CHANUTE

Strategic Solutions

Custom Design and Fabrication

Total Quality

INTRODUCTION

Chanute Manufacturing is a unit of Optimus Industries LLC, a privately held manufacturing and engineering company headquartered in Tulsa, Oklahoma. Chanute Manufacturing (Chanute) has served the power and process industries since the 1960's and was purchased by Optimus in 1986. As Chanute has grown to be one of the largest domestic fabricators of heat recovery steam generators and related steam generation products, the goal has always been to provide quality workmanship at competitive prices. A highly experienced fabrication, engineering, estimating, and sales staff can service any size project. The commitment to excellence, customer satisfaction, and quality workmanship is the cornerstone of Chanute's reputation.

The company is divided into four operating units:

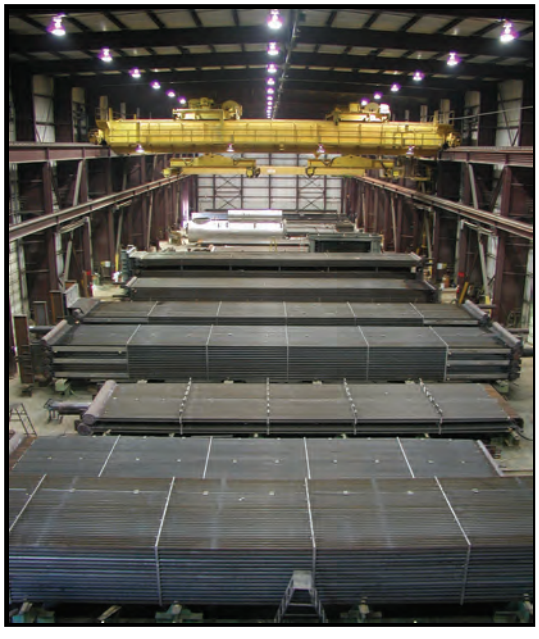
* **Chanute Manufacturing Company** is the largest domestic contract fabricator of heat recovery products including heat recovery steam generators (HRSG's), industrial packaged boilers, and related steam generation products.

* **Chanute Tubular Services (CTS)** provides aftermarket tubular products to the utility and industrial boiler industries.

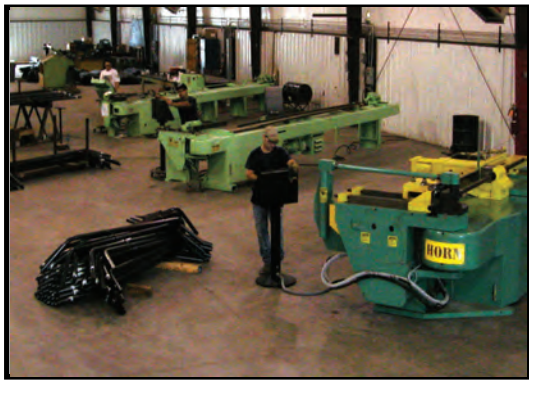
* **CFT, LLC** is a joint venture company producing spiral wound, high frequency welded fintubes.

* **Optimus Engineered Products Group** designs custom waste heat recovery boilers, economizers, superheaters, and related heat recovery components.

Chanute Manufacturing Company



Chanute Manufacturing Interior View



Chanute Tubular Services

Chanute Manufacturing's Final Assembly Building, with 200 Ton Lifting Capacity

CONTRACT FABRICATION

Chanute Manufacturing Company fabricates a variety of heat transfer equipment on a contract basis for the power generation and petrochemical industries. Products manufactured by Chanute include heat recovery steam generators (HRSG's), industrial watertube and firetube boilers, boiler drums/pressure vessels, economizers, superheaters, and similar heat recovery products.

Chanute Manufacturing is located in Chanute, KS and has approximately 200,000 SF of high bay manufacturing facilities, located on 44 acres of land. This plant site is served by five rail spurs with a total of 7,600 feet of track on the property. Manufacturing areas are served by 22 overhead cranes with capacities up to 200 tons and 35 foot hook heights. Annual capacity of the plant is in excess of 350,000 manhours.

HRSG Evaporator Coil

Chanute Manufacturing has been involved in some of the earliest and largest HRSG projects in the country. Chanute has developed weld procedures for a wide variety of materials and material combinations. Chanute Manufacturing has the capability and experience to meet the most demanding and unique customer specifications.

PRODUCTION CONTROL

Superheater Coil

To meet the short cycle times inherent in the power generation industry, Chanute has developed a comprehensive short interval production control system. Each project is broken into tasks by component and department and a critical path schedule is developed. The system's reporting features include detailed manufacturing budgets broken into tasks by component and department, daily reporting of actual against each task, weekly reporting of actual versus estimated by task and department,

equipment resource allocations, and project critical path schedules. This detailed approach to scheduling allows Chanute to maintain critical delivery dates and confidently forecast long-term capacity and manpower requirements. The production management system is on a plant-wide network allowing project managers to provide detailed progress reports to customers as often as requested.

QUALITY ASSURANCE

Chanute's manufacturing facilities are ASME certified to Section I - Power Boilers, Section VIII - Pressure Vessels, and ANSI/ASME B31.1 - Power Piping. Chanute Manufacturing holds "S", "U", "PP" and "R" stamps.

The quality system meets the elements set forth in ISO 9001 guidelines. All manufacturing processes are monitored by Quality Assurance and the results of such inspections are recorded on travelers, which are available for review. All inspection procedures and tests are documented and audited annually. Non-conformance materials are identified, segregated, and their disposition recorded. Calibration and recalibration procedures are in place and the calibration records are available for review. Vendor survey and approved vendor lists exist as well as procedures and documentation to track customer-supplied materials.

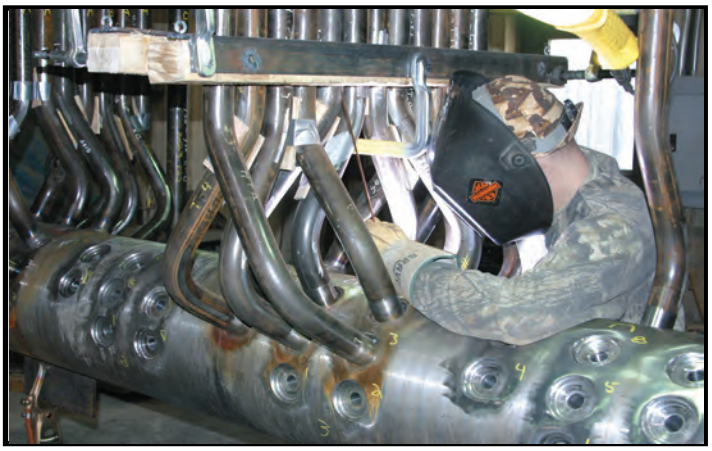
The quality staff includes Certified Weld Inspectors (CWI) and inspectors who are Level II certified for MT, PT, and RT inspection. Chanute Manufacturing has a variety of nondestructive test equipment including radiograph and automatic film processing, dye penetrate and magnetic inspection equipment, helium leak detection, nuclear chemical analyzer, and ultrasonic test equipment.

Packaged Boiler Fabrication

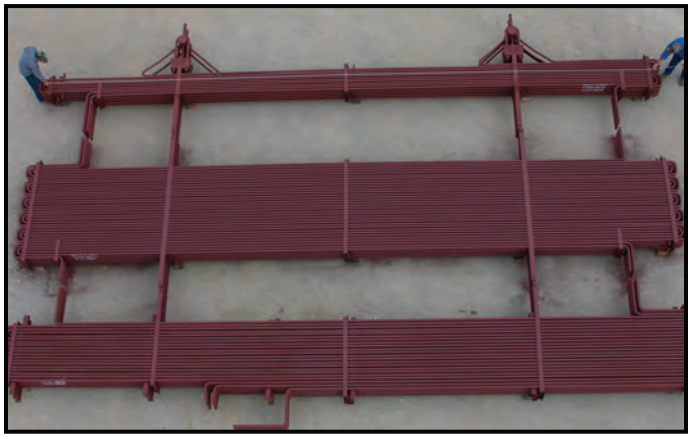
Pressure Vessel Fabrication

HRSG Fabrication

Chanute Tubu



Header Fabrication



Economizer Elements

The Chanute Tubular Services division, CTS, was formed in 2003 to utilize the company's steam generator manufacturing experience and capability in the utility boiler component aftermarket. CTS specializes in the supply of superheaters, reheater and economizer elements, headers, and small membrane panels, such as over-fire air and camera ports.

Chanute's power generation manufacturing experience and size uniquely positions CTS to provide a wide range of products and services. Whether the requirement is for smaller components on a fast track basis to meet an unplanned outage or large replacement projects to meet planned outages, Chanute has the knowledge and resources to ensure a successful outage completion.

As an independent manufacturer, CTS serves both end users and OEM's with the same level of commitment. That commitment is to provide the highest quality fabrication and the most dependable delivery in the industry.

Superheater Coil

ular Services

CTS Products

- Superheater and reheater elements
- Economizer elements (bare tube, longitudinal fin or spiral fin)
- Headers (from carbon steel through SA213-P91)
- Overfire air panels and auxiliary equipment ports
- 360° spiral tube overlay or metallizing

CTS Capabilities

- Cold bending up to 6" diameter
- 1D cold bending
- Induction hot bending
- Tube swaging up to 3 ½" diameter
- Auto-tig welding
- Extensive welding experience with T11, T22, T91, 330 & 400 series stainless & inconel
- Headers up to 6” wall thickness

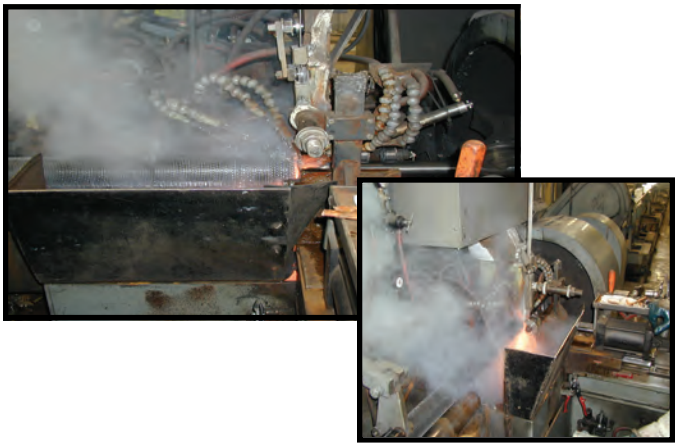
Header Assembly

HTSH Header

Hot Bending

Reheater Header

Fin Machine Operation at CFT



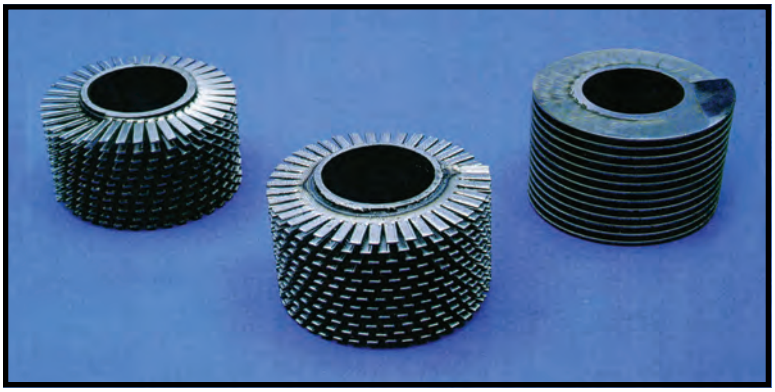
High Frequency Resistance Welding Fin Machine

CFT, LLC

In 1992, the shareholders of Optimus and Tulsa Fin Tube (TFT) formed CFT to manufacture resistance welded fintubes. CFT's manufacturing facility is located adjacent to Chanute Manufacturing's plant.

Fintubes are a major component on many heat recovery systems. The close proximity of the finning operation and the manufacturing plant allows significant savings in packaging and freight as well as a working capital reduction as a result of "just-in-time" scheduling.

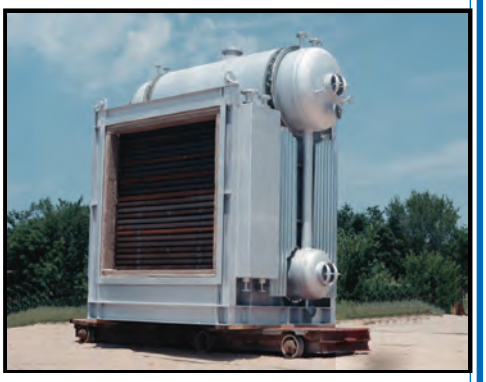
Fintubes are produced to customer specifications on high frequency resistance welding machines. The fin, either solid or serrated, in carbon, alloy, or stainless steel is helically wound around the tube and resistance welded. Bending, on the bare tube or over the fin, is performed on-site with custom designed duplex benders.



Serrated and Solid Fintubes

2-Pass Sulfur Recovery Boiler

Waste Heat Firetube Boiler

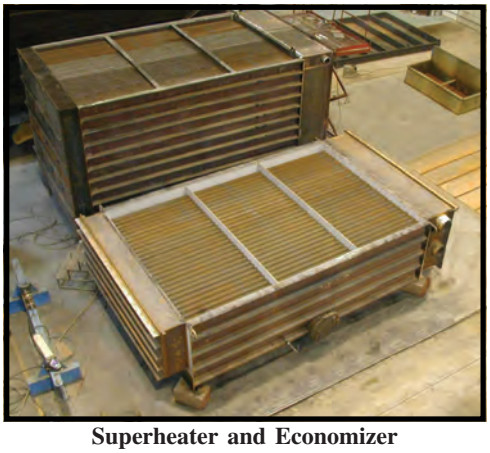


Waste Heat Watertube Boiler
and Economizer

OPTIMUS ENGINEERED PRODUCTS GROUP

Optimus Engineered Products Group (OEP) capitalizes on Chanute's manufacturing expertise to offer customized solutions and specialized applications. OEP can custom design or modify existing heat transfer equipment. OEP has extensive experience in firetube and watertube boilers, superheaters, and economizers. The boilers are designed and constructed to Section I and Section VIII of the ASME Code for Power Boilers. As all OEP projects are built by Chanute Manufacturing, the OEP engineers and project managers work closely with manufacturing personnel to deliver the superior product and service the customer expects.

Waste Heat Watertube Boiler



Superheater and Economizer
for a Sulfuric Acid Plant

Incinerator Waste Heat Watertube Boiler

TO THE CUSTOMER

Chanute's goal is to be the global leader in the manufacture of industrial heat recovery equipment. Chanute creates value by finding strategic solutions that contribute to the success of its customers. Through a philosophy of continuous improvement, the objective is to supply heat recovery equipment using the highest quality materials, skilled craftsmen, and state-of-the-art processes. It is policy to assure that each piece of equipment is completed in a manner that is totally satisfactory to customers. Customers can rely on Chanute to deliver on its commitments.

CUSTOMER LIST

Aalborg Industries
ABB Lummas Heat Transfer
Alliant Energy
American Electric Power
Alstom Power
Ameren
Applied Utility Systems
Arizona Public Service
Babcock & Wilcox
Basin Electric
Bayway Refining
Bechtel
Black & Veatch Pritchard
Boiler Tubes of Texas
BP Amoco
Bremco
Callidus Technologies
Calpine
Calumet Lubricant
Central Arkansas Welding
Central Maintenance and Welding
Clyde Bergemann
CMI/EPTI
Conoco Phillips
Covanta
Deltak
Doosan Power Systems
Duke Energy
DuPont
Enerfab
Energy Recovery International
Equilon Enterprises
Florida Power and Light
Foster Wheeler Corporation
Gemma Power
General Electric
Goodrich
Holman Boiler Works
Hovensa
HRST, Inc.
Indeck Keystone
Indeck Power
John Zink
Kansas City Power & Light
Knopke Company
Los Angeles Dept. of Water and Power
Mallinkrodt
McBurney
Mirant
Monsanto Enviro-Chem Systems
Mosaic Company
Motiva Enterprises
Namhae Chemical-Korea
Nebraska Boiler
Nooter Construction
Nooter/Eriksen
NRG Energy
Ohio Valley Electric Company
Omaha Public Power District
PacifiCorp
Pasco Cogen
PCS Phosphate Company
Primary Energy
Quimica Fluor
Rhodia
Rhone-Poulenc
Rohm and Haas
Solar Gas Turbines
Siemens
Southeastern Mechanical Services
Southern Company
Southern States Chemical
Steam Generation Corporation
Total Western
Vogt Power International
Wabash Power Equipment Co.
Westar Energy
Xcel Energy
Zeeco

Chanute Heat Recovery Products

70 ft HRSG Module

Packaged O Boiler

HRSG Casing & Module Installation

Sulfur Reactor Furnace

Waste Heat Firetube Boiler

Overlaid Superheater Coil

250,000 lb/hr Packaged Boiler with Schnabel Car Transportation System

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