



HEAT EXCHANGERS

Alloy Engineering thermally and mechanically designs custom ASME heat exchangers. These include Air Cooled and Finned Tube Heat Exchangers, Shell and Tube Heat Exchangers, Recuperators and Economizers. We are members of HTRI and utilize HTRI thermal design software, and CodeCalc for mechanical design to ASME Code with S, U and R Stamps.

Features:

- Shell diameters up to 80" with in-house machining capabilities up to 110" turning
- High-temperature gas/gas exchangers
- Bayonet heat exchangers – double tubesheet designs
- Refractory lined
- Replacement bundles, channels, shells and tubesheets
- Nickel brazed finned tubing
- Clean-room fabrication and welding
- Solidworks 3D fabrication drawings
- Ratings up to 1600°F
- Carbon, stainless, high nickel alloys and reactive metals
- Explosion clad

INDUSTRY APPLICATIONS:

- Power generation systems
- Gas turbines
- Petroleum and natural gas production
- Heat treating
- Metals processing
- Chemical processing
- Caustic and specialty chemical
- Specialty gasses
- Food and paper
- Rendering plants

Reduced Maintenance • Longer Life • Lower Life-Cycle Cost

Alloy Engineering

844 Thacker Street, Berea, OH 44017 Phone 440.243.6800 Fax 440.243.6489

Email sales@alloyengineering.com or visit alloyengineering.com



ALLOY ENGINEERING

- Extensive experience in all stainless and high nickel alloys
- Custom fabrications
- Welded to ASME/AWS specifications
- Testing to verify quality including dye-penetrant, pressure testing, x-ray and UT.
- Our ASME-CE's will provide recommendations for longer product life

Quality and Certifications

- ASME Section I S-Stamp
- ASME Section VIII, Div. I U-Stamp
- NBIC R-Stamp
- AWS - CWI and AWS-SCWI Welding Inspectors
- Level II and ASNT TC-1A Certified NDE Inspectors
- In-House Visual, Helium Leak Test, PT, MT, PMI, and Phased Array UT
- RT, UT, Ferrite by Certified Vendors
- Fan Vibration Testing, Balancing and Shaft Run-out

Engineering and Design

- PV Elite (ASME Code Calculations)
- Finite Element Analysis (FEA)
- Fan Design
- SolidWorks 3D
- HTRI for the Thermal Rating of Heat Exchangers

Welding

- Welders Qualified to ASME Section IX and AWS D1.1
- SAW
- GTAW
- GMAW
- FCAW
- PAW
- Manipulators
- Robotic Manipulator-SAW, GMAW
- Strip Cladding Weld Overlays

Fabrication and Prep

- Forming and Corrugation Tooling
- Edge Prep Beveler
- Plasma Table
- Ironworker Hole Puncher
- Bentech 15T Tube/Pipe/Rod Bender
- Shear - 10' Capacity
- Press Brakes to 1,000T/24' Bed/180" Throat
- Plate Rolls - 10' Width/ 1" Thickness (Larger Capacity Available)
- Fan Balancing Machine
- Fan Vibration Testing and Analysis
- Blasting and Painting In-House to Specification

Machining

- CNC Horizontal Boring Mill 168" Capacity
- Large Turning 84" Ø x 37' OAL
- CNC Lathe 80" Ø x 14' OAL
- Vertical Turning Lathes up to 110" Capacity x 66" H
- Milling Machines, Drill Presses, Grinders
- Saws
- Pipe End Machining

Lifting Capacity

- 50,000 LBS in House
- 20' Under Hook
- 20' Shipping Doors

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