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ONLINE AUCTION Bidding Closes June 11th 12:00 Noon EDT

REACTORS



PFAUDLER 150-GAL. HASTELLOY REACTOR

PFAUDLER 150-Gallon Hastelloy Reactor, rated 150 PSI/ FV @ 450° F internal and 150 PSI /FV @ 450° F on the jacket, shell material SB-525 C-22, jacket material 316L, 32" ID x 48" deep, 4-blade turbine agitator, (1) 6" handhole, (1) 4" inlet, (5) 2" inlets, (3) 3" inlet/outlet, (3) 2" jacket connections, (1) 1/2" jacket connection, (1) 3/4" jacket connection, S/N J070452, National Board No. 50372, built 2001.

DEDIETRICH Glass Lined 300-Gallon Reactor, rated 100 PSI @ 500° F internal and 90 PSI @ 500° F on the jacket, 3-blade reverse curve impeller agitator, Dedietrich Series 10 drive, S/N 66782, National Board No. 7628, built 2005.

AMERICAN ALLOY Fab Hastelloy 30-Gallon Reactor, rated 150 PSI @ 450° F internal and 125 PSI @ 450° F on the jacket, Pfaudler TW drive, 4-blade turbine, S/N AAF1989, National Board No. 015.

PFAUDLER Glass Lined 200-Gallon Reactor, rated for 150 PSI / FV @ 450° F internal, and 150 PSI/FV @ 450° F on the jacket, 9119 dark blue glass, Pfaudler VMX250 drive, 40" ID x 45-1/2" deep, 4-blade reverse curve impeller agitator, (1) 6" inlet, (1) 4 3/8" inlet, (2) 4" inlet, (5) 3" inlet, S/N J040751/J050306, National Board No. 50306, built 2000.

DEDIETRICH Glass Lined 200-Gallon Reactor, rated 150 PSI @ 500° F internal and 100 PSI @ 500° F on the jacket, Lightnin Series 10 agitator, GlasLok paddles, S/N 1343, National Board No. 318, built 1992. **DEDIETRICH Glass Lined 100-Gallon Reactor,** rated 150 PSI @ 500° F internal and 100 PSI @ 500° F on the jacket, cone bottom, S/N 1342, National Board No. 316, built 1992.

PFAUDLER Glass Lined 50-Gallon Reactor, rated 150 PSI/ FV @ 450° F internal and 150 PSI /FV @ 450° F on the jacket, 9119 dark blue glass, Pfaudler VXX150 drive, 4-blade reverse curve impeller agitator, 24" ID x 28 3/4" deep, S/N J040750, National Board No. 50304, built 2000.

DEDIETRICH Glass Lined 50-Gallon Reactor, rated 150 PSI @ 500° F internal and 90 PSI @ 500° F on the jacket, Lenze drive, 3-blade reverse curve impeller agitator, top head, National Board No. 303, built 1992.

PFAUDLER Glass Lined 50-Gallon Reactor, rated 300 PSI @ 450° F internal and 150 PSI @ 450° F on the jacket, Pfaudler TW drive, 4-blade turbine agitator, S/N J000767, National Board No. 48010, built 1995.

DEDIETRICH Glass Lined 30-Gallon Reactor, rated 150 PSI @ 500° F internal and 115 PSI @ 500° F on the jacket, Lenzi drive, 3-blade reverse curve impeller agitator, S/N 1339, National Board No. 310, built 1992.

PFAUDLER Glass Lined 500-Gallon Reactor, rated 25 PSI @ 650° F internal and 90 PSI @ 350° F on the jacket, Nucerite, S/N E172-0959, National Board No. 31220, w/ Pfaudler drive and mechanical seal.



DEDIETRICH GLASS LINED 300-GAL. REACTOR



AMERICAN ALLOY FAB HASTELLOY 30-GAL. REACTOR



PFAUDLER GLASS LINED 200-GAL. REACTOR



DEDIETRICH GLASS LINED 200-GAL. REACTOR



DEDIETRICH GLASS LINED 100-GAL. REACTOR



PFAUDLER GLASS LINED 50-GAL. REACTOR



DEDIETRICH GLASS LINED 50-GAL. REACTOR



PFAUDLER GLASS LINED 50-GAL. REACTOR



DEDIETRICH GLASS LINED 30-GAL. REACTOR



PFAUDLER GLASS LINED 500-GAL. REACTOR



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CHEMICAL SYNTHESIS (API) PLANT



USP Pharmaceutical Grade De-Ionized Reverse Osmosis Water Purification System

Complete Water Purification Package Including (in process order): LANCASTER Water Softener; AQUAFINE Ultraviolet Disinfection Unit, SL-10A; MEGOMETRICS Mdl. 18+.2 GPM Reverse Osmosis Water Filter, s/n 4601; 500-Gallon Precision Stainless Storage Tank; WAUKESHA 20 HP Circulation Pump; (4) Resin Polishing Beds; PALL 0.45 Micron Filter; AQUAFINE Ultraviolet Disinfection Unit, RBE-4R Tri-C with control; PALL 0.25 Micron Filter; ALLEGHANY BRADFORD 25 GPM Heat Exchanger (Stabilization); ALLEGHANY BRADFORD 25 GPM Heat Exchanger (Sanitization); (2) ABB Conductivity Meters; Full details and s/n's available on request.



GLATT GCPG 5 Fluid Bed Coater, includes 7" Wurster and 9" Wurster columns, 5 kg max. charge, 22 liters volume product container.



AQUAFINE ULTRAVIOLET

DISINFECTION UNIT

SL-10A

(1 of 2) GRUENBERG Vacuum/ Convection Ovens, mn c/vi5h4.5m, 9 kW.



AQUAFINE ULTRAVIOLET **DISINFECTION UNIT RBE-4R**



PALL 0.45 MICRON FILTER

650° F, steam heat, Mdl. 438F15, S/N

73639, available w/vacuum skid and

heat transfer unit at additional cost.





STOKES 42 Sq. Ft. Heresite Lined Vacuum Shelf Dryer, (7) 2' x 3' shelves, available with Sihi vacuum pump and heating unit at additional cost.

THOMAS ENGINEERING 24" Accela-Cota, Mdl. 24-V, S/S coating pan, 24" diameter perforated pan.

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HEAT EXCHANGERS



PFAUDLER TANTALUM 45 SQ. FT. HORIZONTAL HEAT EXCHANGER





GRAPHILOR CUBIC BLOCK 85 SQ. FT. HEAT EXCHANGER

GRAPHILOR CUBIC BLOCK 38 SQ. FT. HEAT EXCHANGER



METAULLICS SYSTEMS CO. L.P. (CARBORUNDUM) IMPERVIOUS GRAPHITE SHELL AND TUBE HEAT EXCHANGER

PFAUDLER Tantalum 45 Sq. Ft. Horizontal Heat Exchanger, shell rated 150 PSI and full vacuum @ 450° F, tubes rated 150 PSI @ 450° F, Type BEM 08-76, 101 3/16" OAL. (37) 3/4" tubes, 0.015" thick, (Tantalum 2.5% w), (2) 4" inlet/outlet, (2) 2" inlet/outlet, (2) 1" vent/drain, S/N J040814, National Board No. 50301, built 2000, weight 530-lbs. Previous Use: API Pilot Plant.

METAULLICS SYSTEMS CO. L.P. (Carborundum) Impervious Graphite Shell and Tube Heat Exchanger, 34.3 Sq. Ft., shell rated 75 PSI and full vacuum @ 340° F, tubes rated 75 PSI and full vacuum @ 340° F, Type BEP 08-070 Series S Impervite, 88-1/4" OAL. (19) 1.25" tubes, 0.187" thick, (Impervite R), (1) 3" service inlet, (1) 3" service outlet, (1) .75 NPT vent-b, (1) .75 NPT, drain-e, S/N 7594, National Board No. 1341, built 1992, weight 500-lbs.

PFAUDLER Tantalum 20 Sq. Ft. Horizontal Heat Exchanger, Shell rated 150 PSI and full vacuum @ 450° F, tubes rated 150 PSI @ 450° F, Type BEM 06-66, 89 1/2" OAL, (19) 3/4" tubes, 0.015" thick, (Tantalum 2.5% w), (2) 1-1/2" inlet/outlet, (2) 3/4" vent/drain, (2) 3" inlet/outlet, S/N J022725, National Board No. 49469, built 1998, weight 334-lbs. Previous Use: API Pilot Plant.

PFAUDLER 42 Sq. Ft. Hastelloy Horizontal Heat Exchanger, Shell rated 150 PSI and full vacuum @ 450° F, tubes rated 150 PSI @ 450° F, Type BEM 08-60, 86 5/16" OAL, (50) 3/4" tubes, 0.065" thick, (Hastelloy SB-626 AI C-276, WLD), (2) 3" inlet/outlet, (2) 1-1/2" inlet/outlet, (2) 1" vent/drain, S/N J040815, National Board No. 50295, built 2000, weight 545-lbs. Previous Use: API Pilot Plant.

PFAUDLER Tantalum 15 Sq. Ft. Horizontal Heat Exchanger, shell rated 150 PSI and full vacuum @ 450° F, tubes rated 150 PSI @ 450° F, Type BEM 06-48, 68 5/8" OAL. (19) 3/4" tubes, 0.015" thick, (Tantalum 2.55% w), (2) 3" inlet/outlet, (2) 1-1/2" inlet/outlet, (2) 1" vent/drain, S/N J040813, National Board No. 50300, built 2000, weight 285-lbs.

ANDREW B. DUFFY 100 Sq. Ft. Vertical Heat Exchanger, tubes rated 150 PSI at 450° F, S/N 8-98-3204, National Board No. 657, built 1998.

PFAUDLER Glass Lined Shell & Tube Heat Exchanger, rated 150 PSI @ 450° F internal, rated 300 PSI @ 450° F on the jacket, material Glassteel 9115, S/N 8095043-1, National Board No. 66, built 1995.

PFAUDLER Glass Lined Shell & Tube Heat Exchanger, rated 150 PSI @ 450° F internal, rated 300 PSI @ 450° F on the jacket, material Glassteel 9115, S/N 8095043-2, National Board No. 67, built 1995.

PFAUDLER Glass Lined Shell & Tube Heat Exchanger, rated 150 PSI @ 450° F internal, rated 300 PSI @ 450° F on the jacket, material Glassteel 9115, S/N 8095043-3, National Board No. 68, built 1995.

GRAPHILOR Cubic Block 38 Sq. Ft Heat Exchanger, Mdl. K 40/20, shell rated 75 PSI at 350° F, built 1992, S/N 8871, National Board No. 106.

GRAPHILOR Cubic Block 38 Sq. Ft. Heat Exchanger, Mdl. K 40/20, shell rated 75 PSI at 350° F, S/N 8870, National Board No.103.

GRAPHILOR Cubic Block 38 Sq. Ft. Heat Exchanger, Mdl. K 40/20, shell rated 75 PSI at 350 F, built 1992.

GRAPHILOR Cubic Block 38 Sq. Ft Heat Exchanger, Mdl. K 40/20, shell rated 75 PSI at 350° F, built 1992, Plant No. HE-08A, S/N 8872, National Board No. 107.

GRAPHILOR Cubic Block 85 Sq. Ft. Heat Exchanger, Mdl. K 90/45, shell rated 75 PSI at 350° F, built 1992, Plant No. HE-26, S/N 8868, National Board No. 110.

GRAPHILOR Cubic Block 85 Sq. Ft. Heat Exchanger, Mdl. K 90/45, shell rated 75 PSI/FV at 350° F, built 1992, S/N 8869, National Board No. 111.

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MISONIX MDL. MVS-25650 AND 15650 75/500 SCFM GAS SCRUBBER



SLY IMPINGENT GAS SCRUBBER



LUFTROL INC. MDL. KP24-42 HCL SCRUBBER



TOLHURST (KETEMA) BATCHMASTER HASTELLOY 32" X 20" BASKET CENTRIFUGE



PAUL O. ABBE DOUBLE CONE (ROTA-CONE) HASTELLOY 5 CUBIC FT. ROTARY VACUUM DRYER



MISONIX Mdl. MVS-25650 and 15650 75/500 SCFM Gas Scrubber, Design

Conditions: design pressure for both scrubbers–1 PSI g/1 PSI g. Design Temperature: 150° F, max. gas flow rate to scrubber C-08A=75 SCFM, max. gas flow rate to scrubber C-08B=500 SCFM. Unit has (2) fans, each rated @ 500 CFM gas flow @ 17" W.C. static pressure w/5 HP XP motors, (2) polypropylene circulating pumps and (1) Hastelloy "C" plate heat exchanger, built 2001.

SLY Impingent Gas Scrubber, consisting of (2) Mdl. 215 polypropylene towers and (2) 5 HP NY blowers w/XP motors. The unit was designed to

operate at 850 cfm, 7 GPM at 11.5 ph and

15' of packing would reduce the H2S from 5,000 PPM to 1 PPM, built 1990. LUFTROL Inc. Mdl. KP24-42 HCL Scrubber, made of FRP, OAH 19' 9-1/4", skid mounted consisting of column with 2" polypropylene sadder, 316 S/S Mueler plate heat exchanger, 3 HP Fybroc (FRP) recirculating pump and 5 HP FRP circulating fan. System Design: 1,000 SCFM inlet gas @ 80° F containing 90-lbs./hr. of HCl, when supplied w/25 GPM of 5% to 10% caustic @ 10 PSI gas side pressure drop thru. Scrubber will not exceed 3.0" W.C. scrub efficiency for HCL-99.9%. Location: Next to Continental Chiller and JRS3/4 skids, built 1992.



WESTERN STATES 30" X 18" STAINLESS STEEL BASKET CENTRIFUGE



TOLHURST (AMETEK) 30" X 18" BASKET CENTRIFUGE

TOLHURST (Ketema) Batchmaster Hastelloy 32" x 20" Basket Centrifuge, 0–23 RPM, 82-lb./cu. ft. density, top load/bottom dump, hinged cover, S/N TY-56890, new 1994.

WESTERN STATES 30" x 18" Stainless Steel Basket Centrifuge, Mdl. No. EZ300, 90-lb./cu. ft. density, 30 HP electric drive, top load/ unload, tilting top head, heresite lined, S/N 541.

TOLHURST (Ametek) 30" x 18" Basket Centrifuge, 316L SS, top load and unload, 500/1,000 RPM, 129-Ib./cu. ft. MN IBI, electric drive, S/N 2T49481.

PAUL O. ABBE Double Cone (Rota-Cone) HASTELLOY 5 Cubic Ft. Rotary Vacuum Dryer, Mdl. RCVD-30, w/intensifier pin bar, 50 PSI/FV @ 350° F internal, 50 PSI @ 350° F on the jacket, w/stands, S/N A44939 (3W137), built 1994.

LABS

Over a Dozen Lab Rooms With Like New (some unused) FISHER HAMILTON Lab Cabinets and Fume Hoods.

Configurations come with and without island lab space. Hoods include cabinet mounted, walk in and full size. Complete cabinet counts and footage available in catalog.









CHEMICAL SYNTHESIS (API) PLANT

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Presorted First Class Mail U.S. Postage PAID Eugene, Oregon Permit No. 17

Blackbird Asset Services, LLC 5586 Main Street Suite 204 Williamsville, NY 14221

ONLINE AUCTION

Bidding Closes June 11th 12:00 Noon EDT

Equipment Location: 147 STATE HWY. 320 NORWICH, NY 13815

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ONLINE AUCTION

GENERAL TERMS OF SALE

NO WARRANTIES: Everything in this auction sale is sold "AS IS, WHERE IS" and WITHOUT RECOURSE. There are no warranties, guarantees or representations of any kind or variety, whether expressed, implied or otherwise given. Some items may be subject to prior sale and removal.

PAYMENT: ALL PURCHASES MUST BE PAID IN FULL WITHIN 48 HOURS OF THE AUCTION CLOSING ONLINE. You will receive an invoice via email with your winning bids immediately following the auction. Payment may be made by ACH or wire transfer (instructions on invoice), cash will NOT be accepted at the auction site. MasterCard and Visa accepted via phone up to \$5,000. All purchases subject to a 15% buyer's premium.

SALES TAX: All purchases subject to 8% sales tax unless purchaser supplies auctioneer with valid tax exemption documentation. Out of state purchasers may be entitled to a sales tax refund after a bill of lading proving their purchasers were shipped out of state by a third party carrier. Auctioneer reserves the right to charge sales tax to any purchaser and require purchaser to seek a refund from the state taxing authority.

INSPECTION: Open inspection for the site will be Tuesday/Wednesday, June 4 & 5 ONLY. Hours of inspection will be 8:00 A.M.-4:00 P.M. each day. You must check in with the guard shack upon entry to obtain a site pass.

REMOVAL: Due to the complex nature of this offering, all rigging and removal for this auction will be restricted to A&A Rigging. All rigging and loading prices are clearly marked in the catalog and will be added to your invoice at checkout, please bid accordingly. Please see our website for further discussion on rigging.

AIRPORT & TRANSPORTATION: The closest commercial airports are Binghamton (BGM – 1 hour drive) and Syracuse (SYR – 1-1/2 hour drive), NY. Norwich is serviced by Lt. Warren Eaton Airport (OIC) and suitable for private aircraft.

DIRECTIONS: From State Hwy. 12 in Norwich (heading North): Turn right onto State Hwy. 320. Auction site is in a building complex approximately 1/2 mile on your left. Check in at guard shack.

CONTACT INFORMATION: For further information contact Kristen Frost, 716-632-1000 or by email kristen.frost@blackbirdauctions.com.

FOR COMPLETE TERMS OF SALE PLEASE REFER TO THE AUCTION CATALOG. ALL TERMS OF SALE POSTED ON OUR WEBSITE AT THE TIME OF SALE TAKE PRECIDENCE OVER PRINTED MATERIALS.

Blackbird Asset Services, LLC 5586 Main Street Suite 204 Williamsville, NY 14221 Email: info@blackbirdauctions.com Tel. 716.632.1000 Fax. 888.606.7544 **HOTELS:** Along with several B&B accommodations, Norwich is serviced by these hotels:

