

350 TPD AT 100% DUAL PRESSURE NITRIC ACID PLANT FOR SALE

Capacity: 350 TPD at 100%
575 TPD at 61%

Year Built: 1974

Shut Down: 2009

Technology: Grande Paroisse

Concentration: 60-61%

Major Equipment (includes):

- Absorption Column
- Water Cooler Condenser – low pressure
- Water Cooler Condenser - high pressure
- Steam Superheater
- 24 bar g Steam Boiler
- Economizer
- Ammonia Oxidation Reactor
- Air Compressor
- Nitrous Gas Compressor
- GHH Turbo Set
- Tail Gas Expander
- Steam Turbine



Phoenix Equipment Corporation
www.phxequip.com
+1 732 442 6990

Jesse Spector
Vice President
jesses@phxequip.com

Ed Zhang
Plant Sales Manager
edz@phxequip.com

Process Step 1 - Oxidation Step: The ammonia oxidation is carried at 850°C and under a pressure. Ammonia is evaporated in an evaporator and superheated to 60°C in a second heat exchanger. Gaseous ammonia is filtered prior to feeding the primary static air/ammonia mixer. Air is filtered before the air compressor stage. Catalyst is platinum/rhodium gauzes. There is also a catchment system installed underneath the gauzes to recover part of the vaporized platinum during the oxidation reaction. In order to decrease the nitrous gas temperature after the oxidation reactor there is a train of heat exchangers before the nitrous gas compression stage. The first heat exchanger is a low pressure steam boiler which produces saturated steam. The final heat exchanger is the low pressure

condenser where most of the reaction water is recovered as weak acid, which is fed to the absorption column.

Process Step 2 - Nitrous-Gas absorption: The cooled nitrous gas that leaves the first cooler condenser is feed to the nitrous gas compression stage where it is compressed. The pressurized nitrous gas is then cooled in a tail gas pre-heater and finally flows through a final heat exchanger, cooled with cooling water, just before entering the absorption column. The absorption column absorbs the nitrous gases in demineralized water. Weak acid from the first cooler condenser is feed to the lower stages of the absorption column.

CONTACT US FOR MORE DETAILS