TECNICAS REUNIDAS

espindesa

A Nitric Acid Baby Plant: Challenges of Specific Problems

Global Networking ANNA Local Results

Sept 2016

A Nitric Acid Baby Plant: Challenges of Specific Problems

- Project Introduction
- The Compressor
- The Plant
- Specific Elements

Project Presentation

CLIENT: FIASA. Devoted to refrigerants production and removal in Argentina in Remote Area

Nitric Acid Capacity Limited to 20-30 MTPD (Diluted 60% and concentrated 99%)

Availability of fonds from Carbon Credits and Spanish financing, with limited investment

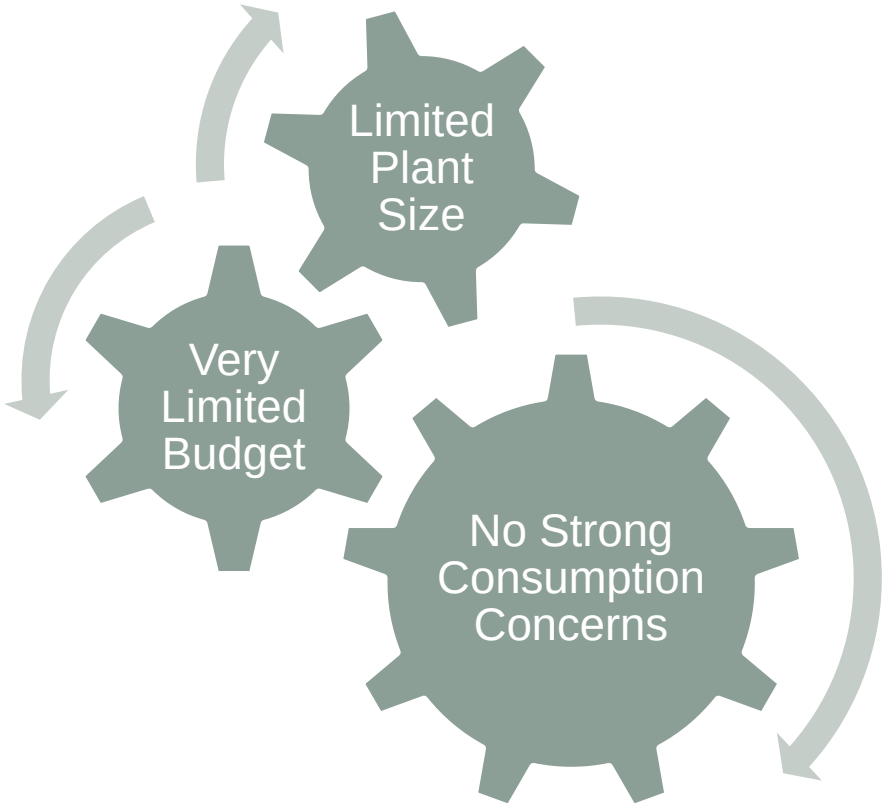
The Site

Site: Villa Mercedes Argentina

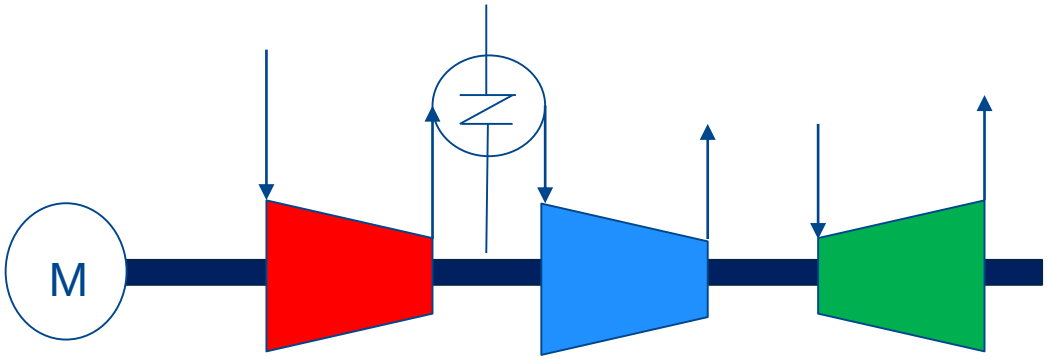
FIASA

PETROQUIMICA RIO TERCERO SA

The Site



The Compressor

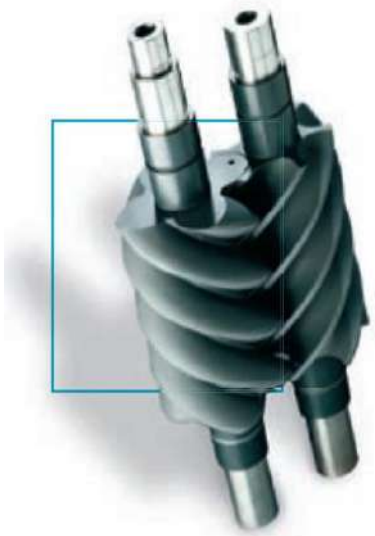


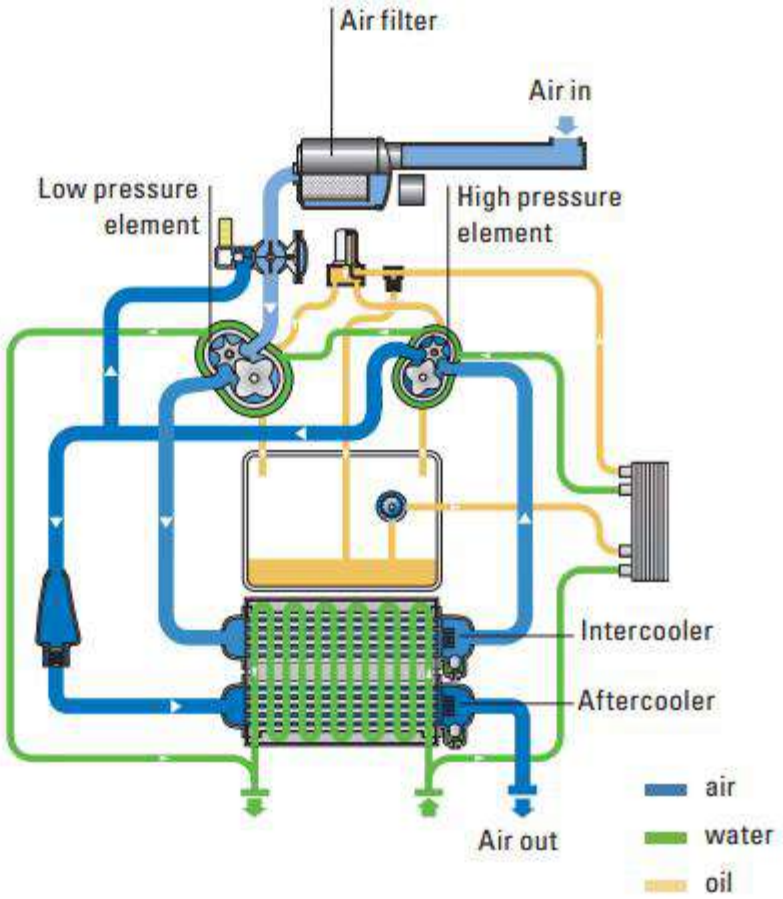
Typical : In line Monopressure Plant Compressor

Problems to find supplier for this capacity

Problems of Budget

The Compressor





Compressor used in farmaceutical/Food Plants

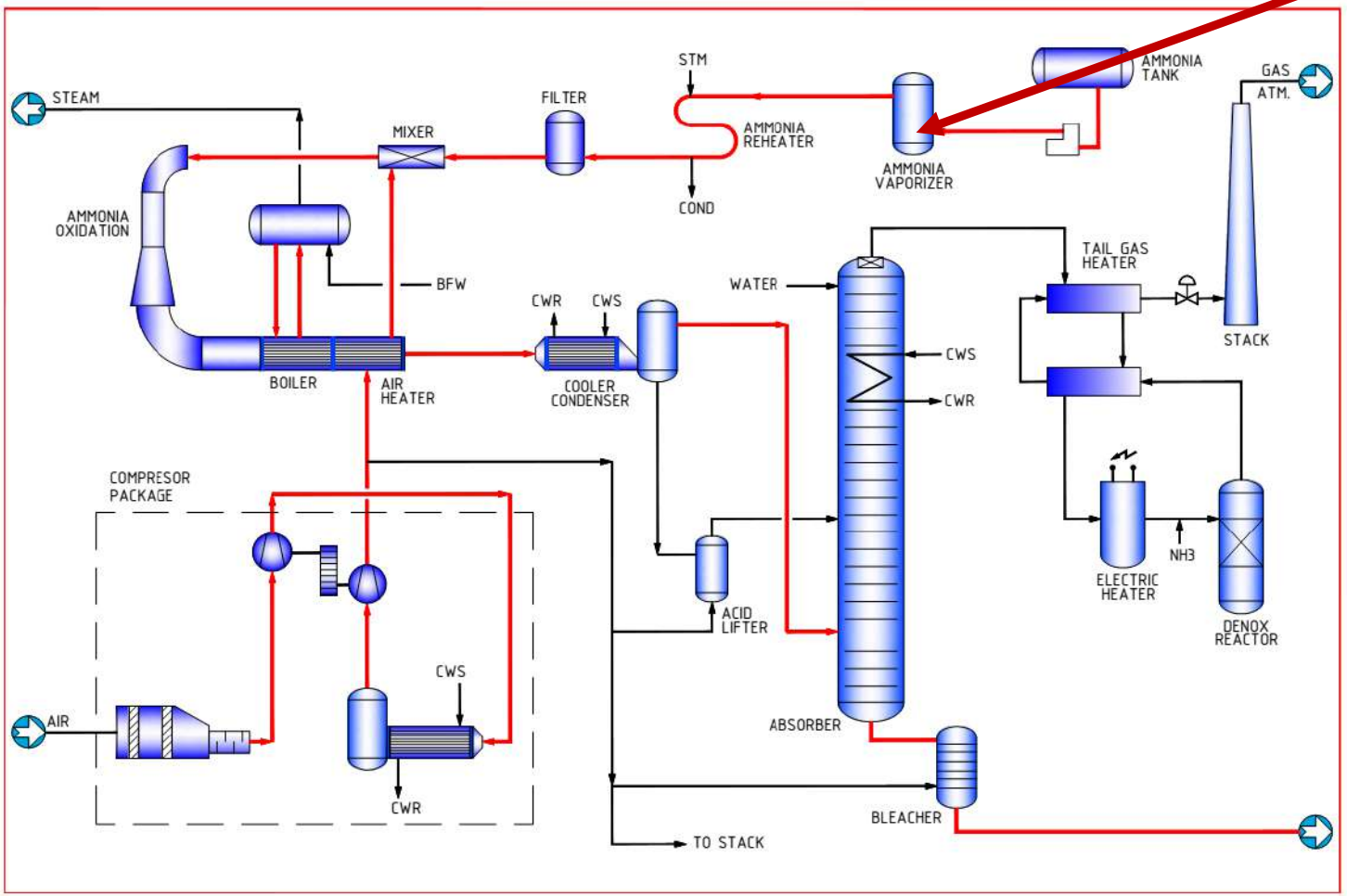
The Compressor

- Package unit
- Capacity fixed
- No expander

Compressor used in farmaceutical/Food Plants

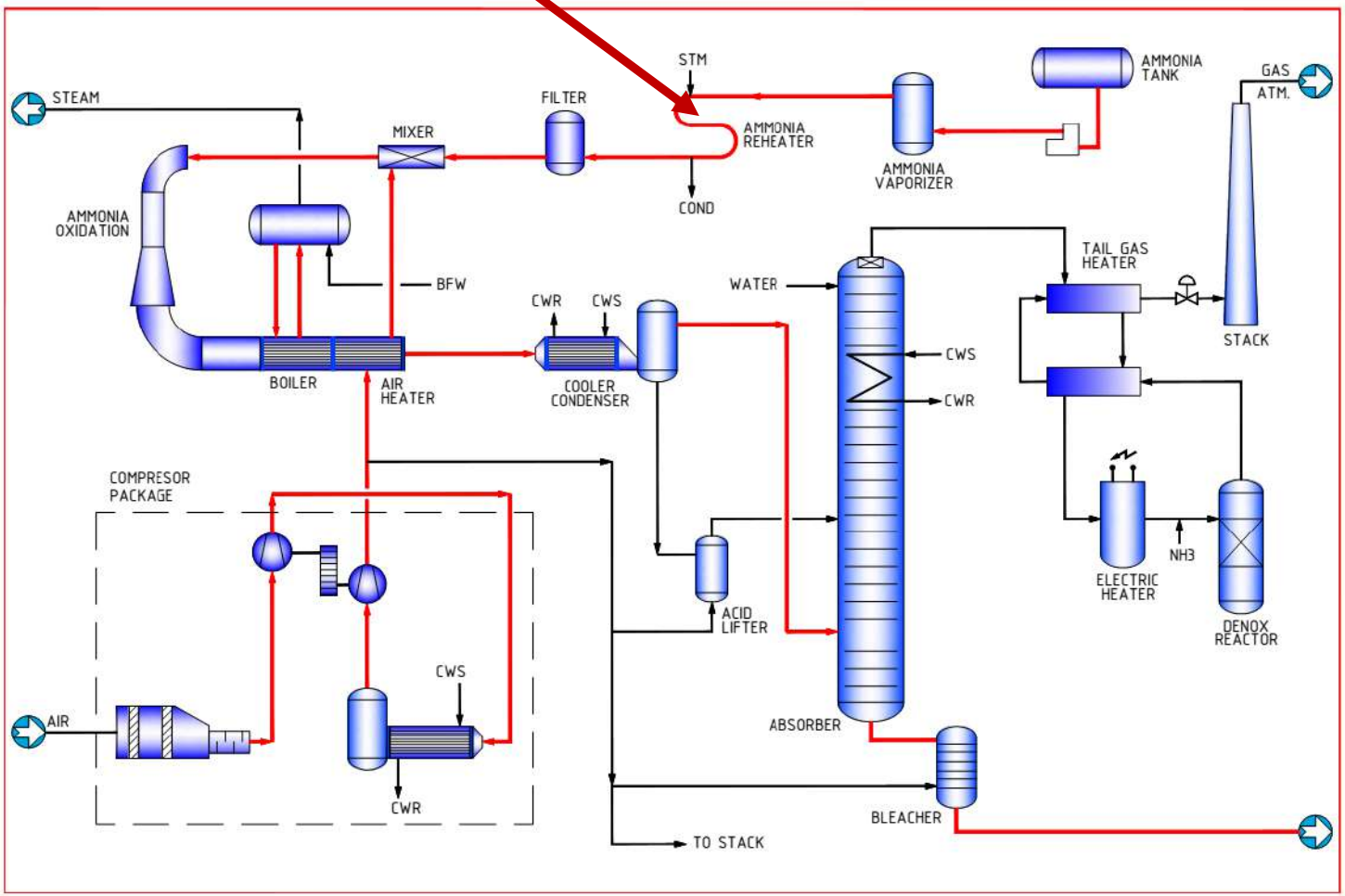
The Plant

Vaporizer: coils



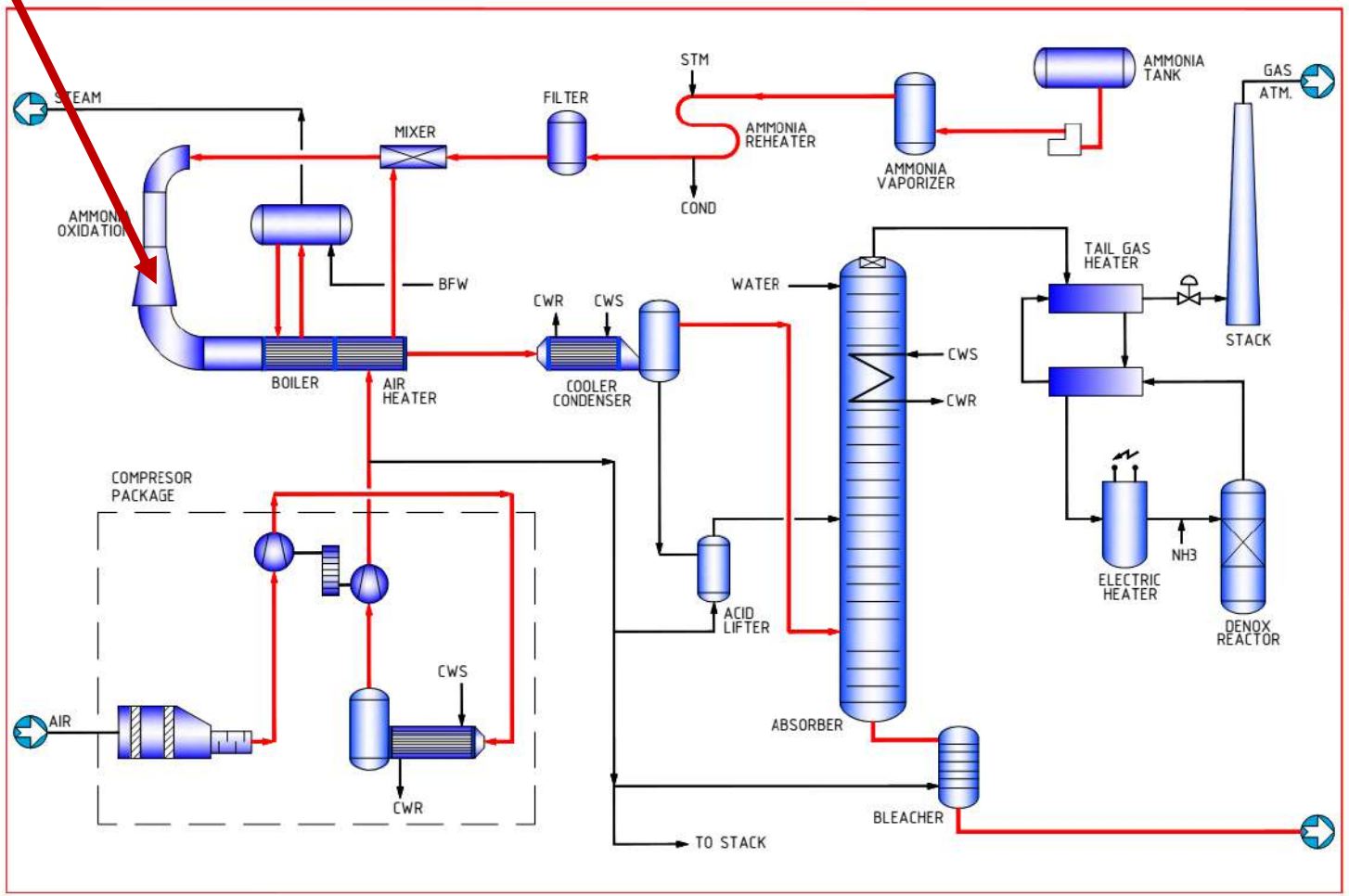
The Plant

Amm Reheater : Double tube

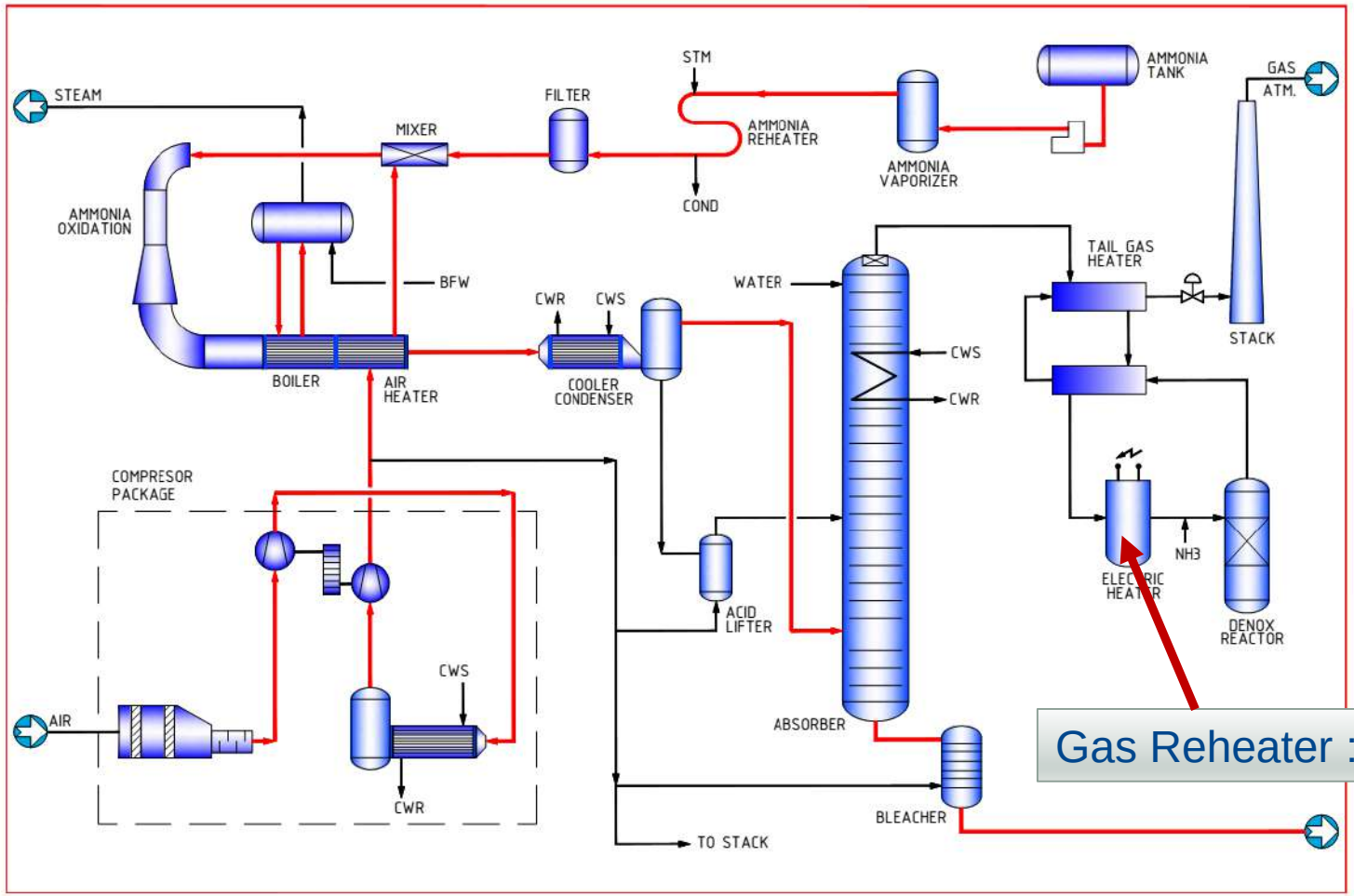


The Plant

Reactor ceramic walls

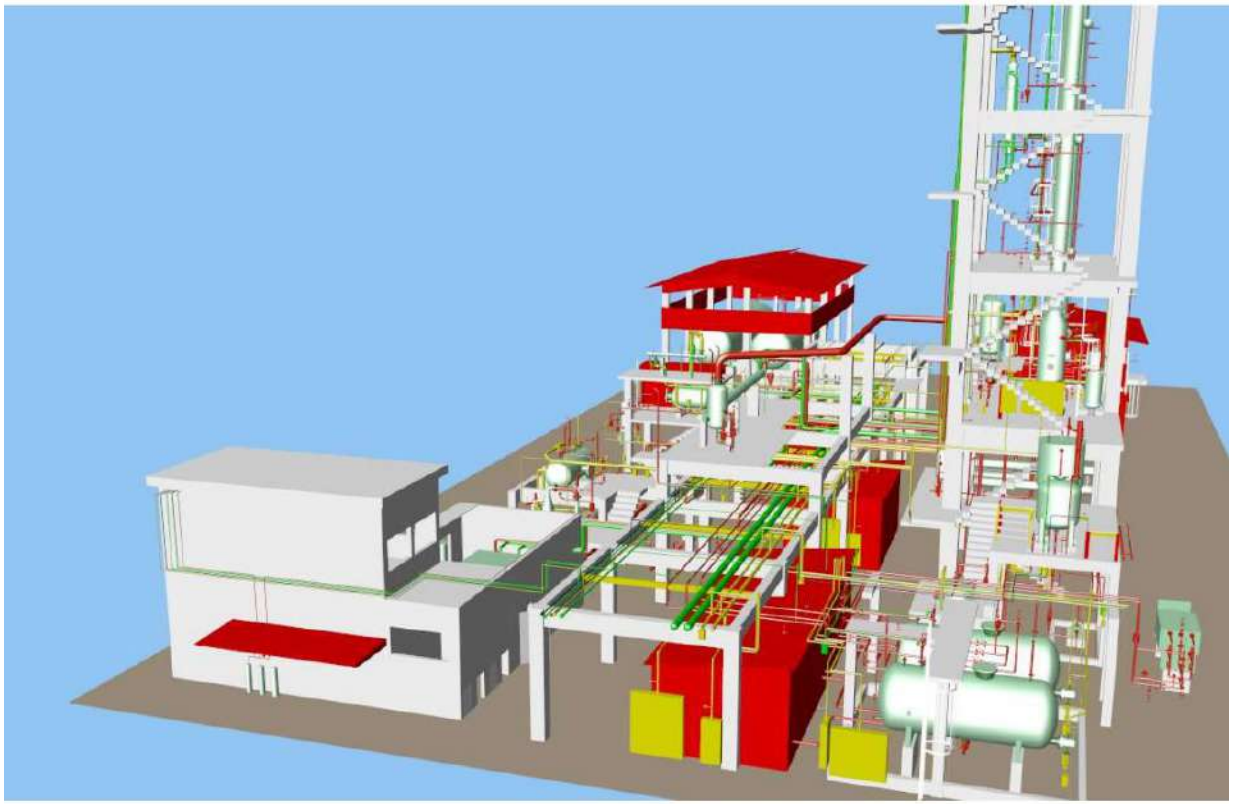


The Plant



Gas Reheater : Electrical

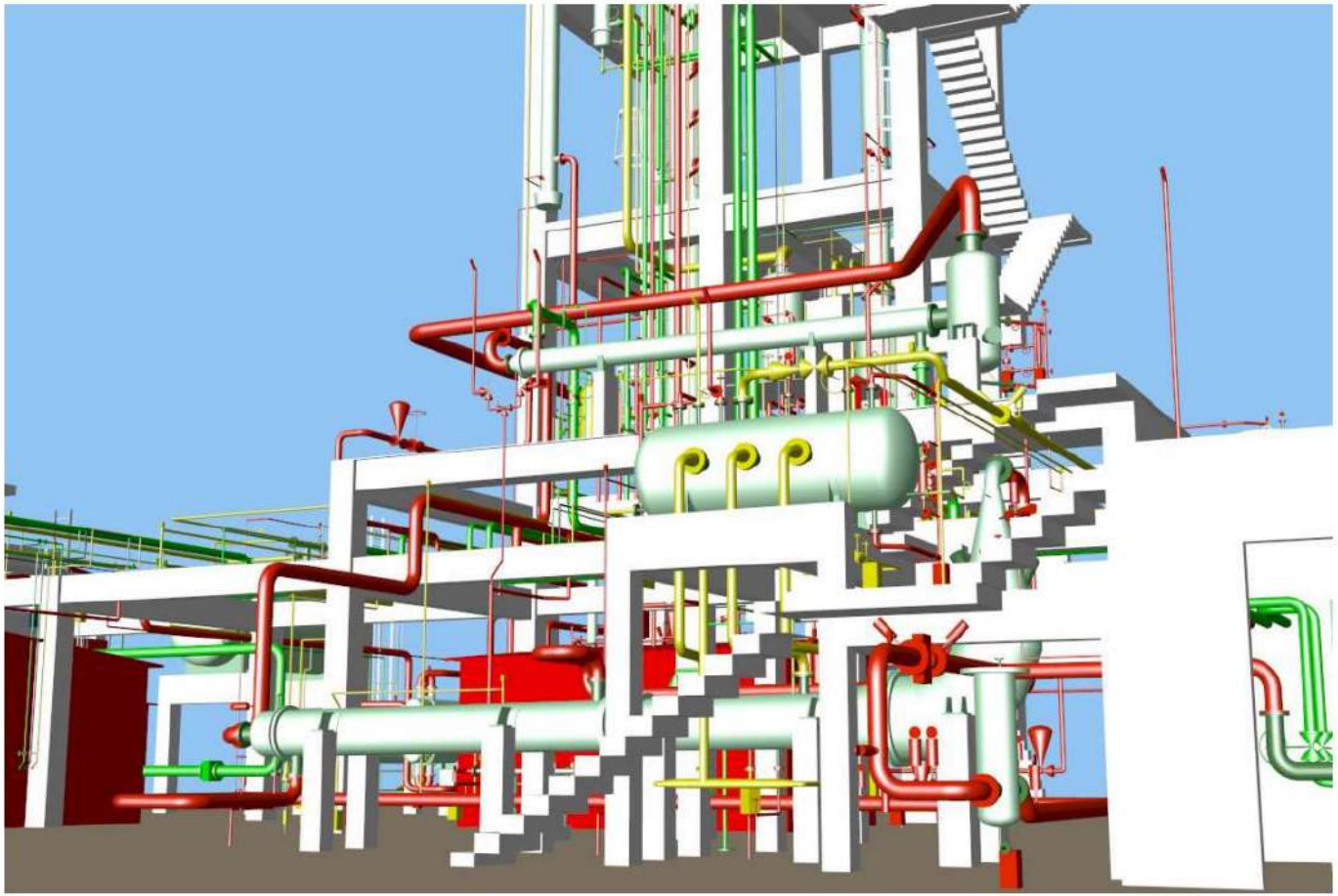
The Plant



GENERAL VIEW. ELECTRICAL SUBSTATION AND CONTROL ROOM BUILDING

The Plant

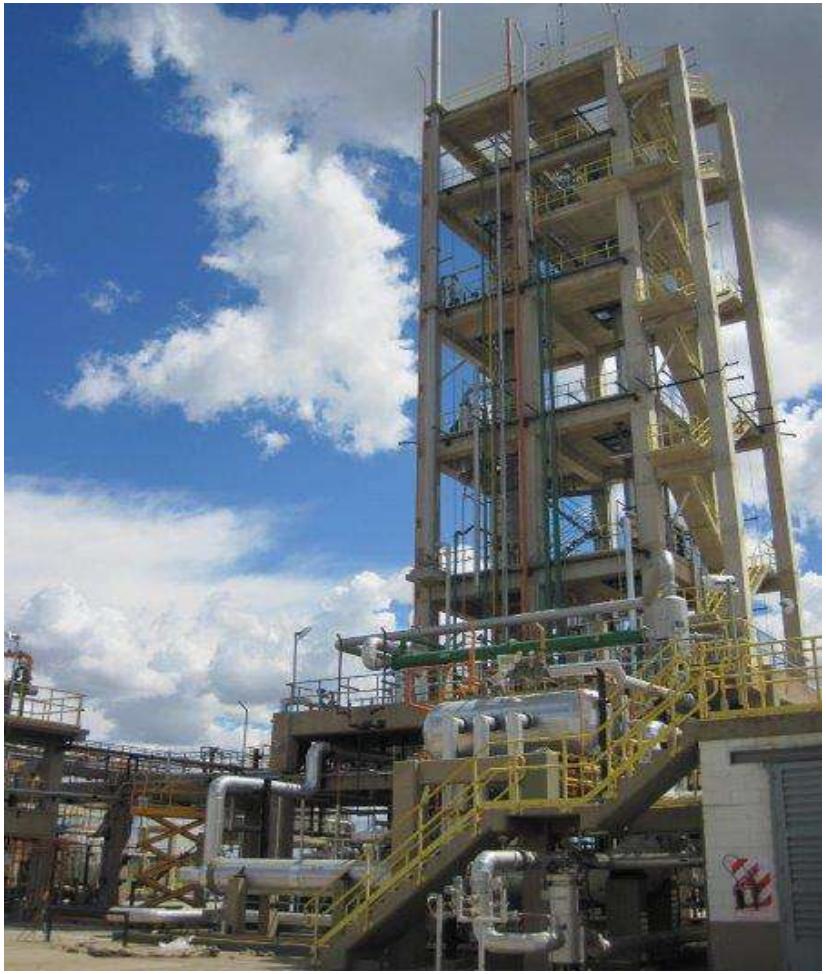
The Plant



STEAM DRUM (FA-003) & REACTOR TRAIN (DC-002, EA-007 / EA-008)

The Plant

The Plant

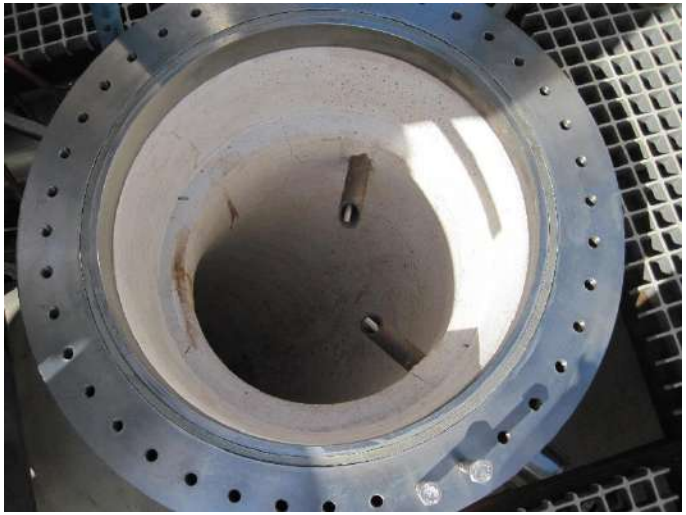


The Reactor

Ceramic Protection Reactor

The Reactor

Beams support



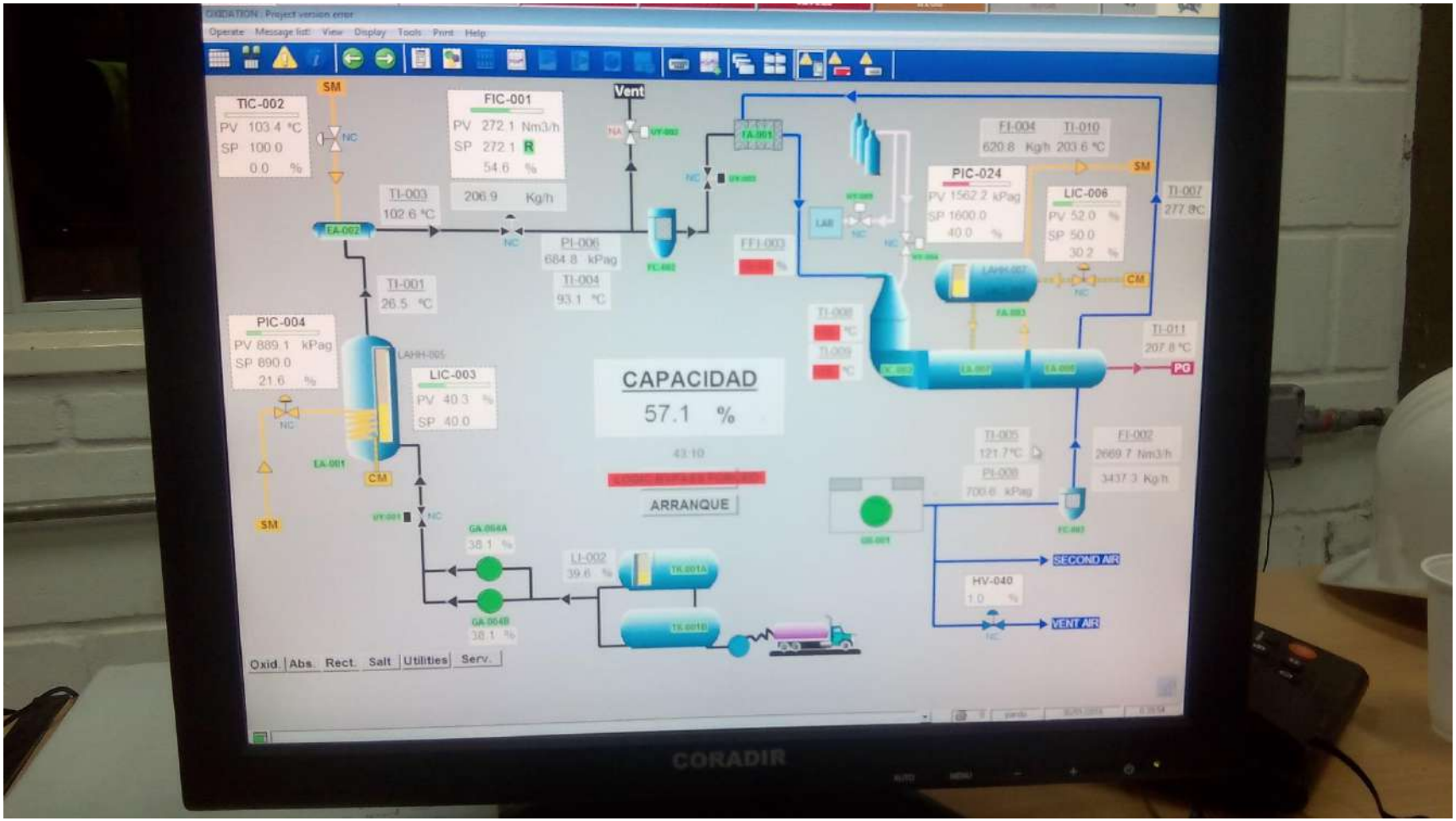
Ceramic Protection

Gauzes Installed

The Electrical heater

Electrical Heater

The Operation



Some Lessons Learned

- Very limited instrumentation reduces reliability of the unit
- Preservations: Very long time for construction, rust acumulation
- Very small equipment, additional study for maintenance
- Start up- Procedures to be analyzed when design is out of standards

Thank you