

Heat Transfer Systems, Inc.

- Located in St. Louis, MO
 - ◆ Focus on custom designed shell-and-tube exchangers
 - ◆ Replacement bundles and complete units
 - ◆ Waste heat recovery units
 - ◆ Offshore and specialty fabrication (high pressure, etc.)

www.heattransfersys.com



S&T Examples



68/91-312 BKM Sulfur Condenser

www.thermpro.com

S&T (Continued)



64-168 NEN Waste Heat Boiler

S&T Continued



Triple Stack 43-240 CEU Crude Cross Exchangers (155,000 lb Total)

S&T Continued



108-324 NEM w/ 8,489 $\frac{3}{4}$ " Tubes (177,000 lb)

www.thermpro.com

S&T Continued



79-492 NEN Propylene Refrigerant Desuperheating/Condenser (172,000 lb)



HEAT TRANSFER SYSTEMS, INC.
DESIGNER & MANUFACTURER
FACILITIES SURVEY

8100 Polk St.
St. Louis, MO 63111-3655
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(314) 631-3399 fax
www.heattransfersys.com

GENERAL INFORMATION

Major Product

Heat Transfer Equipment

- Shell & Tube Heat Exchangers
- Waste Heat Recovery Units
- Waste Heat Boilers
- Heat Recovery Systems
- Feedwater Heaters

Fabricated Plate Products

- Towers
- Vessels
- Reactors

Repair and Modification Services

- Heat Exchanger and Pressure Vessels

Max. Dimension
& Weight

14' Diameter, 150' Length, 300,000 pounds (150 Ton)

Type of
Ownership

Missouri "C" Corporation

ASME
Certification

- Section I "S" Stamp (#20647)
- Section VIII, Division 1 "U" Stamp (#20649)

National Board
of Boiler &
Pressure Vessel

- "R" Stamp (#R-2988)
- "NB" Stamp

Engineering

Complete thermal, mechanical, and drafting services in house.

MANUFACTURING FACILITIES

Plant	<ul style="list-style-type: none"> • 75,000 square feet under roof • 2.5 acres yard storage
Lifting Data	<ul style="list-style-type: none"> • All bays serviced by overhead bridge cranes. 200+ ton total capacity. Custom spreader bars to allow the use of multiple bridge cranes. • Heavy duty rail system for movement between bays. • Forklifts up to 24,000 lbs. capacity • 240 ton hydraulic lift system
Welding	<ul style="list-style-type: none"> • ASME Code Qualified (Section IX) • 500+ qualified welding procedures for the following materials and applications: <ul style="list-style-type: none"> ○ carbon steel ○ low alloy carbon steel ○ stainless steel (300 series, 400 series, duplex) ○ high nickel alloys ○ CuNi alloys ○ aluminum ○ corrosion resistant overlay ○ PWHT ○ impact testing ○ automatic tube to tubesheet welding
Welding Processes	<ul style="list-style-type: none"> • SMAW (stick) • GTAW (tig) • SAW (automatic) • GMAW (mig) • FCAW (flux core)
Machine Shop	<ul style="list-style-type: none"> • 1 – CNC horizontal machining center - 96" x 48" envelope, high pressure coolant • 5 – CNC vertical machining centers - up to 144" x 540" envelope, high pressure coolant • 2 – CNC T lathes with live spindles, 80" swing • 1 – 8' radial arm drill • 2 – 6' radial arm drills • 1 – 4' radial arm drill

Machine Shop
(continued)

- 2 – 54" diameter Vertical Boring Mills
- 2 – 120" diameter Vertical Boring Mills
- 2 – Machine Lathes - 28" diameter x 120" long

Welding &
Assembly Shop

- 2 – automatic tube-to-tubesheet welders
- 20 – welding machines (current range 250-1200 AMPS)
- 6 – automatic submerged arc welders (SAW), four on track mounted manipulators
- 6 – inert gas welder (GTAW)
- 10 – power welding positioners, up to 20,000 lbs capacity
- 10 – power tank turning rolls, up to 90 ton capacity
- 2 – heavy duty 400 AMP plasma cutting machines
- 2 – hydraulic torque wrench systems

Bundle Shop

- 5 – air torque tube expanders
- 1 – hydraulic tube expander

Additional
Equipment List

- 3 – plate shears
 - 0.375" thk x 8' long
 - 0.50" thk x 10' long
 - 0.75" thk x 8' long
- 2 – circle burners
- 4 – straight line burners
- 1 – abrasive cut-off saw
- 1 – 18" jaw band saw
- 1 – 48" band saw
- 2 – electric eye template cutters equipped with oxyacetylene and plasma torches
- 1 – iron worker 90 ton capacity
- 2 – combination cutter & punch
- 1 – CNC cutting machine - 10' x 20' table with Burny3 control
- 3 – Pullmax x91 plate bevellers
- 1 – Komatsu Twister TFP3051 CNC high definition plasma table, 5' x 10' table, 150 amp

Forming

- 2 – hydraulic press brakes (400 ton x 12' capacity)
- 3 – plate rolls
 - 2.75" thk x 10' (four roll with cone capability)
 - 0.625" thk x 10'
 - 0.25" thk x 8'
 - Ability to subcontract up to 6" thk

Forming (continued)	<ul style="list-style-type: none">• 2 – flange machines<ul style="list-style-type: none">○ 1/4" thk capacity○ 3/4" thk capacity• 1 – pipe coiling machine• 1 – Roundo R5 angle roller (4.5" x 4.5" x 0.5")
Blasting	Sandblast booth 40' x 14' x 14' with overhead monorail and ground rail track
Painting	Pressure spray booth 40' x 14' x 14' with overhead monorail and ground rail track
Testing & Inspection	Quality Control Manager reports directly to the President
Inspection Agency	OneCIS Insurance Company (Bureau Veritas)
Hydro-Test	10,000 PSI Capacity
Non-Destructive Testing	<ul style="list-style-type: none">• Radiography• Dye Penetrant• Magnetic Particle• Ultrasound• Hardness• Halide Leak• PMI (Niton XL3t)
Shipping Facilities	<ul style="list-style-type: none">• Truck: Contract Carriers• Railroad: St. Louis Terminal• Air Freight: Various, facility 20 minutes from St. Louis International Airport• Water: Port of St. Louis (Mississippi River)
Bank Reference	PNC Bank – St. Louis, MO

Partial
Customer List

- Abonos Colombianos S.A.
 - Anadarko Petroleum
 - Bechtel Corporation
 - Cameron
 - Cargill
 - Chevron
 - ConocoPhillips
 - CVR Energy
 - Dyno Nobel
 - EDG
 - Evonik Industries
 - ExxonMobil
 - Fluor Corporation
 - Georgia Gulf
 - Gulf Coast Engineered Solutions
 - Jacobs Engineering
 - Koch Industries
 - Marathon Oil
 - Monsanto
 - Murphy Oil
 - Nalco
 - Petrex
 - Petrofac
 - Premier Industries
 - Protherm Corporation
 - Sagebrush Pipeline
 - SBM Offshore
 - Shell Offshore
 - Thermal & Process Sales
 - Total Petrochemicals
 - Vogelbusch
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