

Pressure Vessels

Experience • Design • Fabrication • Quality Assurance



TAYLOR FORGE
Engineered Systems, Inc.

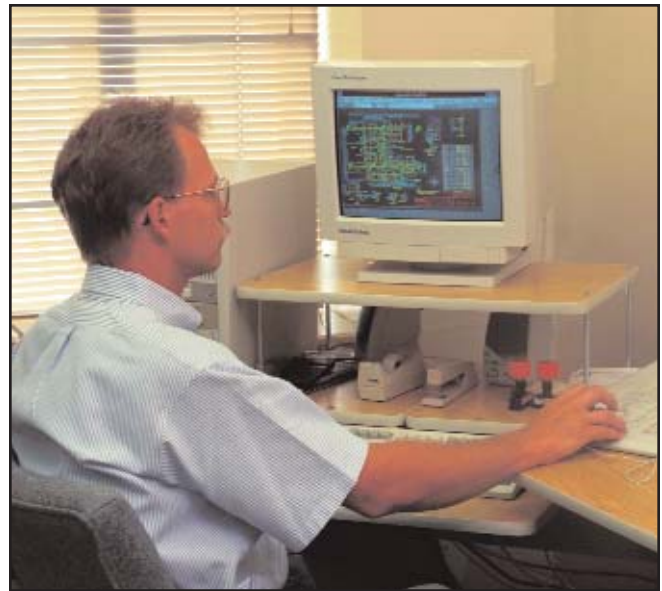
Since the 1950's, Taylor Forge Engineered Systems, Inc., has been manufacturing pressure vessels at our plants in Paola and Greeley.

The Paola facility, with strengths in heavy wall and special design vessels, is qualified to design and fabricate vessels under ASME Code Section I and Section VIII Divisions 1 and 2. ASME stamps include S, U, U2, R, NA and NPT.

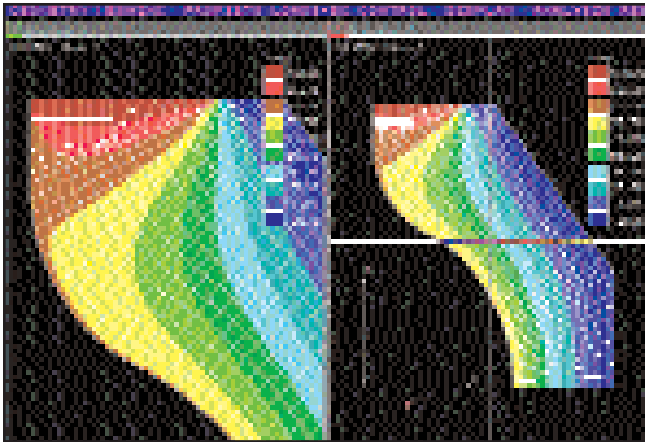
Our Greeley plant is more suited to lighter wall vessels and pipe type vessels. Greeley stamps include S, U, U2 and PP.

Taylor Forge Engineered Systems, Inc. is known for its people, quality, capabilities and experience. This combination of attributes has made us a leader in the manufacture of special or stringent design, critical service pressure vessels.

Even with our position and reputation in the marketplace, we have embarked on a program of continuous improvement to push us to improve all aspects of our business. "Traditionally Dependable" has been our motto for many years. Today, at Taylor Forge Engineered Systems, that motto represents more of a commitment to quality than ever.



Full CAD capabilities are available for use by our degreed engineering staff.



Complete design and analysis capabilities including Div. 2 design and stress reports, fatigue analysis, pipe stress analysis, and finite element analysis.

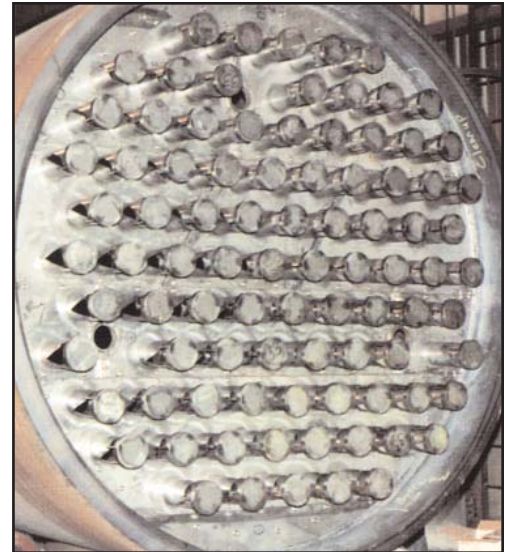


In-house laboratory for destructive testing procedures including Tinius-Olsen tensile machine for tensile tests and weld bends, Tinius-Olsen Charpy impact machine, Rockwell hardness machine, and Brinell hardness machine.



Extensive heat treating facilities at Taylor Forge allow special metallurgies to be quenched and tempered. The large stress relief oven gives in-house post weld heat treat capabilities up to 15' diameter.





Hydrotreater reactor vessel with 347 s.s. clad lining and internals. Taylor Forge also has the capability to provide similar vessels with one or two-pass weld overlay.



Sec. I Steam Drum, 65" ID x 3.5" w x 43'-7" s/s, weight 140,000 lbs. with (103) 4" riser tube conns. TFES can provide process design and fabrication responsibility for all steam drum internals or install our customers' designed internals.



Our commitment to quality and continued improvement has resulted in the ASME certifying Taylor Forge for the following stamps: Sec. I - S and PP, Sec. VIII - U, U2 and R, Sec. III - NA and NPT.

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1. Cold reactor separator, SA-516-70 with 347 S.S. overlay, 78" ID x 6.5" wall, Sec. VIII, Div. 2.
2. Gaseous helium storage vessel designed for 15,000 psi, hydrotested @ 22,500 psi 40" ID x 10.7" wall x 72' s/s, 465,000 lbs., Sec. VIII, Div. 2.
3. Sec. I Steam Drum with customer's internals - 90" ID x 5.5" wall x 30'-0" s/s, 190,000 lbs. Taylor Forge can provide process design and fabrication responsibility for all steam drum internals or install our customers' designed internals.
4. Cryogenic liquid oxygen storage vessel, 5600 psi, SA-240-Tp 304 - 51" ID sphere x 3.9" wall, Sec. VIII, Div. 2.
5. Hydrotreater reactor vessel, SA-387 Gr. 11 Cl. 2 with 347 s.s. clad - 102" ID x 4.5" wall x 61'-6" s/s, Sec. VIII, Div. 1.
6. Shuttle launch involving storage vessel in photo #2.



Large vessels are not the only vessels made. Here is a 3-1/2" ID x 0.750" w x 11" s/s vessel designed for 2600 psi.



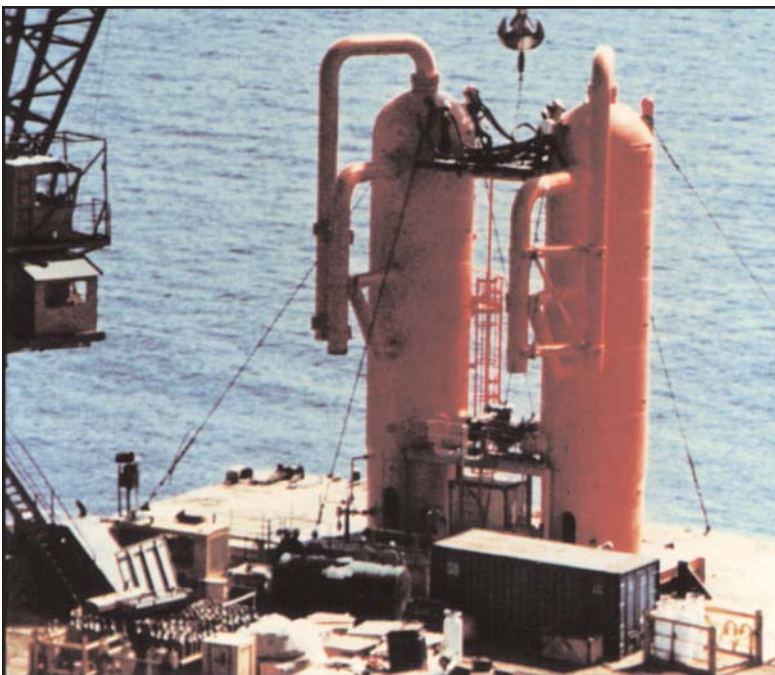
Pulsation Bottles, Extruded per ANSI B31.8 (as shown) or fabricated and stamped to Sec. VIII.



Suction Scrubber, 69" ID x 5.25" w x 22'-0" s/s, weight 92,000 lbs., 2500 psi design. Offshore platform, Malaysia.

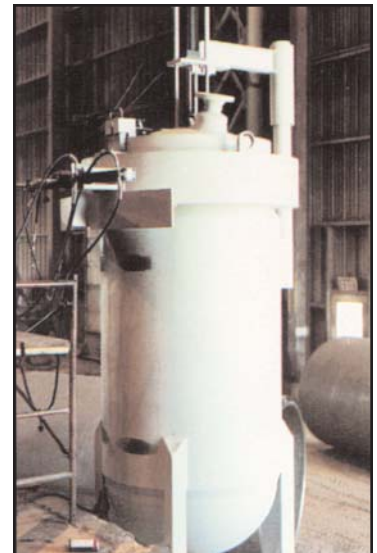


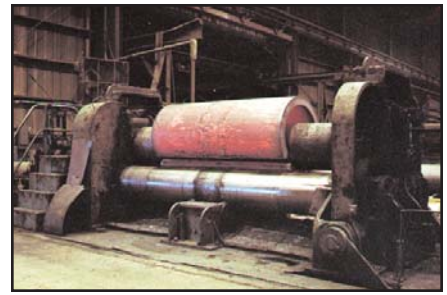
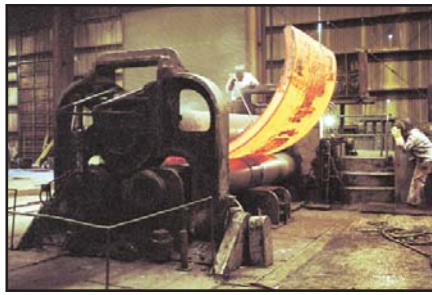
Supercritical CO2 Reactor, 114" ID x 3" w x 31'-0" s/s, weight 148,000 lbs. Overlayed with 316 SS.



Vertical Scrubbers. Taylor Forge can provide process and mechanical design responsibility for scrubbers, filters, and separators. Shown here are (2) 120" ID x 5.62" w x 32'-0" t/t scrubbers, weight 305,700 lbs. Sec. VIII, Div. 1.

Thermoclave with hydraulic, quick opening, Taylor Forge "FM" Closure - 40" ID x 4.2" wall x 5'-8" s/s.





Five (5) pyramid and pinch plate rolls can roll plate hot or cold and up to 7.5" thick. Roll lengths vary up to 16'.



Long seams, girth seams, and nozzle welds (shown here) are done by any one of the following procedures: SAW, SMAW, GTAW, GMAW, FCAW. All Taylor Forge welders are ASME Code Section IX qualified.

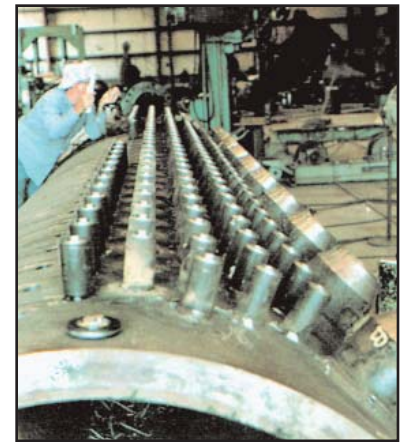


Plate rolling roundness and efficiency is enhanced by the use of the crimping process prior to rolling. Crimping sets the correct radius on the ends of the plate and eliminates the waste of excess material.



The strip overlay process is used on heavy wall vessels like reactors, requiring alloy internal surfaces. The strip overlay method is a submerged arc process, resulting in controlled chemistry and a high integrity bond.



After the plate is formed into cylinders, many welding processes are used to fabricate the rest of the vessel. Here a submerged arc procedure is used for a longitudinal seam.

Quality is verified by in-house level III inspection and a resident Authorized Inspection Agency. Processes performed by Taylor Forge inspectors include x-ray, magnetic particle, ultrasonic, dye-penetrant examinations, and positive material identification.

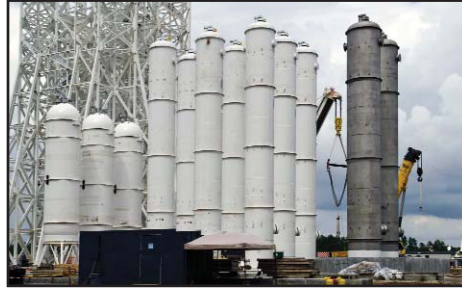


**Slug Catcher
(Modularized for Shipping)**



Slug Catchers

**Pressure Vessels
(Steam Drum)**



**Aerospace
Test Stand**

**Extruded
Outlets
(Air Grid Hub
and Arm)**



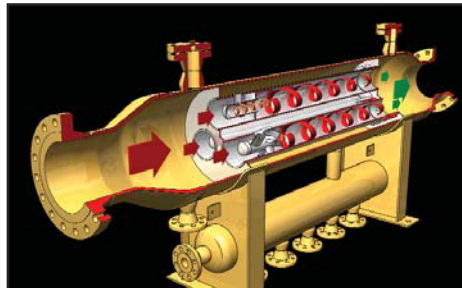
**Cooler
Headers**

**12,000 psi
Y-70/Y-80
Scraper
Trap Skid**



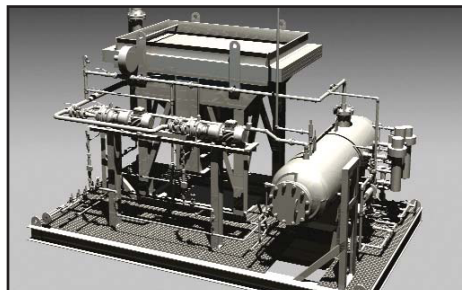
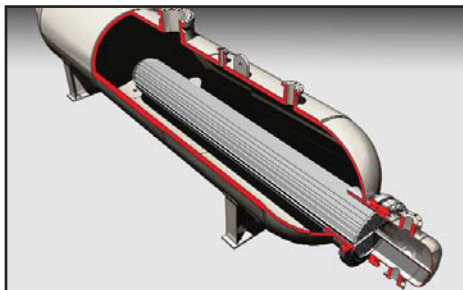
**Scraper Traps
& Trays**

**High Yield
and Nuclear
Fittings**

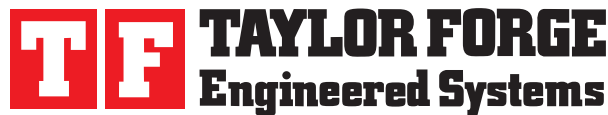


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208 N. Iron Street
Paola, Kansas 66071
Phone: (913) 294-5331
FAX: (913) 294-5337

05/20/13