

160 Years of Excellence

OVERVIEW

Struthers Wells, a division of Thermal Engineering International (USA) Inc., a Babcock Power Inc. company, has a long, successful history in designing and manufacturing fired heaters and heat recovery equipment for the extraction of heat from high temperature process or flue gas systems worldwide. Struthers Wells has supplied heat recovery equipment to many of the world's leading Chemical, Petrochemical, Petroleum and Power (including solar) providers to efficiently utilize the hot gases generated by process reactions during the production of chemicals and processes including:

- Ammonia
- Sulfur recovery
- Ethylene
- Fluid catalytic cracking
- Methanol
- Flue gas cooling
- Hydrogen
- Reactor effluent cooling
- Sulfuric acid
- Nitric acid



PRODUCTS AND SERVICES

Waste Heat Boilers

- Fire tube waste heat boilers
- Water tube waste heat boilers
- Kettle type reboilers

Process Gas Boiler (PGB)

- Reactor, hot process gas or a delayed coker

High Pressure Shell and Tube Heat Exchangers

- Breech-lock closures
- Diaphragm closures
- Confined solid metal gasket closures
 - Self-energized double cone closures

Fired Heaters

- Fuel gas heater skirts
- Thermal fluid systems
- Process furnaces
 - Heat pipe air preheaters

Once Through Heat Recovery Steam Generators (OTHRSG)

Thermal Fluid Heaters for Concentrated Solar Power (CSP) Projects

Molten Salt to Oil or Steam Heat Exchangers

Industrial Heat Recovery Steam Generators (HRSG) <20MW



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AN ESTABLISHED HISTORY

1851

Struthers Wells established in Warren, PA as a foundry and manufacturer for the agricultural industry

1859

Oil was discovered at Drake Well in Titusville, PA and Struthers Wells became involved as a designer and fabricator of process equipment for the oil industry

1908

Struthers Wells produced the first all-welded carbon steel pressure vessel

1940-1965

Struthers Wells achieved worldwide recognition as a designer and fabricator of process and energy related equipment including the following firsts:

- Developed the first forced circulation thermal fluid vaporizer
- Manufactured the first furnace used for thermal cracking of ethylene dichloride (EDC)
- Designed and built the first Once Through Steam Generator (OTSG) for enhanced oil recovery
- Developed a convective-only titanium tetrachloride (TiCl₄) preheater/boiler/superheater utilizing metal tubes in lieu of unwieldy quartz tubes

1994

The intellectual property of Struthers Wells was purchased by Struthers Industries, Inc.

2005

The intellectual property of Struthers Wells and Struthers Industries, Inc. was purchased by Thermal Engineering International (USA) Inc., Santa Fe Springs, CA, to form Struthers Wells

Struthers Wells also offers engineering solutions to provide technical support to your organization's existing heat exchanger needs, regardless of the OEM. Our technical capabilities cover a vast array of activities, including, but not limited to: repair, conceptual system redesign, replacement, diagnostic testing, performance analysis, cycle analysis, failure analysis, condition assessment, thermal & structural analysis, design optimization, finite element analysis, solid modeling, piping flexibility analysis, field modification evaluation, equipment re-rates, physical inspection, troubleshooting, and engineer & operator training.



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Thermal Engineering International (USA) Inc.
TEi-MSR Division
TEi-Struthers Services
Struthers Wells