

Innovative Ideas

with
Customized
Solutions





SERVICE / FLEXIBILITY



RELIABILITY



SPACIOUS PRODUCTION FACILITIES

Meeting **Your Business Needs** Through...



CRAFTSMANSHIP



A HIGHLY QUALIFIED STAFF

COMPANY PROFILE

Facilities

- (2) Facilities – Charlotte, NC and Houston, TX
- Over 60,000 SF (4 separate bays including a S.S./Nickel Alloy bay only)
- Tonnage: (1) 25 ton, (3) 20 ton, (4) 15 ton and (2) 10 ton overhead cranes

Design and Fabrication

- ASME Code, Section VIII, Div. 1
- ASME U & R Stamp
- Heat Exchangers (thermal and mechanical designs)
- Reactors (half-pipe, conventional and dimpled jackets)
- Columns
- Pressure Vessels
- Storage Tanks
- Mix Tanks
- Including mechanical polished to #7 finish and electro-polished

Materials Of Construction

- Over 100 weld procedures (GTAW, FCAW, SMAW, GMAW & SAW processes)
- Carbon Steel (SA-36, SA-516-70, C.S.)
- Stainless Steel, solid and clad (304L, 316L, 317L, 904L & 6Mo Grades)
- Duplex Stainless (2205, 2304, 2507)
- Hastelloy (B-2, B-3, C-22, C-276, C-2000)
- Nickel Alloys (nickel, monel, inconel, alloy 20, AL6XN and others)



Charlotte Facility

Our modern, well-equipped manufacturing facilities complemented by our technical strength provides a unique blend of flexible design, manufacturing and fabrication technology.

With a highly qualified staff of engineers and state-of-the-art facilities, Ward Tank & Heat Exchanger has the resources to produce the tank or heat exchanger to meet your special needs.



Houston Facility

ENGINEERING EXCELLENCE



At Ward Tank and Heat Exchanger Corp., our custom automation allows us to provide **fast** and **reliable service** to meet your **highest expectations**.



From Concept



To Completion

Engineering

- Exceptional technical staff, 9 Engineers including two registered professional engineers, trained in the structural, civil, mechanical and metallurgical disciplines.
- Design Software used: PV-Elite, Compress, B-Jac, FE-Pipe (Nozzle Pro) and AutoCAD
- Internally developed programs customized to automate the fabrication process (**ProJex**, **ProFab**, and **ProBurn**)

What is “**Fabrication Engineering**”?

Our concept of maximizing office and shop man-hours by eliminating redundant and non-productive work through custom automation.

Customer benefits from our “**Fabrication Engineering**”

- Estimating and Engineering departments well staffed and equipped to handle all of your needs from small projects to multi-million dollar projects.
 - Quick and accurate turnaround on budget and/or firm quotes.
 - Unrivaled fast track project capabilities and response times.
- Shorter overall lead times on custom engineered equipment.
- Competitive prices with the highest quality that you can rely on.

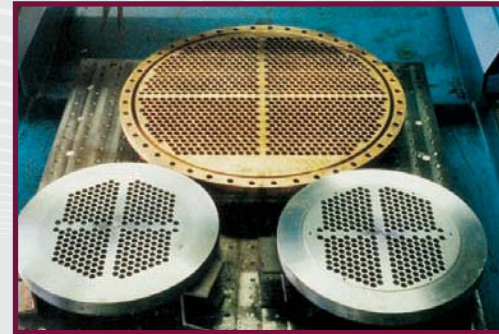
Quality Control

- In-house Level III and Level II Inspectors with CWI and AWS certifications
- In-house NDE equipment (Radiography, Positive Material Identification, Mass Spectrometer Helium Leak Testing, and more).

SHELL AND TUBE HEAT EXCHANGERS

- TEMA class B, C & R
- Shell and Tube (4" up to 144" dia, up to 5000 psi design pressure)
- Standard TEMA configurations
- Fixed Tubesheet design
- Floating Tubesheet design
- U-tube design (Removable Coils)
- Bayonet Type Heaters / Coolers
- Internal / External Plate Coils

We also offer in-house retubing and rework of existing heat exchangers.



(Above)
Copper-Nickel and
Hastelloy Tube Sheets
on CNC tube sheet
drilling machine.



"State-of-the-art" CNC machining

(Below) Stainless Steel Heat Exchangers.



HALF-PIPE JACKETED REACTORS

“The Half-Pipe Specialists”, our “Automated Process” for installing Half-Pipe Coil Jackets was developed for one simple reason; *Quality that can be surpassed by NONE.*

Our process offers the following benefits:

- Improved “Quality” and “Reliability” by virtually eliminating jacket butt joints along the shell side.
- Utilization of a compression fit with a twin head sub-arc welding process that virtually eliminates tack welds during fit up.
- Reducing/eliminating the stops and starts during welding to further enhance the weld quality and jacket reliability.
- Precise fit-up of bottom head half-pipe (180 degree Segments) to ensure that all butt joints are in a line for easy maintenance and inspection purposes at your facility.
- Wide range of sizes (2”, 3” and 4”) to meet all of your cooling and heating needs. 4” half-pipe can be installed on 5.5” pitch providing optimum heat transfer efficiency. Full coverage over the head knuckle can be provided upon request.
- Thanks from your Reliability Engineer!



Stop fighting leaky jackets and let our expertise **Make It Happen** for you!

COLUMNS AND TOWERS



Column 90" ID x 70' 0" OAH painted stainless steel.

We Make It Happen

- Distillation Columns
- Process Towers
- Packed and Trayed Columns
- Exhaust Stacks
- Ladders / Platforms / Handrails

COLUMNS AND TOWERS



Column with Reboiler. We can fabricate and trial fit all components at our facilities to avoid costly issues during field erection.

STAINLESS STEEL AND NICKEL ALLOY FABRICATION



Heat Exchanger with stainless tubes and shell with a #4 exterior polish.



Reactor Stainless with double internal pipe coils, half pipe jacket on shell, conventional stainless jacket on cone, 100% x-ray for lethal service.



Heat Exchangers with Hastelloy C-276 tubes and shell.



Alloy Vessels and heat exchanger painted due to corrosive plant environment.



Alloy 2205 Trayed Column 48" to 72" variable I.D. by 49' OAH.



Stainless Reactor with half pipe jacket.

PARTIAL LIST OF NATIONAL AND INTERNATIONAL CUSTOMERS

Air Products and Chemicals

Aker Kvaerner

Akzo Nobel

Albemarle Corporation

BASF Corporation

Bayer

B E & K

BP

Celanese

CH2M Hill / Lockwood Greene

Ciba Geigy

Clariant

Cognis

DAK Americas

Degussa Huls

Dow Chemicals

DuPont

Eastman Chemical

Fluor Daniel

Honeywell

ICI America / National Starch

Invista

Jacobs Engineering

JBEK

KOSA

Mitsubishi

O'neal Engineering

Penta Engineers

Perigon

Ticona



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Our Goal...

To be your primary source and preferred provider for your fabricated needs.