THERMATOOL
An Inductotherm Group Company

Engineered Structural Section Production Lines

Standard & Specialized Structural Sections Produced with Lean Manufacturing Principles

For more information, call 203/468-4100, email: thermatool@ttool.com or visit www.thermatool.com

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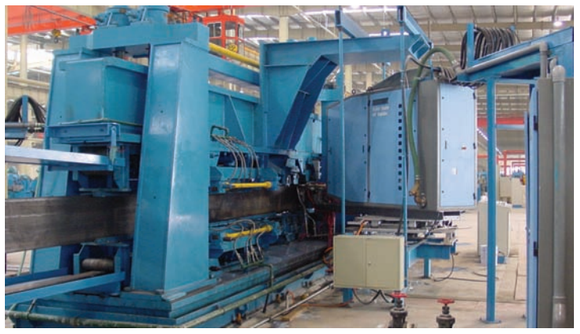

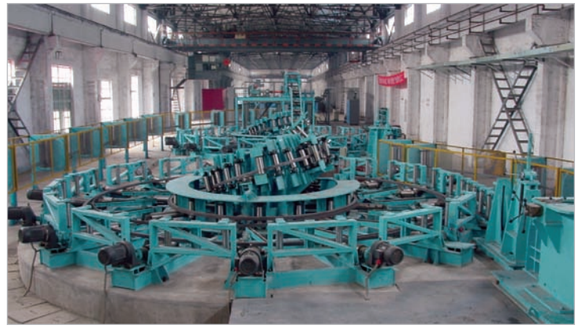

THERMATOOL ESS HISTORY

The birthplace of high frequency welded beam production lines, Thermatool Corp., continues to pursue alternative structural processes. Over time, many new and innovative I-Beam sections have been designed and manufactured for various applications. For this reason, Thermatool now uses the phrase “Engineered Structural Sections” to define what is commonly known as a **welded “I Beam”**.

With the advent of new steel chemistries and improved flat rolled technologies, a new era in engineered structural section production has begun to meet the demands of ever-changing architecture.

Until recently, the ability to purchase structural sections has been limited to the standard catalog of symmetrical shapes and sizes that are practical to produce by rolling ingot metal to the required shape while red hot.

Today designers, architects, engineers and manufacturers are looking for new ways to lower costs, improve product performance, and reduce lead times.

HIGH FREQUENCY CONTACT WELDING

The use of solid state, high frequency contact technology to heat and subsequently forge weld engineered structural shapes at high speeds with maximum precision and strength, enables the production of a virtually unlimited selection of custom beam profiles.

- Achieve highest power cost savings with the contact welding process.
- Engineered structural custom beam sections can be delivered cut to length.
- The cost of an ESS system is considerably less than a hot rolling mill.
- Flexibility to change the sizes of the beam to meet various requirements.
- Enhanced ability to meet shorter lead times.

ULTIMATE PROCESS CONTROL

The forge weld, considered by most to be the strongest weld available, is accomplished through Thermatool's HCT **HAZControl Technology™**. The combination of selecting the right power and frequency gives structural sections producers the ability to successfully weld different materials including **Aluminum**, **Carbon Steel**, **Stainless Steel**, **Advanced High Strength Steel** and even **“Weathered" Steels**.

- Provides the welder operator the ability to select the optimum welding frequency at the console, and maintain it.
- Can broaden your product offering, significantly increase yields, and lower production costs.
- Ability to store and retrieve set up parameters, consistent repeatability, and flexibility to produce the best weld despite ever changing mill variables.
- Selectable Variable Frequency welders are now coupled with an operator friendly control system that enables the user to tailor weld parameters to your products and mill.

BENEFITS OF ESS WELDING LINES

The welded beam can be delivered cut to the required length, saving the end user scrap, cutting costs and beam splices, and making fit-up easier with less weld metal and labor time. Since many different beam configurations and sizes can be produced, the ESS welded beams find a wide range of applications and are very economical to use.

Another advantage of an ESS Welding Line is that the overall line **cost is considerably less than a hot rolling mill**. The smaller production tonnage of the ESS welding line makes it most suitable for small and medium size beam markets. The ESS welding line has the flexibility to change the sizes of beam to be produced to meet various requirements of many different sizes of beam in small quantities.

Welded beams offer improvements over "standard rolled" sections, with a **5 to 20% reduction in weight**. This means that welded beams can achieve the same strength as rolled beams with less weight.

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ESS Product Specifications

Model Number	ESR 500	ESR 150
Web	50 mm up to 100 mm	150 mm up to 500 mm
Flange	50 mm up to 100 mm	100 mm up to 300 mm
Thickness Range	1.5 mm up to 6.35 mm	3.0 mm up to 12.00 mm
Max Line Speed	40m/min	40m/min

Other Thermatool Applications

Thermatool provides innovative and cost-effective HF welding solutions for tube and pipe producers throughout the world. Best known for its CFI series solid-state HF induction welders, contact welders, dual welders and spiral fin welders, Thermatool has installed over 1400 solid-state HF welders… worldwide.

Offering the widest power range from 50kW to 2MW with welding frequencies from 120kHz to 800kHz, Thermatool welders are designed to satisfy the most demanding of tube and pipe welding applications.

- API® oil and gas pipe
- Structural/Mechanical tube
- Roll formed HF welded profiles
- Complex welded profiles
- Automotive tube
- Furniture tube
- Spiral fin tube
- Engineered structural sections

For The Most Reliable Return on Your Investment, Turn to Thermatool.

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