Heavy Fabrication Manufacturing

Design and manufacture of ASME code pressure vessels

CURTISS WRIGHT
Flow Control Company
TapcoEnpro

TapcoEnpro International, a business unit of Curtiss-Wright Flow Control Company, has a reputation for delivering superior process equipment for severe service environments to the global oil and gas industry.

In an effort to grow the heavy wall pressure vessel and reactor manufacturing business in the United States—and worldwide—and provide our customers with a strategically located, high quality, reliable supplier, we developed our state-of-the-art manufacturing facility at Cedar Crossing in Baytown, Texas. This is the most modern “built for purpose” modular manufacturing facility for fabrication of heavy wall pressure vessels, reactors, and hydrotreaters on the Gulf Coast.

The commitment to build this facility represents a major capital investment and demonstrates the critical role we believe energy markets will play in its future growth. With technology, engineering expertise, and this state-of-the-art manufacturing facility, it will continue to offer profound systems solutions for the global refining and petrochemical business.

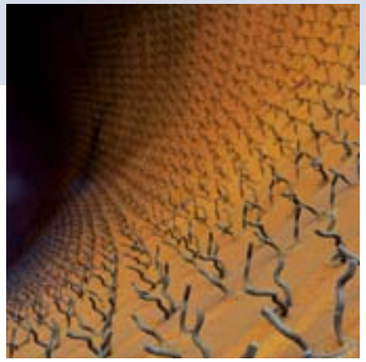
Aligned with the strategy of building growth in high-potential markets, the fabrication plant is equipped with the latest technology and meets the most stringent international standards for quality and environmental protection. The facility can also meet the strong demand for pressure vessels, reactors, hydrotreaters, and other process equipment for the U.S. and South American markets, and supply subcontract needs for neighboring industrial operations.

MANUFACTURING CAPABILITIES

The facility covers over 12 acres and includes a 118,000-square-foot manufacturing area. Key features include large format metal forming, cutting, welding, hard-surfacing, on-site blasting and painting, refractory installation, superior material handling, and convenient barge transportation. The heavy fabrication facility is capable of producing pressure vessels up to 40 foot (12m) diameter inside the building and has unlimited size capabilities in the lay down yard. These features provide the flexibility for TapcoEnpro to grow into new products areas, markets, increase the ability to bid competitively on large-scale refinery projects, and increase global market share.

Curtiss-Wright Flow Control has invested heavily in the state-of-the-art equipment, including:

- Twin heavy vessel bays with four 100 ton cranes
- 45 foot (14m) under-hook lifting capability
- Heavy plate rolls capable of forming plate up to 8 inch (20cm)
- Computerized, numerically controlled thermal cutting
- 2,500 ton hydraulic press break capable of handling 14 foot (4.2m) plate and bending 3 inch (7.5cm) plate
- 44 x 44 x 200 foot (13 x 13 x 61m) self-contained paint booth complete with blast aggregate recycling and modern welding equipment which speeds the fabrication process with greater accuracy and quality



The Cedar Crossing facility has an integrated fabrication management team resulting in combined pipe, vessel, module fabrication and specialty equipment manufacturing capabilities, to sustain both the local industry requirement and large-scale international needs. This unique ability enables TapcoEnpro to respond to demanding worldwide project schedules while maintaining a single point of contact for our customers.

ASME PRESSURE VESSELS

Our capabilities include bimetallic welding, clad welding, overlays, hard-surfacing, and high alloy materials. We overlay nozzle inside diameters down to one inch (2.5cm) and weld vessel wall thickness up to 12 inches (30.5cm).

Materials of construction available for TapcoEnpro include carbon steels, chrome steels (387-11, 387-22, and 387-9), and nickel steels (stainless, monel, incolloy, and inconel). Our capabilities include weights 1200 tons (544kg), 40 foot (12.2m) diameters and 300 foot (91.4m) lengths.

TapcoEnpro currently maintains the following authorizations from the American Society of Mechanical Engineers (ASME) and National Board of Boiler and Pressure Vessel Inspectors (NBBI):

ASME Vessel Code	“U” Stamp Division 1
ASME Vessel Code	“U” Stamp Division 2
ASME Power Boiler	“S” Stamp
ASME Pressure Piping	“PP” Stamp
NBBI Vessel Code	“R” Stamp
NBBI Vessel Code	“NBBI” Registered

PRESSURE VESSEL CAPABILITIES

Since 1972, TapcoEnpro has continually developed manufacturing processes which make us leaders in the design, fabrication, and inspection of pressure vessels for oil refining, petrochemical plants, fossil power plants, steel, and iron ore reduction plants. These facilities operate in severe conditions of pressure, temperature, and are subjected to hydrogen and corrosion attack. Pressure vessel applications supplied by TapcoEnpro include:

- Fractionation Towers
- Distillate Columns
- Vacuum Towers
- Amine Absorbers
- FCC Regenerator Vessels
- CCR Reactors
- FCC Reactor Vessels
- Splitter Columns
- Hydrotreaters
- Distillate Towers
- Caustic Scrubbers
- Coke Drums
- Hydrocrackers
- Isomerization Reactors

Since we have seen an increase of thickness, diameter, and weight of reactors/vessels for refining and petrochemical plant applications, TapcoEnpro has continued to grow and improve our manufacturing expertise and equipment to meet the demands of our customers.

FCCU EQUIPMENT

TapcoEnpro manufactures fabricated components for refining fluid catalytic cracking units. Products can be manufactured to accommodate cold shell or hot shell design installation with any type of refractory or hard-surfacing. All non-destructive examination (NDE) testing is performed at our facility in accordance with applicable standards.

- Regenerator / Reactors Heads
- Seal Pots
- Air Distributors
- Reactor Strippers
- Catalyst Hoppers
- Overhead Transfer Lines
- J-Bends / U-Bends
- Wye Sections
- Regenerator Standpipes
- Reactor Riser Lines
- Regenerator Riser Lines
- Steam Rings
- Feed Nozzles
- Plenums
- Catalyst Coolers
- Inlet / Outlet Nozzles
- Reactor Standpipes
- Critical Feed Nozzles
- Overhead Vapor Lines
- Pressure Piping

ENGINEERING SERVICES

Having an engineering and design staff with many years of diversified equipment application experience, TapcoEnpro provides much more than the standard vessel supplier. We use varying computerized engineering and drafting tools and other proprietary programs developed through TapcoEnpro's own research and experience to provide ASME code, seismic, wind, stress, deflection, thermal, and fluid flow calculations.

TapcoEnpro's design and engineering team has diversified backgrounds including engineering management, senior design engineering, vessel designing, and drafting. Our experience with a variety of projects and requirements has aided many of our customers in their project engineering and planning stages.

We continually upgrade our methods and procedures in order to utilize the latest technology and innovative application techniques available.

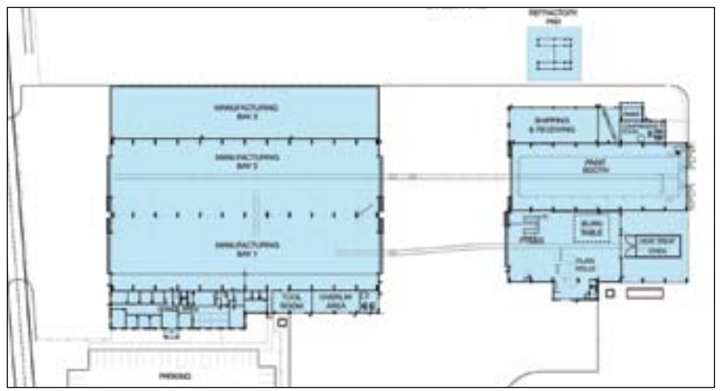
QUALITY ASSURANCE

Our quality system is designed to integrate the departments of our organization and increase each employee's contribution to the overall quality of our final product. The mission of TapcoEnpro is to maintain the highest level of customer satisfaction through continuous improvements in quality, delivery, and service in compliance with ISO9001:2008.

It is the responsibility of TapcoEnpro employees to assure efficient and effective operation of each phase of the quality control program.

CEDAR CROSSING FACILITY

The Cedar Crossing facility houses some of the most modern machining and fabrication equipment in the industry. Our goal is to provide the highest level of quality and engineering expertise to support customers in various processes and operations in the oil and gas, petrochemical, power, water, desalination, and chemical industries.



The facility provides our customers with continued improvement in technology, processes, and quality while providing the safest work environment available.

Our company's commitment to "on-time delivery" will support major projects throughout the world and help customers optimize plant uptime and develop ways to control operation costs.

CURTISS WRIGHT
Flow Control Company
TapcoEnpro

HEAVY FABRICATION MANUFACTURING

4123 W. Greenwood Road
Baytown, Texas 77523
Phone: 281-247-8100

VALVE MANUFACTURING

16315 Market Street
Channelview, Texas 77530
Phone: 281-247-8100

http://tapcoenpro.cwfc.com

Cedar Crossing Facility
Baytown, Texas USA

Printed in USA V02.03.12