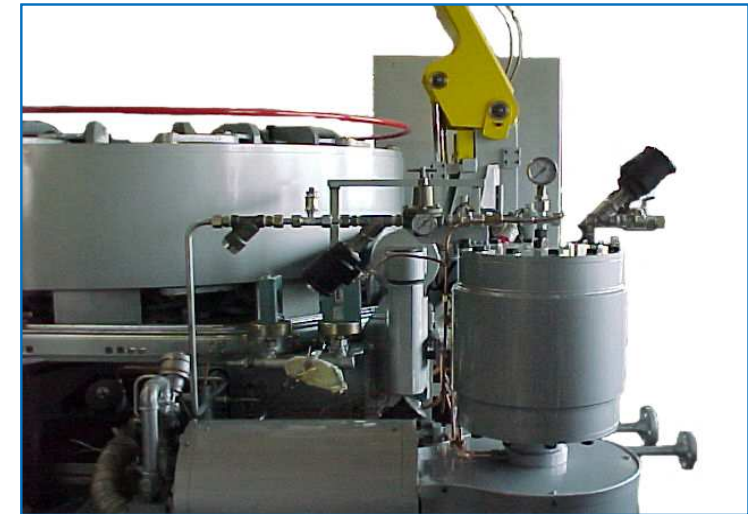
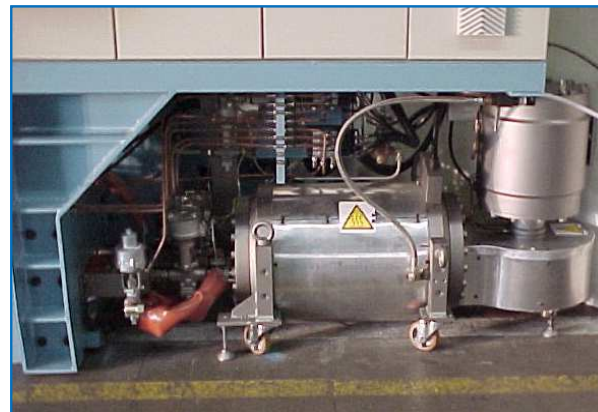


CIMA developed a modular heated nitrogen system for inflation with a circulating flow suitable for tyre retreading and new tyre curing presses

NITROGEN IS AN INERT GAS AND GUARANTEES THE MAXIMUM UNIFORMITY AT HIGH PRESSURE AND TEMPERATURE

(230 °C - 24 bar)

The high pressure and temperature assure the perfect adherence of the green tyre with the mould segments during cure

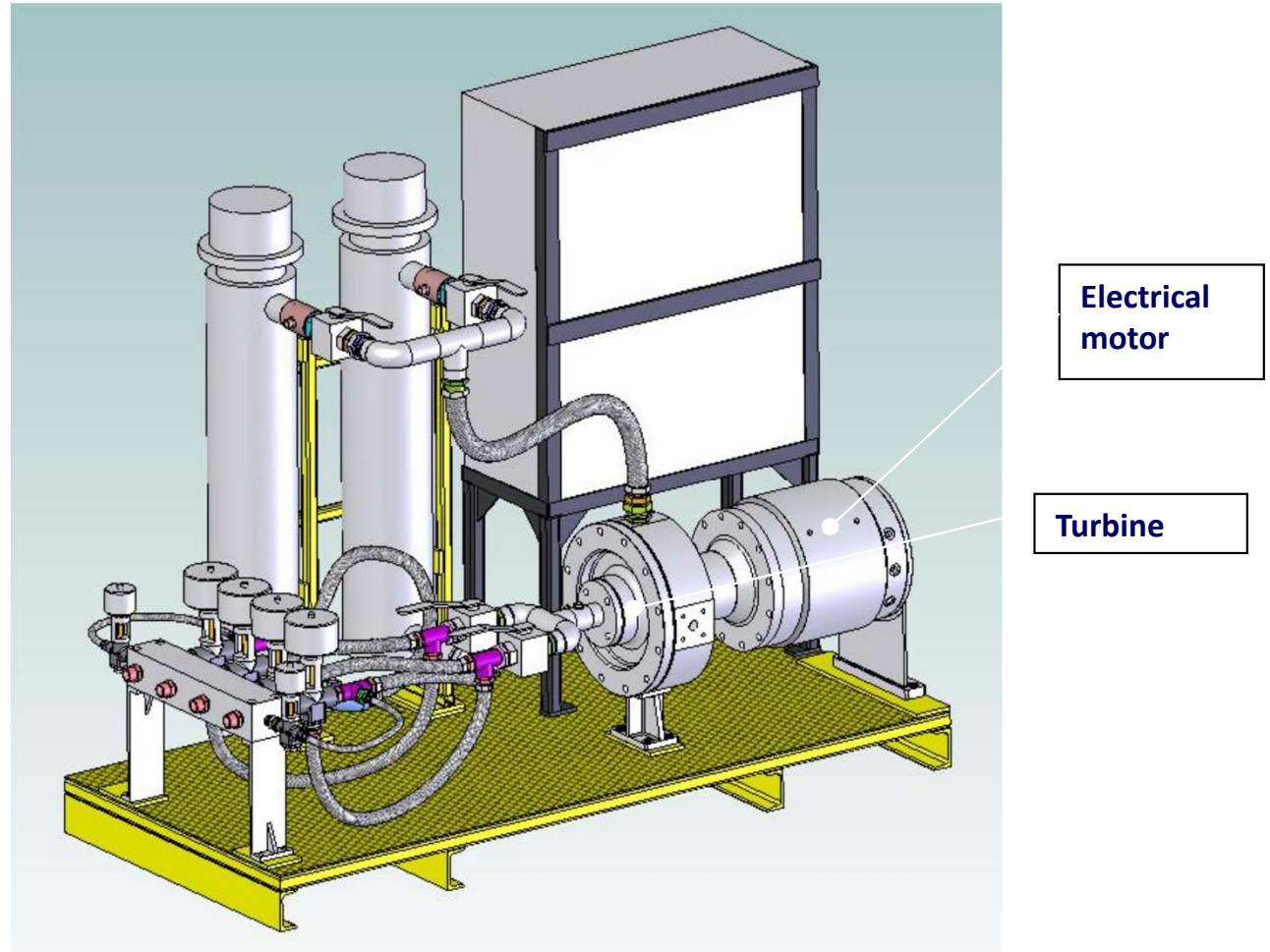


- Nitrogen extends life of bladders because not oxydating**
- Nitrogen is preferred by aircraft tyre retreaders working at high pressure because it assures the maximum adherence between the aircraft tyre (more rigid) and the mould**
- Nitrogen reduces the curing time if used heated**

NITROGEN SYSTEM

The group has the function to heat the nitrogen and assure its circulation inside the curing presses during the curing cycle of tires. The machine is interfaced with the curing press to which it is connected and is composed by:

- Electrical cabinet
- Heating Units
- Electric motor
- Turbine



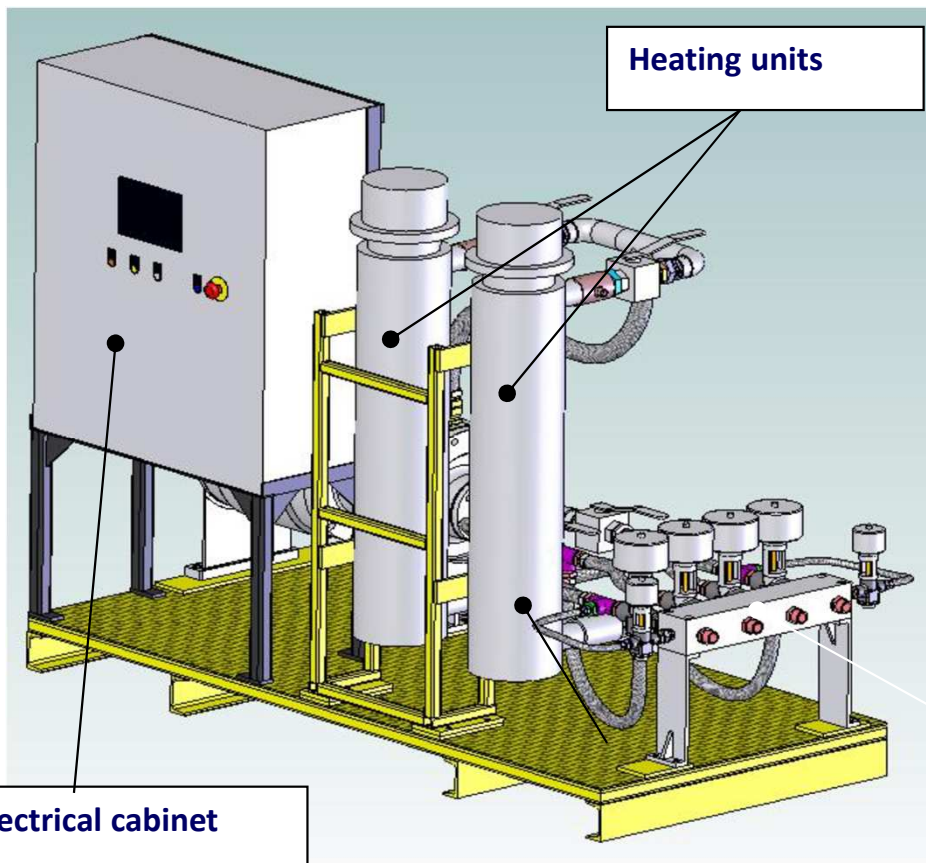
MOTOR/TURBINE UNIT

It generates a continuous gas flow in the bladder feeding circuit. The turbine is operated by an electrical motor supported by high precision bearings that are kept at a low temperature by a special cooling circuit; all the unit is enclosed in a very thick steel pressure tight envelope (max. 30 bar).

NITROGEN SYSTEM

HEATING UNIT.

It consists of a tunnel directly connected to the turbine flange. Inside the tunnel, on direction of the exit, there is a group of electrical elements (high dissipation type) and on direction of the turbine suction there is a collector for gas return. Connections for flexible pipes connected to the bladder are located on tunnel exit. It consists in such a way of a completely closed circuit. All the parts of this unit are enclosed in a steel envelope, suitable to resist to work pressures.



VALVE UNIT.

The use of a group inlet, discharge, return valves, etc. is foreseen to assist gas control in curing process cycle. These valves are operated by inboard computer as a function of cycle program. Several temperature controls are foreseen in various points of the circuit, in order to optimize all feeding group thermal efficiency with the machine requirements.

Inflating and recirculating nitrogen
with curing press