



Proven Performance By Design

A TransTech Company



The Metalforms Difference

Metalforms integrates decades of expertise and proven technologies from legacy brands like BROWN FINTUBE® and TWISTED TUBE® Heat Exchanger, offering advanced, efficient, and customizable heat transfer solutions. With world-class manufacturing in Houston, and Beaumont, Texas, we deliver reliable innovations that drive energy efficiency and support diverse industrial applications.



Engineered Products Division



METALFORMS

A TransTech Company

Why Metalforms?

- **Proven Performance and Reliability:** With a rich history, these legacy brands have established a reputation for delivering dependable heat transfer solutions that meet diverse industrial needs.
- **Innovative Technologies: TWISTED TUBE® Heat Exchangers:** Featuring a unique helix-shaped tube design, these exchangers enhance heat transfer efficiency, reduce pressure drops, and eliminate flow-induced vibrations, leading to improved operational performance. **BROWN FINTUBE® Products:** Known for their advanced fin-tube design, these products offer efficient tank heating solutions, maintaining or increasing tank temperatures effectively and economically.
- **Comprehensive Product Portfolio:** The integration of these brands allows Metalforms to offer a wide range of products, including hairpin heat exchangers, tank heaters, shell and tube heat exchangers, and enhancement devices, catering to various industrial applications.
- **Customization and Flexibility:** Leveraging extensive experience and technical expertise, Metalforms provides tailored solutions designed to meet specific customer requirements, ensuring optimal performance and efficiency.
- **Commitment to ESG Goals:** The company's technologies are designed to improve efficiency, reduce energy consumption, and lower production costs, assisting customers in achieving their Environmental, Social, and Governance (ESG) objectives.
- **Enhanced Manufacturing Capabilities:** With facilities in Beaumont and Houston, Texas, Metalforms combines its existing assets with the strengths of the acquired brands to deliver world-class heat transfer solutions to North American customers.
- **Integrated Solutions and National Capacity:** As part of the TransTech Group, Metalforms works in harmony with a network of industry-leading facilities and teams specializing in engineered products and services. This collaboration enhances project outcomes, reduces lead times, and provides customers with tailored solutions backed by a national presence and robust technical expertise.

Proven Performance By Design

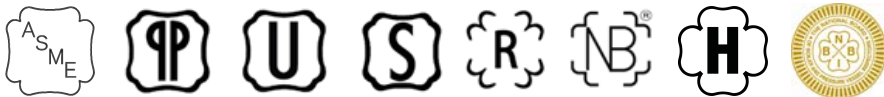


Fabrication Specialists

Metalforms is a leading provider of custom engineered and fabricated solutions for gas and liquids processing, storage and handling across a broad range of industries including Energy, Petrochemical, Refining, Specialty Chemical, Biofuels, and others.

As part of the TransTech Group family of companies we deliver a wide range of fabrication solutions, field services, and 24/7 support services for critical industries. We specialize in process equipment solutions including Shell & Tube Heat Exchangers, ASME Pressure Vessels, repairs, and replacements.

*Where Engineering
Meets Fabrication*





Capabilities

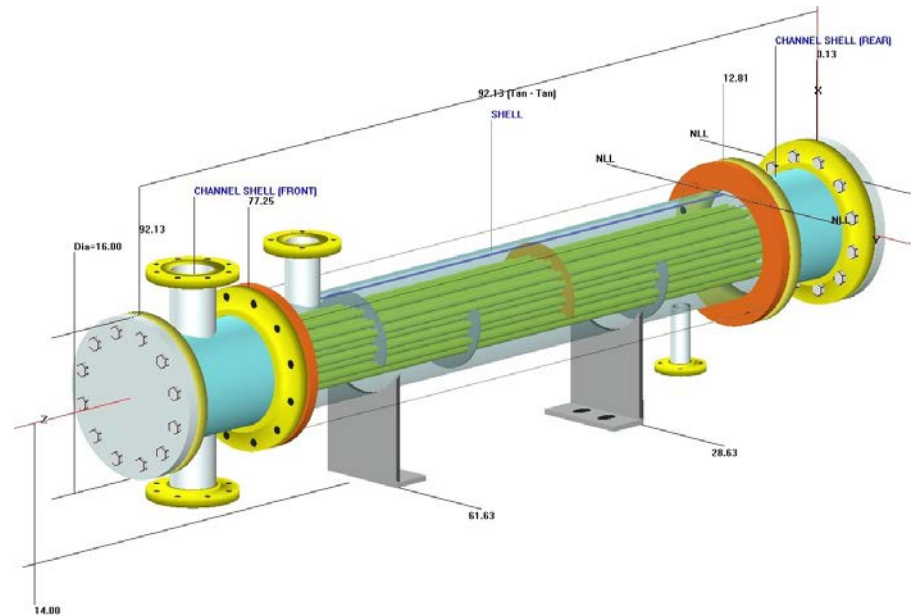
- GTAW/FCAW/SMAW/SAW
- Automatic Tube End Welding
 - 2 Mobile Climate Controlled Rooms
- Extensive List of ASME Section IX Qualified WPS Including Duplex with Ferrite Testing
- CNC Controlled Plasma Burner
- CNC Controlled Plate Rolls
- 4 Large Capacity CNC Drilling/Milling Machines
- 3 Horizontal Boring Mills
- 3 Vertical Turret Lathes
 - Maximum Swing of 84"
- Controlled Rolling Equipment
- On-site Blasting & Coating
- Strip & Retube
 - 72" Diameter Band Saw for Strip & Retube
 - 2 Strip Racks with Air Winches

Services

- Pre-turnaround Planning
 - Budget quotes for multiple options
 - Fabrication of replacement bundles prior to turnaround
- Turnaround Services
 - 24/7 Capabilities
 - Strip & Retube, Replacement Parts, Re-machining, Weld Buildup, & Painting
 - Parts Tracking and Updates
 - Value Added
 - In-house PWHT Oven & Local Stress Relief
 - On-site Radiography
 - On-site Blasting & Coating
 - Freight & Logistics Management

Engineering & Design Software

- COMPRESS: Mechanical design of Pressure Vessels, Reactors, and Shell & Tube Heat Exchangers
- ASPEN TECH
- HTRI: Thermal analysis of Shell & Tube Heat Exchangers
- PV Elite
- Nozzle Pro for FEA
- Inventor
- AutoCAD Plant 3D
- CUSTOM “in-house” programs: Developed by our experienced engineering staff for the efficient creation of Bill of Materials and Customer Quotations



Facilities Overview



Across 220,000 square feet in Beaumont, TX and Houston, TX, we operate as a cohesive unit, encompassing three integral shops at each location. Houston focuses on BROWN FINTUBE® and TWISTED TUBE® products, and services while Beaumont specializes in fabrication, repair, and turnaround services for heat exchangers. With over 80 years of combined experience, our expert shop foremen ensure timely completion of any job. Supported by our team of Production Managers, Engineers, and Quality Control Inspectors, we offer value-added services for high-quality equipment construction and on-time delivery.

Fabrication

The Fabrication Shop excels in fabricating and assembling heat exchangers and equipment. Our skilled staff of welders, pipe-fitters, and operators ensures that our products not only meet but exceed ASME code and quality requirements, along with customer specifications.

Machining

The Machine Shop produces quality heat exchanger components using CNC and manual machinery. Our extensive drilling capabilities prevent downtime by addressing emergency needs. With lathes up to 84" in diameter and drills for plate thickness up to 12", we excel during turnarounds and unplanned outages.

Assembly

The Bundle Shop assembles new units and conducts repairs, including strip and re-tube. Our skilled team delivers high-quality finished products on time, regardless of size or complexity.





Certifications

- ASME U, U2, U3, and S Certifications
- NBIC Certification
- TEMA Class R, C & B
- API 660
- Licensed fabricator of Phillips Petroleum Rod Baffle

Materials

- Carbon Steel
- Low Alloy Steel
- Austenitic Stainless Steel - 304, 310, 316L, 317L, 321, 347
- Super Austenitic Stainless Steel - ALLOY 20, 904L, AL6XN
- Ferritic Stainless Steel
- Duplex Stainless Steel - 2205, 2507
- Hastelloy - C22, C276, C2000
- Other Nickel Alloys - Nickel 200/201, Monel 400
- Copper Nickel
- 1 1/4 Chrome

In-house NDE

- Radiography
- Liquid Penetrant, Magnetic Particle, and Brinell Hardness
- PMI (XRF Analyzer)
- Hydro Testing
- In-house PWHT Oven
 - 8'-0" X 8'-0" X 20'-0"
- In-house Local Stress Relieving
- Detailed Inspection of Existing Units



Heat Exchangers

Metalforms is a leading provider of custom engineered and fabricated shell and tube heat exchangers including:

- Fixed tubesheet
- Floating tubesheet
- U-tube

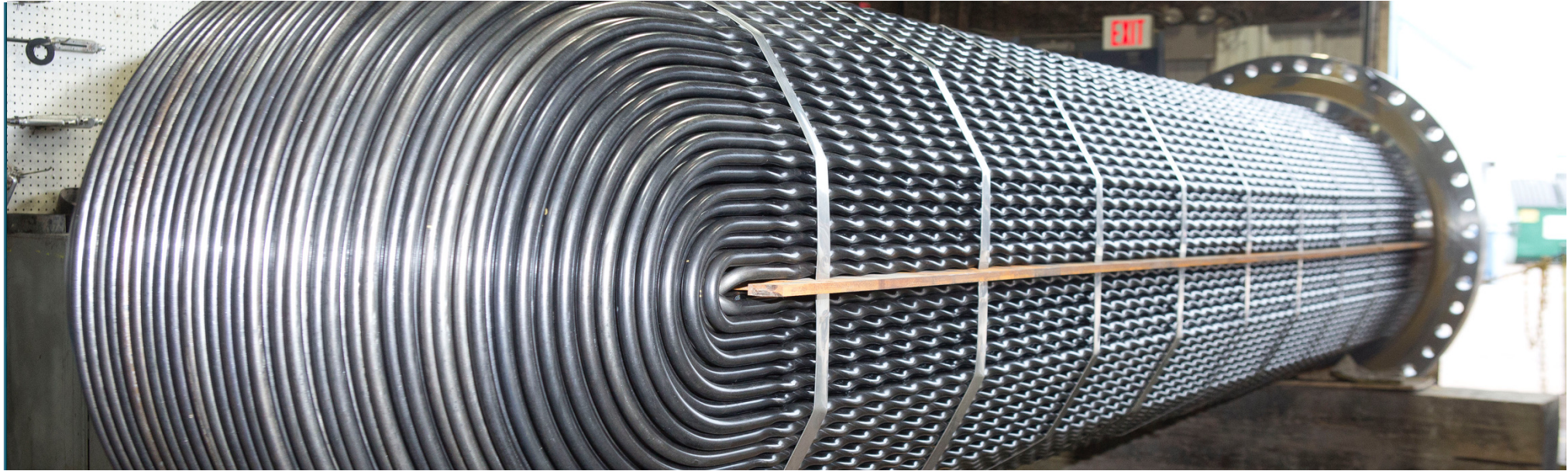
All our heat exchangers are designed to standard TEMA configurations and in accordance with ASME Code, Section VIII, Division 1; TEMA class R, C & B; and API-660. Our materials expertise includes: Stainless Steel, Carbon Steel, Nickel Alloy, Duplex, and more.



Repairs

Metalforms understands heat exchangers are a critical process component and when repairs are needed, they are often needed quickly. When time is critical and you need your heat transfer equipment repaired quickly and correctly, Metalforms has the expertise and capabilities to handle all types of repairs to get your unit back up and running. Common repairs we perform include

- Gasket surface repair
- Weld repairs
- Weld build-up and re-machining
- Replacement components
- Repairs to shell and channel components
- Coating and paint application



TWISTED TUBE® Heat Exchanger Technology

The innovative design of our TWISTED TUBE® Heat Exchangers delivers more efficient and more reliable performance than conventional shell and tube heat exchangers. The TWISTED TUBE® Bundle is designed as an easy retrofit solution for your existing shell and tube layout. No additional piping changes are necessary. It's as simple as taking your old less efficient tube bundle and replacing it with a better solution. The difference is that TWISTED TUBE® Heat Exchangers can be more efficient and reliable.

Our innovative design eliminates baffles and damaging tube vibration. The uniquely shaped tubes are arranged on a triangular pattern that provide adjacent support as fluid swirls freely alongside. Gaps between the tubes make it easier to clean on the shell side. Rounded ends allow for the use of conventional tube-to-tubesheet joints.

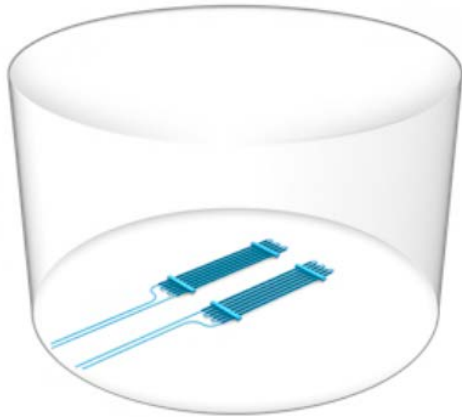


BROWN FINTUBE® Hairpins: Double Pipe & Multitube Heat Exchangers

BROWN FINTUBE® hairpin heat exchangers are the industry standard for efficient performance and proven reliability. Backed by decades of combined engineering and manufacturing experience—and available in both double pipe and multitube configurations—our innovative designs and unique closures are a key element of more economical designs that offer ongoing operational savings. Key features include:

- Enhancement Devices
- External Bolting
- Internal Terminal Closure
- Robust Aftermarket Support
- Single-Pass Design
- Wide Range of Sizes

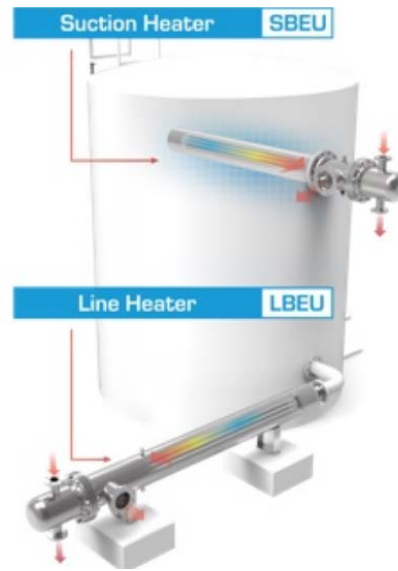
Our Hairpins are also available with unique closures including: LOK-FLANGE®, Separated Head Closure, TAPER-LOK®, and the ZR™ closures.



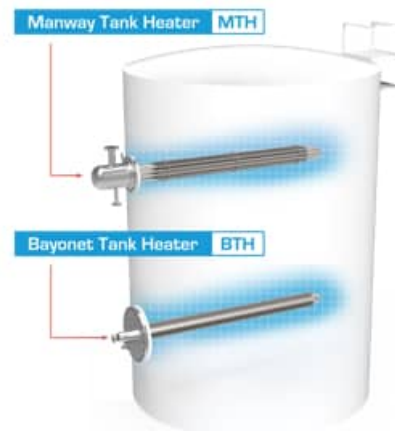
Horizontal Tank Heater (Internal)



Vertical Tank Heater (Internal)



Suction Heater & Line Heater
(Intermittent)



Manway Tank Heater & Bayonet
Tank Heater (Stab-In)

Tank Heaters

BROWN FINTUBE® tank heating products typically use steam or hot oil. They are engineered to fit most applications either together or individually. Choose from solid or perforated designs, and various metals (C.S., S.S., nickel, etc.). If standard materials, styles, or sizes do not meet your requirements, we can customize our products. Key features include:

- Compact Design
- Fewer Field Welds
- Lower Skin Temperature

Internal Models:

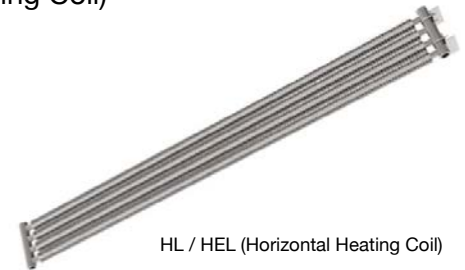
- HL / HEL (Horizontal Heating Coil)
- HL-S / HEL-S (Horizontal Heating Coil)
- TF (Vertical Heating Coil)

Stab-In Models:

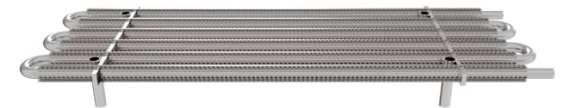
- BTH (Bayonet Tank Heater)
- MTH (Manway Tank Heater)

Intermittent Models:

- LBEU (Line Heater)
- SBEU (Suction Heater)



HL / HEL (Horizontal Heating Coil)



HL-S / HEL-S (Horizontal Heating Coil)



BTH (Bayonet Tank Heater)



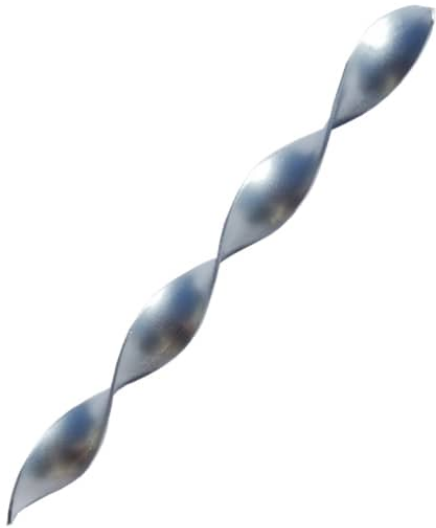
SBEU (Suction Heater)



MTH (Manway Tank Heater)



LBEU (Line Heater)



Twisted Tape



Wire-wrapped Core



LOK-BAFFLE™ Tube Support



Extended Fin Surfaces

Enhancement Devices

Metalforms Heat Transfer has specially developed correlations for our tube insert technology, resulting in more reliable and optimized thermal and hydraulic solutions. With a variety of options, we customize budget-conscious designs that fit heat transfer needs. Key benefits include:

- Increasing Existing Exchanger Performance
- Reduce the Size & Cost of New Equipment
- Potentially Reduce the Tube Side Fouling Rate

Tube Inserts:

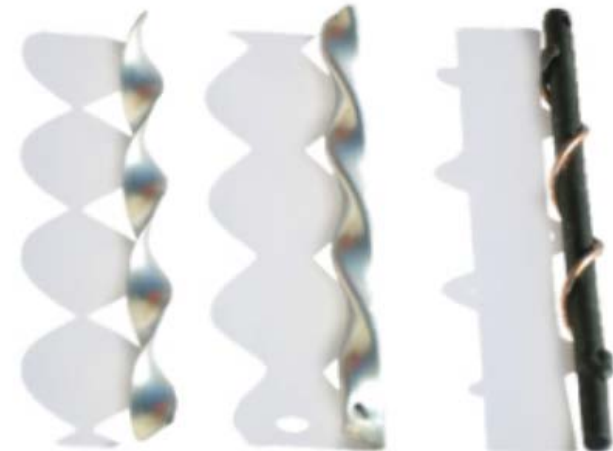
- Twisted Tape
- Wire-wrapped Core

Baffles:

- LOK-BAFFLE™ Tube Support

Fin Surfaces:

- Extended Fin Surfaces





 **TRANSTECH GROUP**

Proven Performance By Design

TRANSTECH GROUP BY THE NUMBERS

Enhancing performance, reliability, continuous improvement & ROI through effective project delivery.



Industries

- Energy
- Renewables
- Industrial
- Process Manufacturing
- Refining
- Petrochemical
- Specialty Chemical
- Air Separation
- Cryogenics



Workforce

- 700+** Employees
- 130+** Dedicated field services team members
- 60+** Engineers
- 220+** Welders, Fabricators, Quality Inspectors



Capital Assets

- 600,000 ft²** Fabrication Capacity
- 165+** Acres of Vessel & Equipment Storage/Staging
- 8** State-of-the-Art Fabrication Facilities



Locations

13 Company Locations:

- McGregor, TX
- Houston, TX
- Beaumont, TX
- Charlotte, NC
- Rocky Mount, NC
- Wilmington, NC
- Rock Hill, SC
- Indianapolis, IN
- Cleveland, OH
- Missoula, MT
- Denver, CO
- Sisters, OR
- Crema (Milan), Italy

Customers

- Owner Operators
- EPCs
- Investors & Developers
- Municipalities

Our Expertise

- Development Support
- Engineering
- Fabrication
- Construction/Management
- MRO Services

Certifications

- ASME, U, U2, U3, S
- NBIC
- TEMA Class R, C, B
- API 660, 650, 620
- NACE
- CSR, SPRAT



TRANSTECH GROUP AT A GLANCE

Integrated, Best-in-Class Capabilities:
TransTech's ONE SOLUTION Simplicity

Reduce Risk

- › Over five decades of experience behind every engagement
- › Enterprise-wide Goal Zero Safety drives the highest safety standards in the industry
- › Industry leading QC/QA standards ensure superior project delivery

Maximize Uptime

- › 24-7 Emergency Repair
- › In-house Confined Space Rescue & Rope Access teams support faster turnarounds
- › Superior quality products are built for performance & efficiency

Increase ROI

- › Outstanding engineering & design ensure peak performance while minimizing downtime.
- › Nationwide fabrication facilities support parallel job execution—and accelerate project delivery
- › Streamlined, end-to-end solutions improve efficiency and reduce project cycles.

End-to-End Solutions Across the Plant Lifecycle

Engineered Equipment Fabrication

ASME
U, U2, U3, & S

NBIC
R-Stamp

TEMA
Class R, C, & B

API
660, 650, & 620

Specialized Mechanical Services

MRO
Solutions

Mechanical
Services

Repair &
Replacement

Process
Piping & Tubing

Energy Solutions

Storage Tanks
& Equipment

Gas & Liquids
Bulk Plants

Gas & Liquids
Terminals

Industrial Fuel &
Power Generation

Renewables Solutions

Development
Support

EPC Services,
Fabrication, O&M,
Process & Control,
SCADA

Biogas Processing &
Utilization:
AD, ADTE, LFG, LFGTE,
RNG

Renewable Fuels,
Renewable Diesel,
H2, rLPG, rLNG,
rCNG

Cryogenics Solutions

ASU Construction,
Commissioning,
Maintenance,
Repair & Operations

Cryogenic Tanks,
Vessels & Equipment,
Fabrication, Installation &
Repair; ASU & CO2
Plant Relocation

BAHX & Cold Box
Installation,
Maintenance,
& Repair

Industrial Gas Bulk Plant
Solutions, Automation &
Control Technologies

Heat Transfer Solutions

Thermal Design &
Engineering

Shell & Tube, Hairpin,
Twisted Tube® Heat
Exchangers

Aftermarket
Parts/Bundles

24-7 Maintenance &
Repair Services

TRANSTECH GROUP PORTFOLIO



TransTech provides **custom-engineered and fabricated solutions for liquids and gas processing, storage, transfer, and utilization** across a broad range of industries. With in-house engineering, fabrication, construction, and field services expertise, we've delivered service excellence and an unwavering commitment to quality and safety for over six decades.



Bendel **custom designs and fabricates virtually all types of shell & tube heat exchangers, ASME pressure vessels, reactors, distillation columns and towers, and API storage tanks** for specialty chemical, petrochemical, biofuels, biogas, food & beverage, pharmaceutical, and other process manufacturing industries.



Metalforms delivers **custom-engineered Shell & Tube Heat Exchangers, ASME Pressure Vessels, and 24/7 maintenance and repair services**—including emergency response—for the world's largest refining and petrochemical companies.



Built on some of the most trusted heat-transfer brands, including BROWN FINTUBE® and TWISTED TUBE® Heat Exchanger Technology, Metalforms **produces heat transfer technologies designed to reduce energy costs, emissions, maintenance requirements, eliminate flow-induced vibrations, and improve thermal efficiency.**



MIG provides **specialized cryogenic and mechanical services for air separation/ cryogenic systems, industrial process piping fabrication, installation, construction, maintenance, and confined space rescue** for air separation, wastewater/water treatment, food and beverage, pharmaceuticals, chemical, and other process industries.



Cryogenic Technology Resources specializes in the **design, fabrication, installation, service, and repair of cryogenic and high-pressure gas bulk storage and transfer solutions, cylinder filling systems, and advanced automation and control technologies.**



ESI **delivers end-to-end solutions for biogas and RNG utilization**, including development assistance, engineering, process & control, SCADA, procurement, construction, operations, and maintenance.

NATIONAL FOOTPRINT



Beaumont, TX
170,000 square foot
fabrication facility
Metalforms



McGregor, TX
170,000 square foot
fabrication facility
TransTech Fabrication



Charlotte, NC
65,000 square foot
fabrication facility
Bendel Tank & Heat
Exchanger



Houston, TX
50,000 square foot
fabrication facility
Metalforms Heat Transfer



Indianapolis, IN
46,000 square foot
fabrication facility
Maddox Industrial Group



Rocky Mount, NC
25,000 square foot
fabrication facility
TransTech Energy

ASME VESSEL FABRICATION



ASME Pressure Vessels

TransTech Group's Engineered Products Division delivers high-quality, custom-engineered Pressure Vessels, built to each client's specific application requirements. Every vessel is engineered and fabricated in strict accordance with ASME Code. Available in Stainless Steel, Carbon Steel, Nickel Alloy, and Duplex, vessels can also include the following at your option:

- ASME U, U2, U3 Certifications
- Lethal Service
- Internal Coils
- Half-Pipe Jacket
- Dimple Jacket

ASME VESSEL FABRICATION



Reactors

Through our sister company Bendel Tank & Heat Exchanger we deliver custom manufactured Reactors built to your exact specifications. All of our Reactors are engineered and fabricated in strict accordance with ASME code and are available in Stainless Steel Carbon Steel Nickel Alloy, and Duplex. Vessels can also include the following. at your option:

- ASME U, U2, U3 Certifications
- Low and High Pressure Designs
- Lethal Service
- Internal Coils
- Dimple Jacket
- PMI - Positive Material Identification
- Pickling and Passivation

ASME VESSEL FABRICATION



Columns & Towers

Through our sister companies Bendel Tank & Heat Exchanger & TransTech we deliver custom manufactured trayed and packed columns & towers built to your exact specifications. All our columns & towers are fabricated in strict accordance with ASME code and are available in Stainless Steel Carbon Steel, Nickel Alloy, and Duplex, including:

- Adsorber Columns
- Amine Stills
- Condensate Stabilization
- Debutanizers
- Deethenizers
- Depropanizers
- Distillation Columns
- High Pressure Contactors
- Lethal Service Scrubbers
- Rectifying Columns
- Scrubber Columns
- Stabilizers
- Stripper Columns
- Vertical Absorbers

API STORAGE TANKS



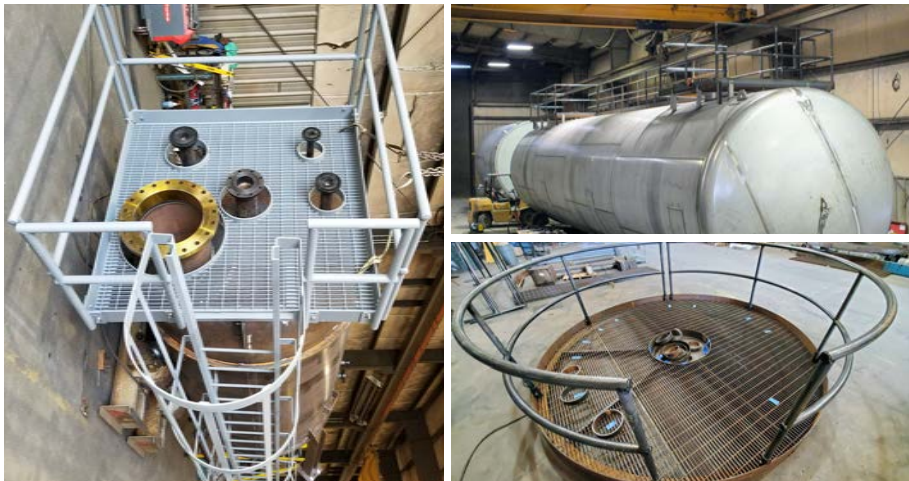
API-650 & API-620 Storage Tanks

Our sister company Bendel Tank & Heat Exchanger manufactures the highest quality storage tanks, engineered and fabricated in accordance with ASME, API-650, and API-620 specifications.

Their unique manufacturing process allows them to seam weld plates up to 192" long with 100% X-ray quality, resulting in fewer circumferential welds and an overall superior product at the same or less cost than our competitors. Materials include:

- PWHT & Stress Relieving
- Internal Coils
- Half-Pipe Jacket
- Dimple Jacket
- Ladders & Platforms
- Insulation

API STORAGE TANKS



Platform & Ladders

Our sister company Bendel Tank & Heat Exchanger offers outstanding quality custom-fabricated ladders, platforms and other systems for providing safe, convenient access to tanks, vessels and equipment as needed for day-to-day operations, maintenance and repair.

All our fabricated assemblies are purpose-built to your exact specifications, for indoor and outdoor applications, offering complete design flexibility and ensuring impeccable fit and compatibility with your facility and operations.

ASME PRESSURE VESSELS



Large Diameter, Heavy Wall Vessels

TransTech provides custom design and fabrication of large diameter, heavy wall, super capacity ASME code certified pressure vessels, serving clients in chemical, petrochemical, oil and gas, refining, and a wide variety of manufacturing industries. With sizes of up to 20 feet plus in diameter and weighing as much as 650,000 pounds and more we can also include the following, at your option:

- ASME "U" Stamp, Division 1, 2, and 3, and NBIC "R" Certificate
- Atmospheric, Low and high pressure designs
- Above ground and underground options

SPECIALIZED MECHANICAL SERVICES



Field Services Solutions

- In-field Maintenance & Upgrades
- In-field Consultative Trouble-Shooting
- Reliability Support for Air Separation
- Coldbox Troubleshooting, Leak Detection & Repair
- BAHX Troubleshooting & Repair
- Confined Space Entry & Rescue
- SPRAT - Rope Access
- In-stock Inventory of 5083 Pipe & Fittings
- UHP & Sanitary Piping Cleaning/Fabrication/Installation
- R-Stamp Repair & Modification - Shop & Field
- Onsite Pneumatic & Hydrostatic Pressure Testing
- Design & Engineering
- ASME Fabrication
- On-site NDE (RT, PAUT, & PT)
- Tank Set & Equipment Installation
- Contract In-house Machining, Milling and Tubesheet Drilling Capabilities

SPECIALIZED MECHANICAL SERVICES



Process Piping

MIG is a full service mechanical contractor supporting a wide range of industrial process piping applications. Process piping is any piping that carries a product in a processing system. Each product and process is uniquely different and creates challenges in building, installation, maintenance and upgrade of those systems.

Process Piping Systems:

- Steam & Condensate
- Cooling & Service Water
- Compressed Air & Gas
- Instrument & Control
- Hydraulic & Lubrication
- Pneumatic Conveyance
- Petroleum & Pipeline
- High Temperature & Pressure
- Cryogenic
- Food Grade
- Sanitary Tubing
- High Purity Tubing

MIG Offers:

- Precision Laser Alignment
- Certified Welding
- Certified Riggers
- Emergency Maintenance Repairs & Alterations
- All forms of piping materials: stainless steel, carbon steel
- All forms of piping connections: bolt up, welded, grooved, threaded, bent tubing, etc.

SPECIALIZED MECHANICAL SERVICES

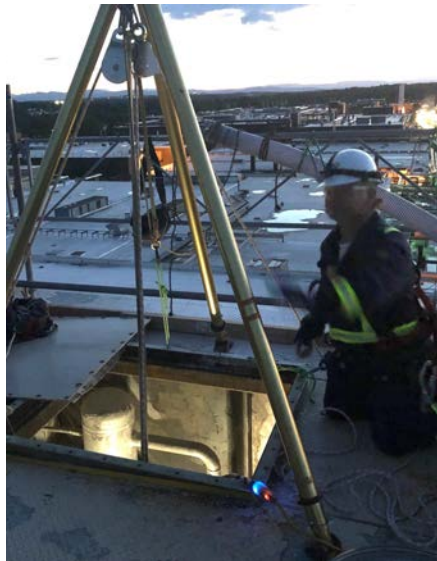


Rope Access

MIG delivers integrated rope access capabilities across our complete services portfolio, enabling faster, safer, and more economical project and services delivery. All our rope access teams follow SPRAT (Society of Rope Access Technicians) standards and work procedures and are monitored for compliance to ensure optimal safety and performance. With four decades of experience, our seasoned teams have extensive experience utilizing rope access methods for all of the following tasks:

- Inspection & Testing
- Construction
- Maintenance & Repair
- Vessel & Equipment Installation
- Cleaning & Painting
- Facilities Management & Building Services
- Emergency Maintenance & Repair
- Confined Space Rescue
- And More

SPECIALIZED MECHANICAL SERVICES



Confined Space Rescue

Our team has extensive experience working inside boilers, tanks, columns, and process vessels and the need for a standby rescue team developed from this type of work. MIG Confined Space Rescue Team (CSRT) allows your company to put an emergency response plan in place to ensure the safety and health of your staff during critical emergency operations. Our industrial rescue services include:

- Emergency rescue teams
- Trained rescue personnel
- Confined Space training
- Standby rescue services
- Low angle rescue
- Confined Space entry
- Safety and rescue equipment rental

MIG keeps your employees safe by offering industrial rescue services that emphasize crisis avoidance and emergency training that is tailored to your company's specific needs.





METALFORMS
A TransTech Company

FABRICATION SOLUTIONS
for Petrochemical & Refining



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