

GAS COMPRESSION

6312 S. 39th West Avenue • Tulsa, Oklahoma 74132 • Phone: 918.446.4406 • Fax: 918.445.2857 • www.smithco-eng.com • email: info@smithco-eng.com

For a quote or more information about our design and manufacturing capabilities, please contact your local Amercool Division sales representative or email us at info@smithco-eng.com.



Smithco's Amercool Division designs, manufactures and supports air-cooled heat exchangers for the gas compression industry. Applications include gas coolers & condensers, engine coolers, process coolers, oil coolers as well as others.

Features of Amercool Coolers:

- Heavy duty "Oil Field" construction
- Header construction per ASME Code 150—11,150 psig design pressure
- Rugged construction from heavy gauge steel for equipment longevity
- Galvanized finish standard—suitable for off-shore applications and other harsh environments
- Heavy duty tapered roller bearings
- Shoulder-type access plugs for ease of maintenance
- Low noise, high efficiency fans
- Extensive experience in rating coolers for gas compression packages
- Custom engineered and built
- Outline drawings available with quote

Configurations Available:

- VCI Models: 48" – 168" (vertical, engine driven, induced draft)
- VCF Models: 48" – 168" (vertical, engine driven, forced draft)
- ST Models: 30" – 60" (vertical, motor driven, forced/induced draft)
- HF Models: horizontal coils, vertical fans, engine driven, forced draft, up to 60' long sections
- Horizontal (electric motor drive, forced/induced draft, up to 60' long sections)

Maintenance & Support:

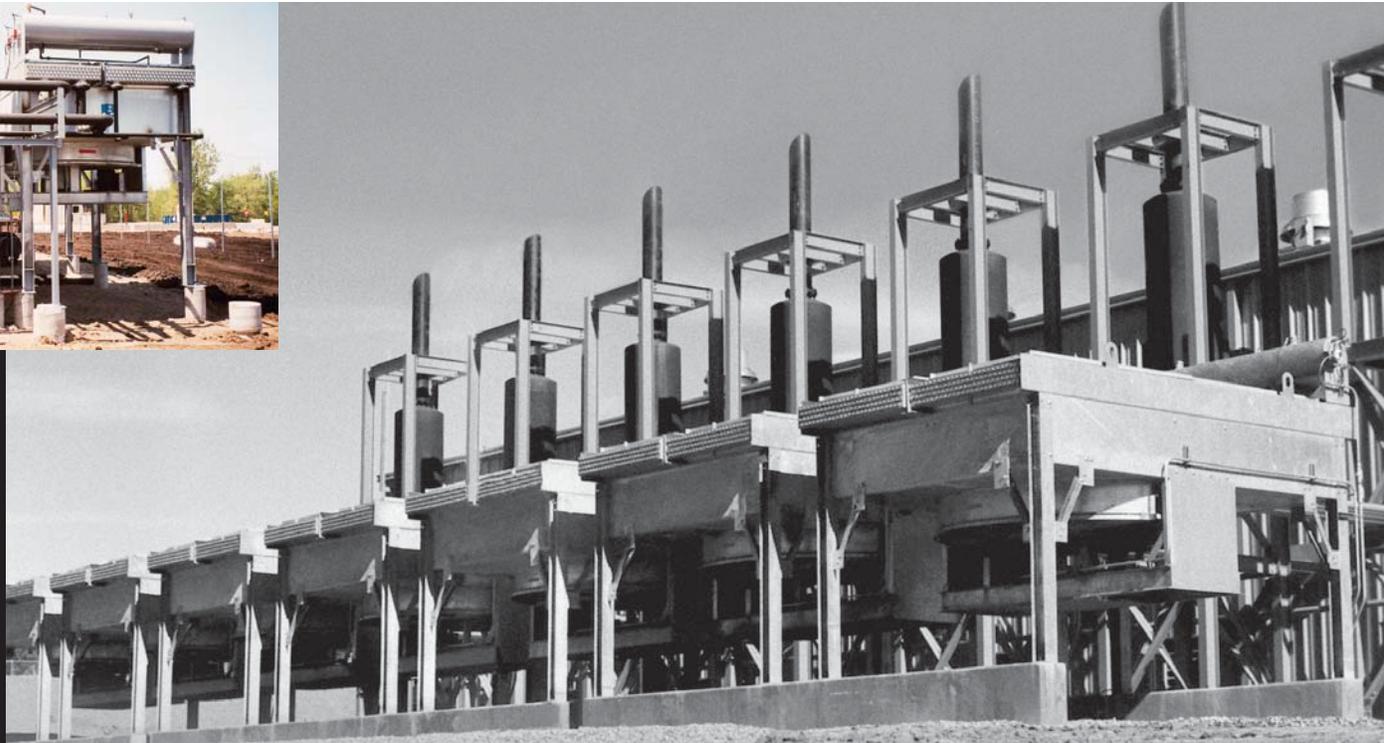
- Customer support during critical maintenance schedules
- Replacement finned tubes
- Replacement bundles
- Mechanical components
- Technical field service support



GENERATOR SETS

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Smithco's Amercool Division designs, manufactures and supports air-cooled heat exchangers for the power generation industry. Applications include radiators, generator sets, landfill gas cooling as well as others.

Features of Amercool Coolers:

- Rugged construction from heavy gauge steel for equipment longevity
- Galvanized finish standard—suitable for off-shore applications and other harsh environments
- Low noise designs available
- Outline drawings available with quote
- Cooling sections from 3' to 60' long
- Round finned tubes 5/8" to 1 1/4"
- Low pressure drop design
- Various materials of construction available including 304, 316 stainless
- Surge tanks available

Configurations Available:

- Horizontal (electric motor drive, forced/induced draft, up to 60' long sections)
- VCI Models: 48" – 168" (vertical, engine driven, induced draft)
- ST Models: 30" – 60" (vertical, motor driven, forced/induced draft)
- HF Models: horizontal coils, vertical fans, engine driven, forced draft, up to 60' long sections

Maintenance & Support:

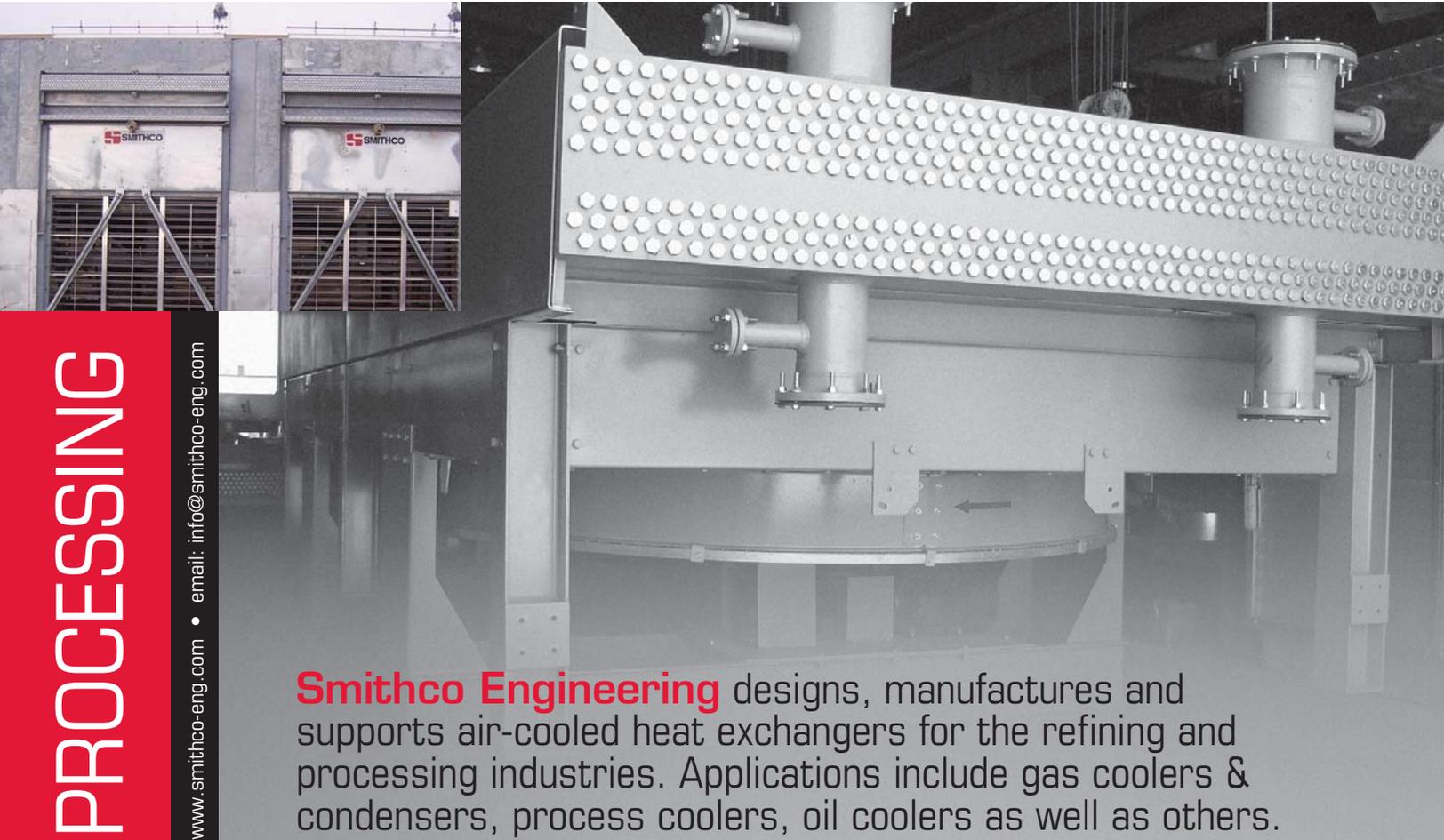
- Customer support during critical maintenance schedules
- Replacement finned tubes
- Replacement bundles
- Mechanical components
- Technical field service support



REFINING & PROCESSING

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Smithco Engineering designs, manufactures and supports air-cooled heat exchangers for the refining and processing industries. Applications include gas coolers & condensers, process coolers, oil coolers as well as others.

Key Features:

- Custom thermal and mechanical designs
- Rugged construction from heavy gauge steel for equipment longevity
- Outline drawings available with quote
- Various materials of construction available – Carbon and Low Alloy Steels, Stainless Steel, Duplex as well as other Alloy Materials
- Cooling sections from 3' to 60' long
- Galvanized structural finish and metallized headers standard, suitable for off-shore applications and other harsh environments
- Low noise designs available
- Induced and forced draft designs

Optional Auxiliary Components:

- Louvers (manual or automatic)
- Warm air recirculation system
- Steam coil
- Walkways and maintenance platforms
- Project and/or customer specific requirements

Maintenance & Support:

- Customer support during critical maintenance schedules
- Replacement finned tubes
- Replacement bundles
- Mechanical components
- Technical field service support



CORPORATE PROFILE

Profile:

| | |
|------------------------------|---|
| Ownership: | Privately Owned Company |
| Products: | Air-Cooled Heat Exchangers |
| Sales Representation: | Most Major U.S. Cities, Western Canada, Pacific Rim, Middle East and South America (Refer to www.smithco-eng.com for rep list) |
| Mailing Address: | P.O. Box 571330 Tulsa, OK 74157 |
| Office Address: | 6312 South 39th West Avenue Tulsa, OK 74132 |
| Telephone: | 918.446.4406 |
| Fax: | 918.445.2857 |
| E-mail: | info@smithco-eng.com |

Key Personnel:

| | | | |
|---------------------------|-------------------------|-----------------------|-----------------------------|
| David Block | President | Steve Boes | Sales and Marketing Manager |
| Gary Mourton | Chief Financial Officer | Chris Ashley | Engineering Manager |
| Valerie Armentrout | Controller | Tom Montgomery | Parts and Service Manager |

Qualifications:

| | |
|---|---|
| Engineering: | Complete thermal, hydraulic, and mechanical design of air-cooled heat exchangers and atmospheric sections |
| Materials of Construction: | Carbon Steel, Stainless Steel, Monel™, Copper-Nickel, Duplex, Incoloy®, Titanium, and Hastelloy® |
| Codes and Standards of Construction: | ASME, Section VIII, Division I; TEMA R-B-C; API 661; AISC; AWS |
| Non-Destructive Examination: | By Smithco: Magnetic Particle Examination, Dye Penetrant Examination, Brinnell Hardness Tests Subcontracted at Smithco Facilities: Radiography, Ultrasonic Testing Subcontracted: All Physical Testing |
| ASME Code Inspections: | Seneca Insurance Company of Texas |



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Please contact your Smithco Engineering sales representative for quotes or for more information.

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PLANT SURVEY

Smithco Engineering Inc.'s facilities are located in West Tulsa near major subcontractors, suppliers, terminals, and shipping. The plant includes 36,700 square of fabrication space under roof and 1,500 square feet of office space on an eleven-acre site.

Details of the facilities are shown below:

Header Welding Fabrication

| Bay Dimensions | Crane Type | Number | Total Capacity |
|----------------|------------|--------|--|
| 40' x 360' | Bridge | 4 | (2) @ 3 tons each (2) @ 5 tons each |

Finning Operations

| Bay Dimensions | Crane Type | Number | Total Capacity |
|----------------|------------|--------|----------------|
| 40' x 220' | Bridge | 2 | 5 tons each |

Bundle Assembly

| Bay Dimensions | Crane Type | Number | Total Capacity |
|----------------|------------|--------|----------------|
| 40' x 220' | Bridge | 2 | 10 tons each |

In Process Storage Area

| Bay Dimensions | Crane Type |
|----------------|----------------------|
| 40' x 80' | Mobile Handling Only |

Header welding fabrication bay and storage area consume one total bay of 40' x 440'. Finning operations and bundle assembly consume one total bay size of 40' x 440' with an additional 160' of tube storage area and completed bundle area.

Header Welding Fabrication

- 16 - Miller® Phoenix® 456cc/cv Inverter Power Sources with D64 Dual Wire Feeders (SMAW / GMAW / FCAW)
 - 4 - Miller 444 Power Sources (SMAW)
 - 2 - Lincoln® DC-600 Power Source (for internal SAW seam welding)
 - 1 - ESAB® Deuce Pack - 150 Auto Plasma Gouger
 - 4 - Lincoln DC-1000 Power Source (for auto SAW)
 - 1 - L-Tec 801 DC Power Source (for auto SAW)
 - 1 - Hobart® Cybertig® 800 with Water Cooler (for tube-to-tubesheet GTAW welding)
 - 1 - Hobart Cybertig 300 with Water Cooler (for tube-to-tubesheet GTAW welding)
- NDE Capabilities - RT, PT, MT, UT, PMI

Machine Capabilities

- 4 - 5' Summit® Radial Arm Drill

Finning Equipment

- 3 - McElroy® No. 4 Tube Finning Machine (tension single footed, tension double overlap footed)
 - 1 - McElroy No. 3S Tube Finning Machine (tension single footed, tension double overlap footed)
 - 1 - McElroy No. 1 Extruded Finning Machine (S/N 079)
 - 1 - Cast Zinc Tube Support Table Complete with Zinc Pots and Molds
- Additional Capabilities - Tooling 8-12 FPI; 1/2" or 5/8" Fin Heights

Mobile Handling Equipment

- 1 - 5-ton Yale® Forklifts
- 2 - 3-ton Yale Forklifts

Bundle Assembly

- 4 - Airetool® Model 850/660 rpm Rolling Motors
- 4 - Airetool Model 850/1250 rpm Rolling Motors
- 1 - Airetool Model 1000/400 rpm Rolling Motors
- 2 - Centrifugal Quip Fill Pumps
- 2 - 5,000 PSIG Hydrostatic Test Pump
- 1 - 20,000 PSIG Hydrostatic Test Pump
- 1 - 15,000 PSIG Dead Weight Tester
- 1 - Lube Oil Flushing System; 650 GPM at 50 PSI Drop with Test Sample Tank and 500-Gallon Storage Tank.

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RECENT INSTALLATIONS

| Year | Company | Locations | Service |
|------|---|-----------------------------------|---|
| 06 | Enterprise Products | Wyoming | NGL Product Cooler Stabilizer Product Cooler Propane Cooler |
| 06 | NATCO | Texas | Reflux Condenser Amine Cooler |
| 06 | The Hanover Company | Texas | Amine Cooler Condenser |
| 06 | Ventech Engineering | Yemen | Condenser Liquid Cooler |
| 06 | SPX Cooling Technology | Georgia | Water Cooler |
| 06 | York Refrigeration | Undisclosed | R-134A Condenser |
| 06 | Suncor Energy | Alberta | Pretreater Effluent Cooler Solvent Stripper Cooler Stripper Condenser |
| 05 | Panhandle Energy Co. | Illinois | Liquid Coolers |
| 05 | Voith Turbo, Inc. | Ohio | Lube Oil Cooler Working Oil Cooler |
| 05 | Sinclair Oil Corporation | Wyoming | Steam Coils (Retrofit) Fractionator Overhead Condenser Pumparound Cooler |
| 05 | WPS, Inc. | Undisclosed | Natural Gas Cooler Anti-Freeze Cooler |
| 04 | Apina, S.A. de C.V. | Saudi Arabia | Ammonia Condenser Lube Oil Cooler |
| 04 | Southeast Texas Industrial Services, Inc. | Iraq (Ministry of Electricity) | Light Naptha Cooler Residue Cooler Distillate Cooler |
| 04 | The Hanover Company | Colorado | Amine Cooler Amine Reflux Condenser Refrigerant Condenser NGL Product Cooler Stabilizer Overhead Cooler Oil Cooler |
| 04 | Petroleum Development of Oman | Oman | Gas Intercooler |
| 03 | Duke Energy Co. | Various | Lube Oil Coolers |
| 03 | Equistar Chemical Co. | Texas | Liquid Coolers |
| 03 | Wynnewood Refining Co. | Oklahoma | Gasoline Product Cooler Hot Flash Vapor Condenser Diesel Product Cooler |
| 03 | EPC, Inc. | Bolivia | Inlet Gas Cooler Stabilizer Condensing Cooler Pipeline Recompression Cooler Refrigerant Condenser Lube Oil Cooler |
| 03 | Air Products & Chemicals | Texas | Hydrogen Cooler Jacket Water Cooler |
| 02 | Coastal Aruba Refining | Aruba | Debutanizer Condenser Depropanizer Condenser |
| 02 | Navajo Refining Co. | New Mexico | Overhead Condenser |
| 02 | York Refrigeration - Frick | China | Refrigerant Condenser |
| 02 | National Fuel Gas | Pennsylvania | Natural Gas Cooler |
| 02 | ENAP | South America | Gas Cooler Regeneration Overhead Condenser |
| 02 | Rolls Royce Energy Systems, Inc. | Alabama | Working Oil Cooler Lube Oil Cooler |



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ENGINEERING & CONSTRUCTION INSTALLATIONS

| Year | Company | Locations | Service |
|------|--|---------------------|---|
| 06 | Optimized Process Designs | Texas | Regen Gas Cooler |
| 06 | Kellogg Brown & Root | Iraq | Natural Gas Cooler |
| 06 | CB&I Howe-Baker Engineers | Texas | Amine Stripper Condenser Lean Amine Cooler Sour Water Cooler Stripper Water Cooler |
| 06 | ENGlobal Engineering, Inc. | Kansas | Debutanizer Overhead Condenser |
| 06 | EDG Consulting Engineers | Undisclosed | Recycle Cooler Oil Cooler |
| 05 | Optimized Process Designs | Undisclosed | Glycol Cooler Still Overhead Condenser Condensate Cooler Refrigerant Condenser Stabilizer Reflux Condenser |
| 05 | Jacobs Engineering Group | Aruba | Sour Gas Condenser Brine Cooler Stripper Overhead Condenser |
| 05 | CB&I Howe-Baker Engineers | Louisiana | Sour Water Stripper Condenser Lean DEA Cooler Quench Water Cooler Lean Solvent Cooler |
| 05 | ENGlobal Engineering, Inc. | Washington | Quench Water Cooler Lean MDEA Cooler Blowdown Cooler Stripper Overhead Condenser |
| 04 | S & B Engineers and Constructors, Inc. | Texas | Iso-octane Product Cooler Hydrogen Cooler Hydrogenation Circulation Cooler |
| 04 | Fluor Daniel, Inc. (Canada) | St. Romuald, Quebec | Reactor Effluent Air Cooler Product Stripper Overhead Condenser 1st Stage Intercooler 2nd Stage Intercooler Compressor Spillback Cooler |
| 04 | Lipsa Industrial, S.A. de C.V. | Madero, Mexico | Feed Cooler Isomerase Cooler Condenser |
| 03 | Petrofac, L.L.C. | Azerbaijan | Reactor Effluent Cooler Product Air Cooler |
| 03 | Thomas Russell, L.L.C. | Bolivia | Naphtha Overhead Condenser Reformer Effluent Condenser Gas Cooler Stabilizer Overhead Condenser Propane Condenser |
| 03 | Thermo Design Engineering | South America | Gas Coolers Liquid Coolers Lube Oil Cooler Condenser |



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ENGINEERING & CONSTRUCTION INSTALLATIONS

| Year | Company | Locations | Service |
|------|---------------------------------|-------------|--|
| 02 | Petrofac, L.L.C. | Russia | Crude Tower Overhead Condenser Condensate Overhead Condenser Heavy Naphtha Cooler Diesel Product Cooler Diesel Cooler Condensate Bottoms Cooler |
| 02 | Dickson & Tryer Engineering Co. | Undisclosed | Reflux Condenser Lean Amine Cooler |
| 02 | Jacobs Canada, Inc. | Wyoming | 1st, 2nd, 3rd, 4th Stage Aftercooler Acid Gas Condenser Dense Phase Cooler Steam Condenser Glycol/Water Cooler |
| 02 | CB&I Howe-Baker Engineers | Peru | Refrigerant Condenser Debutanizer Bottoms Cooler Hot Oil Cooler Depropanizer Condenser Naphtha Condenser Vapor Condenser Butane Condenser Naphtha Cooler Diesel Cooler |

GAS TRANSMISSION INSTALLATIONS

| Year | Company | Locations |
|------|------------------------------|-------------|
| 06 | Cimarex Energy, Inc. | Various |
| 06 | Kinder Morgan, Inc. | Colorado |
| 06 | AG Equipment | Colorado |
| 06 | Williams Transcon | Louisiana |
| 06 | Devon Energy | Louisiana |
| 05 | Kinder Morgan, Inc. | Texas |
| 05 | Compass Compression, Ltd. | Various |
| 04 | Panhandle Energy, Inc. | Various |
| 04 | Cheyenne Plains Gas Pipeline | Colorado |
| 03 | Southern Natural Gas | Various |
| 03 | Kinder Morgan, Inc. | Texas |
| 03 | Colorado Interstate Gas | Kansas |
| 03 | Eagle Mountain Pipeline Co. | Undisclosed |
| 02 | Kinder Morgan, Inc. | Iowa |
| 02 | El Paso Field Services Co. | Colorado |
| 02 | Nicor Gas | Illinois |
| 02 | Florida Gas Transmission | Florida |



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MAJOR SUBCONTRACTORS

MATERIALS

| Subvendor | Material | Location |
|-----------------|-------------------------------------|------------------|
| Webco | Tubes (C.S.) | Sand Springs, OK |
| Tubes, Inc. | Tubes (Import C.S., S.S., & Alloys) | Tulsa, OK |
| Port City Plate | Plate (C.S.) | Tulsa, OK |
| American Alloy | Plate (C.S. with HIC testing) | Houston, TX |
| Metals, Inc. | Plate (S.S. & Alloys) | Tulsa, OK |
| Mattsco Supply | Flanges, Pipes, Fittings | Tulsa, OK |

COMPONENTS

| Subvendor | Component | Location |
|------------------------|---------------------------------|------------------|
| Reliance Electric | Motors | Tulsa, OK |
| The Moore Co. | Fans | Marceline, MO |
| The Unlaub Co. | Drive Components (Dayco, Dodge) | Tulsa, OK |
| Airtech Products, Inc. | Louvers | Sand Springs, OK |
| Frank W. Murphy Mfg. | Vibration Switches | Tulsa, OK |

FABRICATION ACTIVITIES

| Subvendor | Fabrication | Location |
|----------------------------|-----------------------------------|------------------|
| Metal Services Inc. | Structural Fabrication & Assembly | Tulsa, OK |
| Lewis Industries | Nozzle Assembly Welding | Collinsville, OK |
| Tulsa Gamma Ray | RT | Tulsa, OK |
| Precision Heat Treating | PWHT | Tulsa, OK |
| Universal Sandblasting | Sandblasting & Painting | Tulsa, OK |
| Superior Sandblasting | Sandblasting & Zinc Metalizing | Tulsa, OK |
| North American Galvanizing | Hot Dip Galvanizing | Tulsa, OK |

SHIPPING

| Truck | A Choice of Major Contract Freight Firms is Available | |
|---------|---|--|
| Width: | 18' – 20' Surrounding States | |
| Length: | 60' | |
| Weight: | Pre-assembled Units up to 30 Tons | |

| Rail | Missouri-Pacific Spur into Facilities |
|------|---------------------------------------|
|------|---------------------------------------|

| Water | Port of Catoosa (Barge to the Mississippi River) |
|-------|--|
|-------|--|

| Air | Tulsa International Airport |
|-----|-----------------------------|
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