



**OVER 160 YEARS OF EXCELLENCE**



Struthers Wells®, a TEI line of products, has an unparalleled reputation and 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. For more than 160 years, Struthers Wells® has been relied upon to supply heat recovery equipment to the world's leading chemical, petrochemical, petroleum and power (including solar) providers.

With Struthers Wells® proven technology and extensive expertise, providers are able 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
- Petroleum refining



## 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

- Thermal fluid systems
- Refinery Heaters
- EDC Furnaces

### Once Through Steam Generators (OTSG)

### Thermal Fluid Heaters for Concentrated Solar Power (CSP) Projects

### Molten Salt to Oil or

### Steam Heat Exchangers

### Industrial Heat Recovery Steam Generators (HRSG) <20MW



## ENGINEERING SOLUTIONS AND TECHNICAL SUPPORT

Struthers Wells® offers engineering solutions to provide technical support to your organization's existing heat exchanger needs, regardless of the OEM. Our vast array of technical capabilities include: 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.

### AN ESTABLISHED HISTORY

<b>1851</b>	Struthers Wells® established in Warren, PA as a foundry and manufacturer for the agricultural industry
<b>1859</b>	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
<b>1908</b>	Struthers Wells® produced the first all-welded carbon steel pressure vessel
<b>1940-1965</b>	Struthers Wells® achieved worldwide recognition as a designer and fabricator of process and energy related equipment including the following firsts: <ul style="list-style-type: none"> <li>■ Developed the first forced circulation thermal fluid vaporizer</li> <li>■ Manufactured the first furnace used for thermal cracking of ethylene dichloride (EDC)</li> <li>■ Designed and built the first Once Through Steam Generator (OTSG) for enhanced oil recovery</li> <li>■ Developed a convective-only titanium tetrachloride (TiCl4) preheater/boiler/ superheater utilizing metal tubes in lieu of unwieldy quartz tubes</li> </ul>
<b>1994</b>	The intellectual property of Struthers Wells® was purchased by Struthers Industries, Inc.
<b>2005</b>	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®



SAFETY® PEOPLE. POWER. PROJECTS.

We're giving safety the third degree.

Babcock Power Inc. and its subsidiaries place the safety, health and security of our people at the core of our company values. Our team is our most valuable resource, generating solutions everyday to deliver safe, clean, reliable energy globally. With a keen focus on safety, Babcock Power Inc. conducts business in a manner that protects our people, our customers and the environment. From innovation to generation, we are proud of our award-winning safety record and are committed to operating with integrity and excellence.

The data contained herein is solely for your information and is not offered, or to be construed, as a warranty or contractual responsibility.

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