

# HEAT TRANSFER SYSTEMS, INC. DESIGNER & MANUFACTURER

# **FACILITIES SURVEY**

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GENERAL INFORMATION	
Major Product	Heat Transfer Equipment
Max. Dimension & Weight	14' Diameter, 150' Length, 300,000 pounds (150 Ton)
Type of Ownership	Missouri "C" Corporation
ASME Certification	<ul> <li>Section I "S" Stamp (#20647)</li> <li>Section VIII, Division 1 "U" Stamp (#20649)</li> </ul>
National Board of Boiler & Pressure Vessel	<ul><li>"R" Stamp (#R-2988)</li><li>"NB" Stamp</li></ul>
Engineering	Complete thermal, mechanical, and drafting services in house.

#### **MANUFACTURING FACILITIES**

#### Plant

- 75,000 square feet under roof
- 2.5 acres yard storage

#### **Lifting Data**

- All bays serviced by overhead bridge cranes. 300+ 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 36,000 lbs. capacity
- 240 ton hydraulic lift system

#### Welding

- ASME Code Qualified (Section IX)
- 500+ qualified welding procedures for the following materials and applications:
  - o carbon steel
  - o low alloy carbon steel
  - stainless steel (300 series, 400 series, duplex)
  - high nickel alloys
  - o CuNi alloys
  - o aluminum
  - corrosion resistant overlay
  - o PWHT
  - impact testing
  - o automatic & manual tube-to-tubesheet welding

#### Welding Processes

- SMAW (stick)
- GTAW (tig)
- SAW (automatic)
- GMAW (mig)
- FCAW (flux core)

#### **Machine Shop**

- 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)

- 1 54" diameter Vertical Boring Mills
- 2 120" diameter Vertical Boring Mills
- 2 Machine Lathes 28" diameter x 120" long
- 2 Bullard CNC Vertical Boring Mills, max 92" swing, 8' under rail

## 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 30,000 lbs capacity
- 10 power tank turning rolls, up to 90 ton capacity
- 2 heavy duty 400 AMP plasma cutting machines
- 2 hvdraulic torque wrench systems

#### **Bundle Shop**

- 5 air torque tube expanders
- 1 hydraulic tube expander

# Additional Equipment List

- 3 plate shears
  - o 0.50" thk x 10' long
  - o 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
- 1 Vernon 5-axis CNC pipe cutting & contouring machine
- 1 Alltra CNC high definition plasma table, 12' x 42' table, 260 amp

Forming	<ul> <li>2 – hydraulic press brakes (max 1250 ton, 12' capacity)</li> <li>3 – plate rolls <ul> <li>2.75" thk x 10' (four roll with cone capability)</li> <li>0.75" thk x 10' (four roll with cone capability)</li> <li>0.25" thk x 8'</li> <li>Ability to subcontract up to 8" thk</li> </ul> </li> <li>2 – flange machines <ul> <li>1/4" thk capacity</li> <li>3/4" thk capacity</li> </ul> </li> <li>1 – pipe coiling machine</li> <li>1 – Roundo R5 angle roller (4.5" x 4.5" x 0.5")</li> </ul>
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	15,000 PSI Capacity
Non-Destructive Testing	<ul> <li>Radiography</li> <li>Dye Penetrant</li> <li>Magnetic Particle</li> <li>Ultrasound</li> <li>Hardness</li> <li>Halide Leak</li> <li>PMI (Niton XL3t)</li> </ul>
Shipping Facilities	<ul> <li>Truck: Contract Carriers</li> <li>Railroad: St. Louis Terminal</li> <li>Air Freight: Various, facility 20 minutes from St. Louis International Airport</li> <li>Water: Port of St. Louis (Mississippi River)</li> </ul>

#### Bank Reference

PNC Bank - St. Louis, MO

### Partial Customer List

- Abonos Colombianos S.A.
- Anadarko Petroleum
- Bechtel Corporation
- Burns & McDonnell
- Cameron
- Cargill
- Chevron
- ConocoPhillips
- Denbury Resources
- CVR Energy
- Dyno Nobel
- EDG
- Evonik Industries
- ExxonMobil
- Fluor Corporation
- Foster Wheeler
- 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