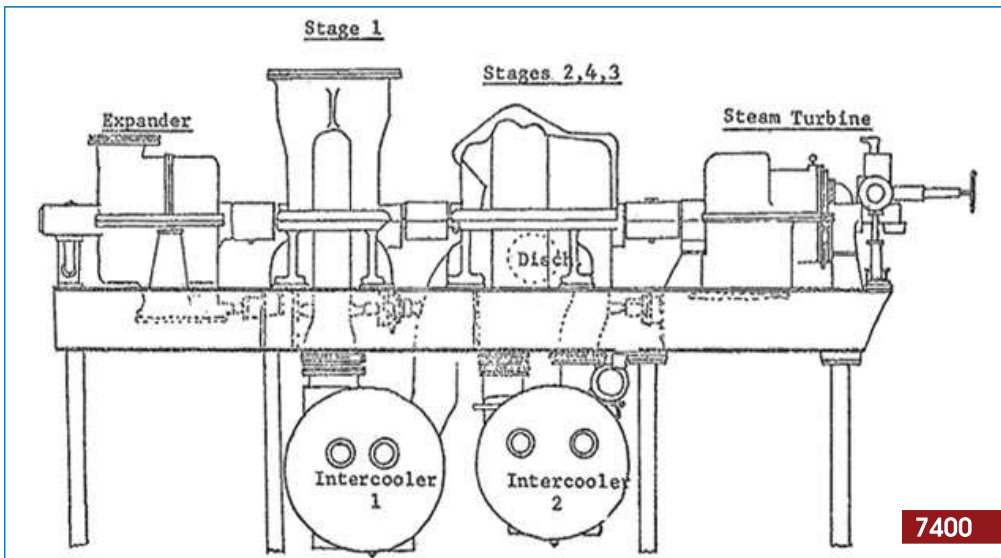


Summary

Weatherly Designed Nitric Acid Plant, 390 TPD, Built in 1971, with minimal operating time. Equipment includes: Compressor Train, Heat Exchanger Train, Absorber Tower and Related Area, and other parts.

Compressor Train



ALL EQUIPMENT
IS DISMANTLED
AND READY
FOR IMMEDIATE
SHIPMENT.

Compressor Train - #7400 44,450 CFM Ingersoll-Rand Steam Turbine Driven Compressor Train

7400A Air Compressor Base Skid

7400B Compressor Stage 1 with spare rotor and No. 1 Intercooler Condenser with spare tube bundle

7400C Compressor Stage 2, 4 and 3 with spare rotor and No. 2 Intercooler Condenser with spare tube bundle

7400D Steam Turbine: Terry Model GHF-45 with rotor and steam ejectors and steam condensers

7400E Surface Condenser

7400F Lube Oil System

Note: Expander is not available

Includes: Compressor Stage 1, 2, 4, 3; Steam Turbine; Intercooler 1 and 2 with spare bundles; Lube Oil System.

44,450 CFM @ 134 PSI Used Compressor Train includes: Compressor - Speed 8200 rpm, Drive power 9020 HP, Disch. Press. 120 psig, Temp. Out 345 F, 4 Stages, Capacity to Process 36,739 SCFM (dry) (SCFM 14.7 psia & 60 F), Capacity (including air) 44,455 CFM. Stage 1 (with spare rotor): 1st critical speed 10,320 rpm, Max Temp 450 F, Max Oper. Press. 30 psig. Stage 2, 4, 3 (with spare rotor): 1st critical speed 5700 rpm, 2nd critical speed 12,900 rpm, Max Temp. 450 F, Max. Oper. Press. variable to 120 psig. Steam Turbine: Speed 8200 rpm, normal HP 1130 HP, Start-up HP 3000 HP, Steam In. 250 psig, Steam Temp. 406 F, Start-up steam 47,600 lbs/hr, Normal steam 12,700 lbs/hr, Start-up Ex. Press. 9" Hg absolute, Normal Ex. Press. 3" Hg abs., No. Stages 4 (with rotors, steam ejector, steam condenser). Cooling Water Data: Lube oil cooler 107 gpm, Surface condenser 1143 gpm, Start-up surface cond, 2350 gpm, No. 1 intercooler 610 gpm (with spare bundle), No. 2 intercooler 550 gpm (with spare bundle), Absorber 3120 gpm, Product cooler 205 gpm. Total Cooling Water: Normal 5735 gpm, Start-up 6942 gpm. Expander (Note: Missing Expander): Speed 8200 rpm, 8250 HP, Press. Inlet 85 psig, Temp. Inlet 1250 F, No. Stages 5, Disch. Temp. 640 F. Previous Use: Nitric Acid

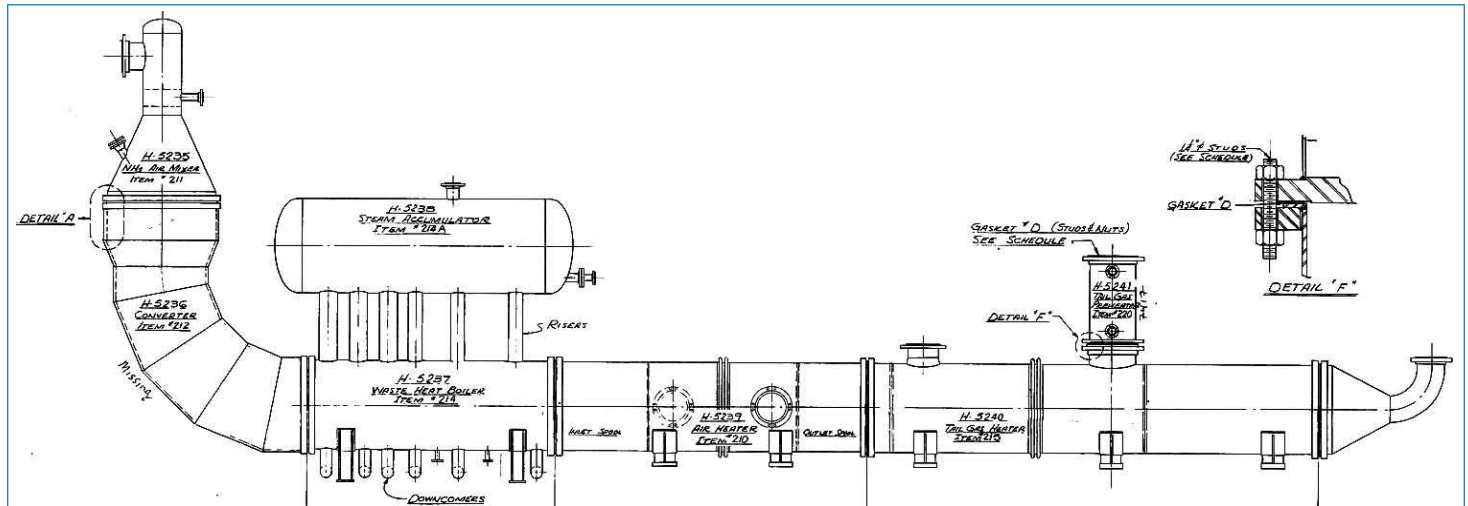
Also Available:

#7418 - Exhaust Stack

#7439 - Economizer - Used 2473 Sq. Ft. Kentube Company Fin Fan Heat Exchanger, 325#

#7440 - Treated Water Heater - Used 604 Sq. Ft. Kentube Fin Fan Heat Exchanger, 55#

Heat Exchanger Train



Ammonia Air Mixer



Unused Waste Heat Boiler



Air Heater



Tail Gas Interchanger



Unused Tail Gas Heater



Tail Gas Preheater

Ammonia Air Mixer - #7407

Used Nitric Acid Plant Ammonia Air Mixer (Converter Cone). Manufactured by Missouri Boiler and Tank Company, Stainless Steel. Rated 135 psi @ 650 F. Fig "A" 135 psi @ 550 F. Shell thickness 3/16" and 5/16". Head thickness 169 min, Head radius 211. Serial # H-5235, National Board # 3133, Built 1971. (Note: Converter and Converter Elbow not available but drawings are available)

Waste Heat Boiler (Unused) - #7408

Unused 1900 Sq. Ft. Reco Industries Horizontal Stainless Steel Shell & Tube Heat Exchanger, rated 285 psi @ 600 F. Serial # N6439.10, National Board # 81414, Built 1985.

Waste Heat Boiler - #7409

Used 1900 Sq. Ft. Reco Industries Horizontal Stainless Steel Shell & Tube Heat Exchanger, rated 285 psi @ 600 F. Serial # N6439.20, National Board #P700, Built 1984. Estimated weight 24,000 lbs.

Air Heater - #7410

Used 991 Sq. Ft. Horizontal 304L Stainless Steel Shell & Tube Heat Exchanger. Rated 135 psi @ 775 F on the shell, and 135 psi @ 700 F on the tubes. Serial # H5239, National Board # 3136, Built 1971.

Tail Gas Interchanger - #7429

Used 1150 Sq. Ft. Shell & Tube Heat Exchanger. Shell rated 110 psi @ 1450 F, SA 249-304 Tubes rated 110 psi @ 1200 F. U-Tube design, Mfg by Missouri Boiler & Tank Company, Serial #L-1188, Built 1971.

Tail Gas Heater (Unused) - #7411

Unused 3695 Sq. Ft. Horizontal Reco Industries Inconel Shell & Tube Heat Exchanger. Stainless steel shell rated 120 psi @ 550 F on the shell, and Inconel tubes rated 135 psi @ 650 F. Serial # N6439.30, National Board #81444, Built 1985.

Tail Gas Heater - #7412

Used 3695 Sq. Ft. Horizontal Reco Industries Inconel Shell & Tube Heat Exchanger. Stainless steel shell rated 120 psi @ 550 F on the shell, and Inconel tubes rated 135 psi @ 650 F. Serial # H-5240, National Board #3137, Built 1971. Repaired - 1984.

Tail Gas Preheater - #7417

Used 350 Sq. Ft. Horizontal Missouri Boiler & Tank Company Stainless Steel Shell & Tube Heat Exchanger, Steel shell rated 285 psi @ 475 F on the shell, and Stainless steel tubes rated 125 psi @ 475 F. Serial # H5240, National Board #3138, Built 1971.

Platinum Filter Shell - #7422

Used 46" Dia Brink System's Platinum Filter (Platinum Recovery). Dimensions: 46" ID x 1/4" thick x 7' 10" length, 110 psig @ 421 F operating. Outlet end provided with removeable coned-down spool with flanged outlet to match pipe to cooler condenser. Internal flange and support rack provided for holding cartridge type filter. Shell & internal fittings SA-240-304-L, Flanges SA-181-II, Gaskets 304 SS.

Absorber Area

Absorber - #7416

Used 304L Stainless Steel Absorber Tower, Mfg. by Metal Arts Company, Column: 11'0" ID x 78' Height, Design Press. 125 psig @ 200 F, No. of trays 27, bubble cap type. Built 1971.



Cooler Condenser - 1st Stage - #7413

Used 2444 Sq. Ft. Horizontal Missouri Boiler & Tank Company 304L Stainless Steel Shell & Tube Heat Exchanger. Shell rated 75 psi @ 475 F on the shell, and tubes rated 125 psi @ 475 F. Serial # H-5232, National Board #3125, Built 1971.

Cooler Condenser - 2nd Stage - #7414

Used 2781 Sq. Ft. Horizontal Missouri Boiler & Tank Company 304L Stainless Steel Shell & Tube Heat Exchanger. Shell rated 75 psi @ 475 F on the shell, and tubes rated 125 psi @ 475 F. Serial # H-5233, National Board #3131, Built 1971. Estimated weight - 15,000 lbs.

Cooler Condenser - 3rd Stage - #7415

Used 1600 Gallon Horizontal Missouri Boiler & Tank Company 304L Stainless Steel Tank. Tank rated 125 psi @ 475 F. Dimensions: 4'6" ID x 13'8" T./T. Serial # 5234, National Board #3135, Built 1971.

Bleach Air Cooler - #7423

Used 50.1 Sq. Ft. Bos-Hatten Inc. Horizontal Heat Exchanger, Steel shell rated 80 psi @ 400 F, Stainless steel tubes rated 135 psi @ 400 F. Serial # 11919, National Board # 692, Built 1971.

Product Acid Cooler - #7435

Used 194 Sq. Ft. Bos-Hatten Inc. Horizontal Shell & Tube Heat Exchanger, Carbon Steel shell rated 75 psi @ 200 F, Stainless Steel "U" tubes rated 125 psi @ 200 F. Serial # 11944-B, National Board # 711, Built 1971.

Product Acid Cooler - #7436

Used 194 Sq. Ft. Bos-Hatten Inc. Horizontal Shell & Tube Heat Exchanger, Carbon Steel shell rated 75 psi @ 200 F, Stainless Steel "U" tubes rated 125 psi @ 200 F. Serial # 11944-A, National Board # 710, Built 1971.

Miscellaneous

Butane Vaporizer-Superheater - #7449

Used 56.5 Sq. Ft. Richmond Engineering Vertical Carbon Steel Shell & Tube Heat Exchanger. Shell rated 250 psi @ 320 F, Tubes rated 300 psi @ 500 F. Serial # L-15072, National Board # 64094, Built 1971.

Boiler Feedwater Deaerator - #7428

Used 1,020 gallon Spray Deaerating Heater, ASC manufacturing Co, Model 60 M-10T HBS. Rated 35 psi / FV @ 650 F, Material of construction: Steel. Serial # K71-102, National Board # 6275, Built 1971. Shipping weight - 4,254 lbs.

Boiler Feedwater Pump - #7463

Used 135 GPM Johnston Pump Co Boiler Feedwater Pump at 773 Ft Total Head. 9 Stage vertical turbine pump, 3510 RPM, Graphite Bearings.

Boiler Feedwater Pump - #7464

Used 135 GPM Johnston Pump Co Boiler Feedwater Pump at 773 Ft Total Head. 9 Stage vertical turbine pump, 3510 RPM, Graphite Bearings.

Also Available: Pumps, Piping & Associated Parts of Nitric Acid Plant

For More Information:

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