Thomas Struthers 1803–1892

James C. Wells 1839–1890

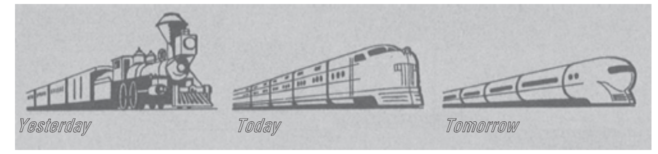
STRUTHERS WELLS CORPORATION

Struthers Wells Division WARREN, PA.

Titusville Iron Works Division TITUSVILLE, PA.

Titusville Forge Division TITUSVILLE, PA.

The Story of a **Notable** American Industrial Corporation



Richard Schuler 1956
Tim Sandberg 1964
John Bosko 1966
Richard Mancuso 1968
Patti Munch 1972
Bill Caldwell 1973
Merl Rice 1973
Dave Carlson 1973

Struthers Wells WARREN, PA.

1850 | 1860 | 1870 | 1880 | 1890 | 1900 | 1910 | 1920 | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2010

1851

Warren Foundry & machine shop established by W.F. Kingsbury on the banks of the Allegheny River by "remodeling the mills known as Stewart's Mills on the island opposite the Grist Mill in the Borough of Warren". Kingsbury employed local foundry men and machinists and began business. Even though he had to rely on uncertain water power, iron that was brought up the river on flat boats, and coal hauled all the way from Dunkirk, via Lake Erie, he was not deterred. He applied his knowledge vigorously and made his business prosper. Products included: plows, plow points, sleigh shoes & cast iron parts for flour and saw mills. Also a range of machining and repair services.

1854

Renamed Kingsbury & Brown

Some years after it's founding, W.F. Kingsbury retired and the company was taken over by Henry Brown & renamed Brown Brothers. Added steam engines & saw mill machinery to product lines.

1859

Drake well in Titusville becomes the first successful oil well in the world. Brown Brothers expands with new products: boilers, oil storage tanks, shell stills & gas engines.

1867

Henry Brown joined by L.W. Arnett & Thomas Struthers: the firm was known as Brown, Arnett & Co. and the plant became known as The Allegheny Iron Works. The new owners replaced the frame structure with brick buildings, improved the facilities and quickly increased the staff to over 200.

1868

Boilers, oil tanks, and oil stills were added to the product lines. This was the genesis of the widely known Struthers Wells pressure vessels.

1875

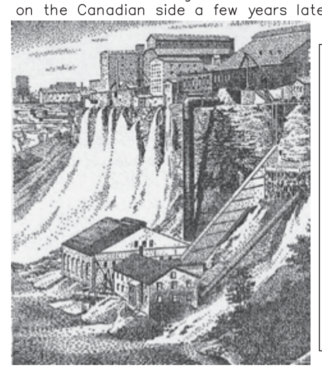
purchased by Thomas Struthers, James C. Wells, & Alex McKelvey: known as Struthers Wells. Expanded product lines: tubular, flue and locomotive boilers.

In early 1882, Thomas Struthers proposed to erect, at his own expense, a building suitable for the accommodation of a library, public rental spaces and a Public Hall. His offer was dependent on the citizens of Warren expressing their interest in the project by the purchase of a suitable site for the building. In June 1882, the chosen site was deeded to Thomas Struthers in consideration of $7,050 raised by the people of Warren and paid to the landowners. (He wanted to build a local opera house – the problem was that most people in town looked askance at an entertainment emporium, so he named it the "Struthers Library Building"). It was an historic triple play. Warren eventually ended up with a beautiful opera house, a substantial post office, and a terrific library.

A period of firsts. Although by no means the largest of steel fabricating plants, it had many famous "firsts" to it's credit. It had been one of the pioneers in using pneumatic hammers in making boilers. It had already acheived a leading position in the manufacture of gas engines.

1898

Produced the first penstock on the American side of Niagara Falls and the first on the Canadian side a few years later.



1902

incorporated as Struthers Wells Company

Shortly after it's incorporation it began the manufacture of wood alcohol distillation equipment and became the leading concern in the country in that line. It was among the first to employ oxy-acetylene welding in 1907. Shortly afterward it began to use the electric method welding.

1908

Produced the first all-welded carbon steel pressure vessel in the U.S., followed by the first all-welded stainless steel pressure vessel several years later.

Bought by the Dillon Group

S.W. was one of the first companies to forsee the need of heat treating welded vessels and following the merger in 1928 began installation of the necessary equipment. A car type furnace was constructed, the floor of the car being the bottom of the furnace. Heated by gas, the furnace was 87 feet long, 14 feet wide, and 16 feet high. The furnace operated with a maximum temperature of 2150 F.

In the middle 1920's, Struthers Wells hired a number of design engineers experienced in the petroleum refining field from Smith Engineering in Kansas City; entering the contracting field as a designer and installer of small refinery crude distillation and cracking units. This represented the start of it's exposure to the design of process equipment such as heat exchangers, distillation towers, waste heat boilers, and process furnaces.

1928

Titusville Iron Works Co., Titusville Forge Co., and Struthers Wells Co. merge to become Struthers Wells–Titusville Corporation

1937

Designed and fabricated it's first feedwater heater for the utility industry.

Developed the first forced circulation thermal fluid vaporizer. Manufactured the first furnace used for thermal cracking of ethylene dichloride (EDC)

1942

name changed to Struthers Wells Corporation

S.W. pioneers the forced circulation Dowtherm A vaporizer.

The three plant complex (1 in Warren & 2 in Titusville) continued intact for over thirty years

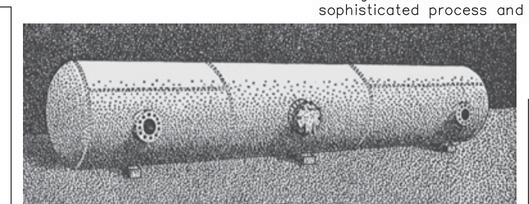
1955

S.W. develops the radiant-wall furnace. This design has since become the world wide standard.

1959

S.W. develops it's MULTIWALL laminated shell construction for use in high pressure vessels for use at missile silos.

The 1940 to 1965 period was the time of almost complete transformation for the Warren facility wherein it achieved world-wide recognition as a designer and fabricator of performance warranted sophisticated process and energy related equipment.



The use of welding instead of riveting made better pressure vessels possible. Struthers Wells quickly grasped the possibilities of the new method. The first all-welded pressure vessel built by Struthers Wells in 1908. It was 7 feet in diameter, 29 feet 9 inches long. This equipment is still operating at Forest Products Laboratory in Wisconsin. [1944]

In the late 1950's, Struthers Wells formed Struthers Scientific & International Corporation

1960

S.W. develops it's once through 80% quality steam generator (OTSG) design for use in the thermal enhanced recovery of heavy or highly paraffinic crude oils. Sold over 2000 units worldwide prior to sale of product line to Babcock & Wilcox in 1986.

1962

Designed and built the first once through steam generator (OTSG) for enhanced oil recovery.

1964

Struthers Thermo-Flood Corporation formed

The company has expanded to include plants in Titusville, Pa., Gulport, Miss., and Winfield, Kansas, with operations of the four plants coordinated centrally at Struthers Wells Nuclear and Process Company in Warren, Pa.

In the middle 1940's, Struthers Wells at Warren added crystallizers to it's product line by hiring the Norwegian developer of the Oslo Type Crystallizer. This addition gave S.W. an entry into the mineral processing and chemical separation fields.

In the middle 1960's, Struthers Wells formed Struthers Wells Gulfport, Inc. with a fabricating plant in Gulfport, Mississippi

During WWII, S.W. participated heavily in the defense program fabricating hundreds of heat exchangers and condensers for Liberty Ships. It also made coolers, condensers, heaters of special design and evaporators that went into U.S. Navy battleships, cruisers, destroyers and Maritime Commission cargo ships. Also: gun barrels, crankshafts for diesel engines, destroyer and submarine shafting, cylinders and plungers for aircraft carriers, rotors for turbines, reduction gear cases, etc., etc.

1976

Struthers Wells Corp.: Struthers Wells offices & plant in Warren, Pa., Struthers Thermo-Flood offices & plant in Winfield, Kansas with a field service office in Bakersfield, Ca., Struthers Scientific & International Corp. in Warren, Pa. & Paris, France. Struthers Wells Gulfport offices & plant in Gulfport, Mississippi.

1986

restructuring & sale of subsidiaries named Struthers Wells Industries

1993

closure of Warren Plant & Chapter 11 bankruptcy

1994

Shop machinery auctioned off & shop buildings sold. On July 1, intellectual property with assets and ongoing business of S.W. were sold to Struthers Industries, Inc. of Gulfport, Mississippi, a former subsidiary of Struthers Wells

At the time of the restructuring program, S.W. had a large backlog of contracts for marine nuclear components, and the decision was made to concentrate the capacity in this area. As a result S.W. was inactive for several years in soliciting inquires on industrial products for fabrication in the Warren shop. Later...due to substantial reductions in the national defense budget, sharp decreases in the number of defense contracts ensued.

2005

Intellectual property assets purchased by Thermal Engineering International (a subsidiary of Babcock Power) & renamed TEi–Struthers Wells with offices in Warren, Pa., & Houston, Tx.

April 12 2013

Closure of Struthers Wells Warren office. 162 years of continuous service in the Warren/Titusville area comes to an end.

The Future? Plans are underway to consolidate the engineering offices in Louisville, Kentucky; hiring new staff to replace losses from the Warren & Houston offices. Houston will remain open as the sales office. Fabricating plants in Joplin, MO., & Sapulpa, OK.

SNAP NEWS

THIS NEWSLETTER IS PUBLISHED BY Struthers FOR ITS EMPLOYEES, FAMILIES AND FRIENDS

AN EQUAL OPPORTUNITY EMPLOYER

VOL. 6, NO. 1 | SPRING ISSUE | 1978

Struthers Awarded Large Soviet Contract

By J. P. FANARITIS

At 11:46 P.M. Moscow time on March 23rd, I made the last signature on the contract that was to represent the largest single order ever received by Struthers in its 127-year-old history. The contract signing culminated 14 months of intensive technical and commercial negotiations, and was accomplished on my eleventh trip to Moscow. It would confirm that eleven is indeed a lucky number.

Struthers newsletter published for many years

By the mid 1980's, severely depressed markets for it's products plus the sale of it's Struthers Oil & Gas subsidiary, the latter a limited partnership corp. for oil & gas exploration and drilling which was sold at a significant loss, had placed S.W. in a serious debt position with it's principle bank. The resultant restructuring included the following: sale of Struthers Thermo-Flood Corp., including the offices & plant, plus the rights to oil field steam generators and gas turbine waste heat boilers. Sale of Struthers Wells–Gulfport, including the offices & plant, plus the rights to low and medium pressure shell and tube heat exchangers and electric utility feedwater heaters and auxiliary cooling heat exchangers. Sale of the Paris operation of Struthers Scientific & International Corp. including the rights to crystallizers.

The historic Struthers Library, Post Office, & Theatre in 1907

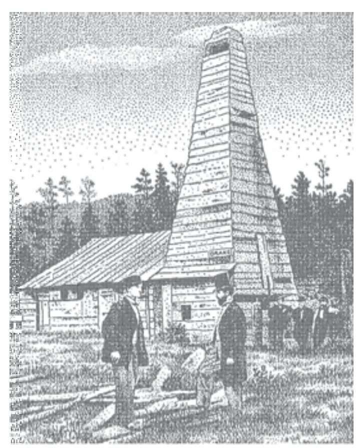
Inside the Struthers Library Theatre

MILESTONES: Dec. 3, 1883: Library Hall opens, with the opera "Iolanthe" as the entertainment.

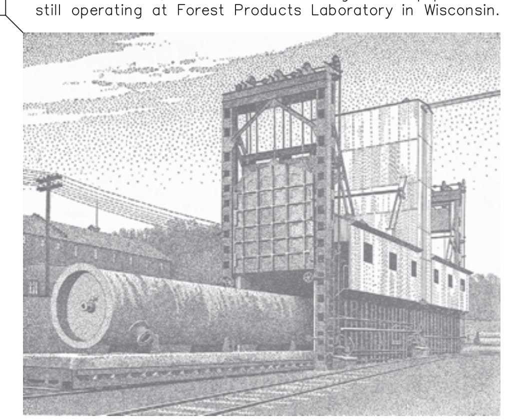
Nov. 10, 1919: The new Library Theatre opens after a complete gutting and remodeling of the auditorium, with a popular Broadway play "My Lady Friends" starring Clifton Crawford on the evening's program.

Oct. 15, 1983: The Library Theatre celebrates an extensive renovation and its 100th birthday with a Gala Re-Opening featuring a varied program with jazz pianist George Shearing, classical pianist Eugene List, opera singers Julia Lovett and James Sergi, a professional dance company, and a bagpipe and drum band.

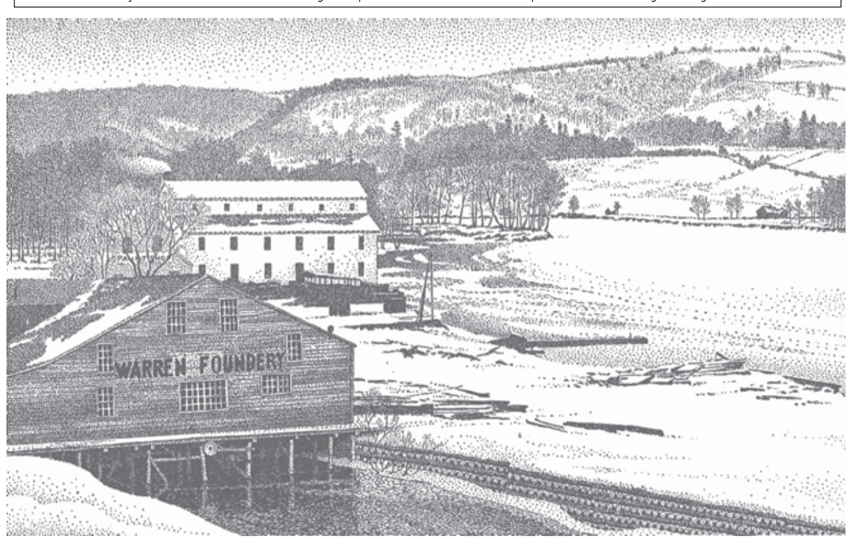
1984: The Library Room is restored to its original splendor and outfitted for special events and gatherings.



The famous first Drake oil well was drilled 'within a year and a mile' of the Titusville Iron Works.

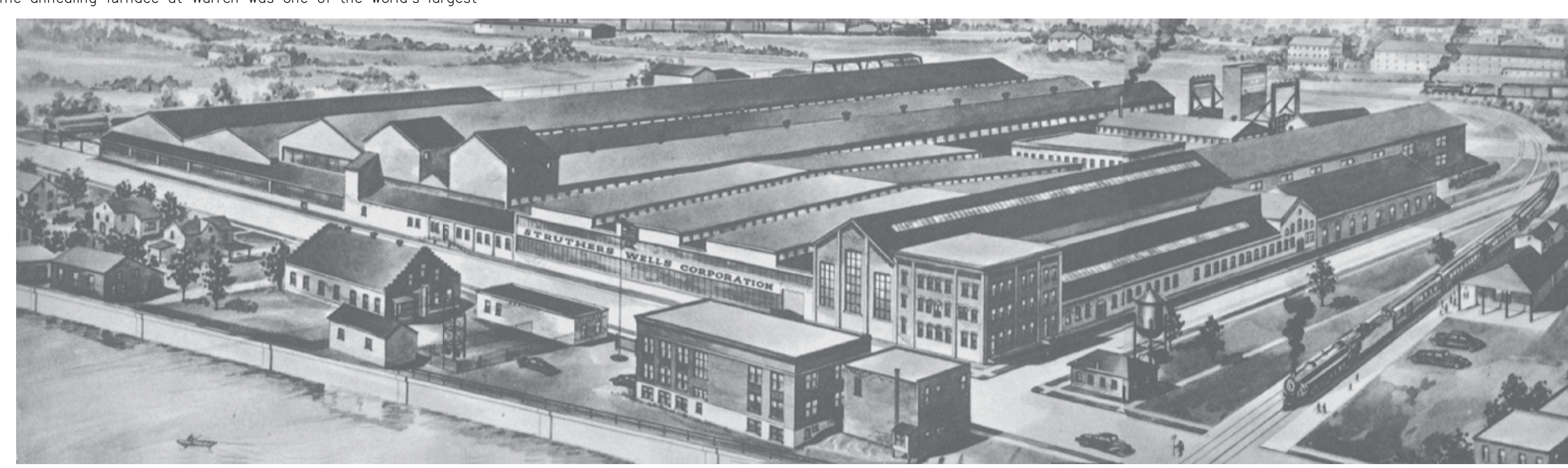


The annealing furnace at Warren was one of the world's largest



The Warren shop where W.F. Kingsbury began business in 1851

This shop, built in 1856, occupied a small part of the land on which the large plant was later built.



The Warren Division of Struthers Wells Corporation in the early 1940's

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