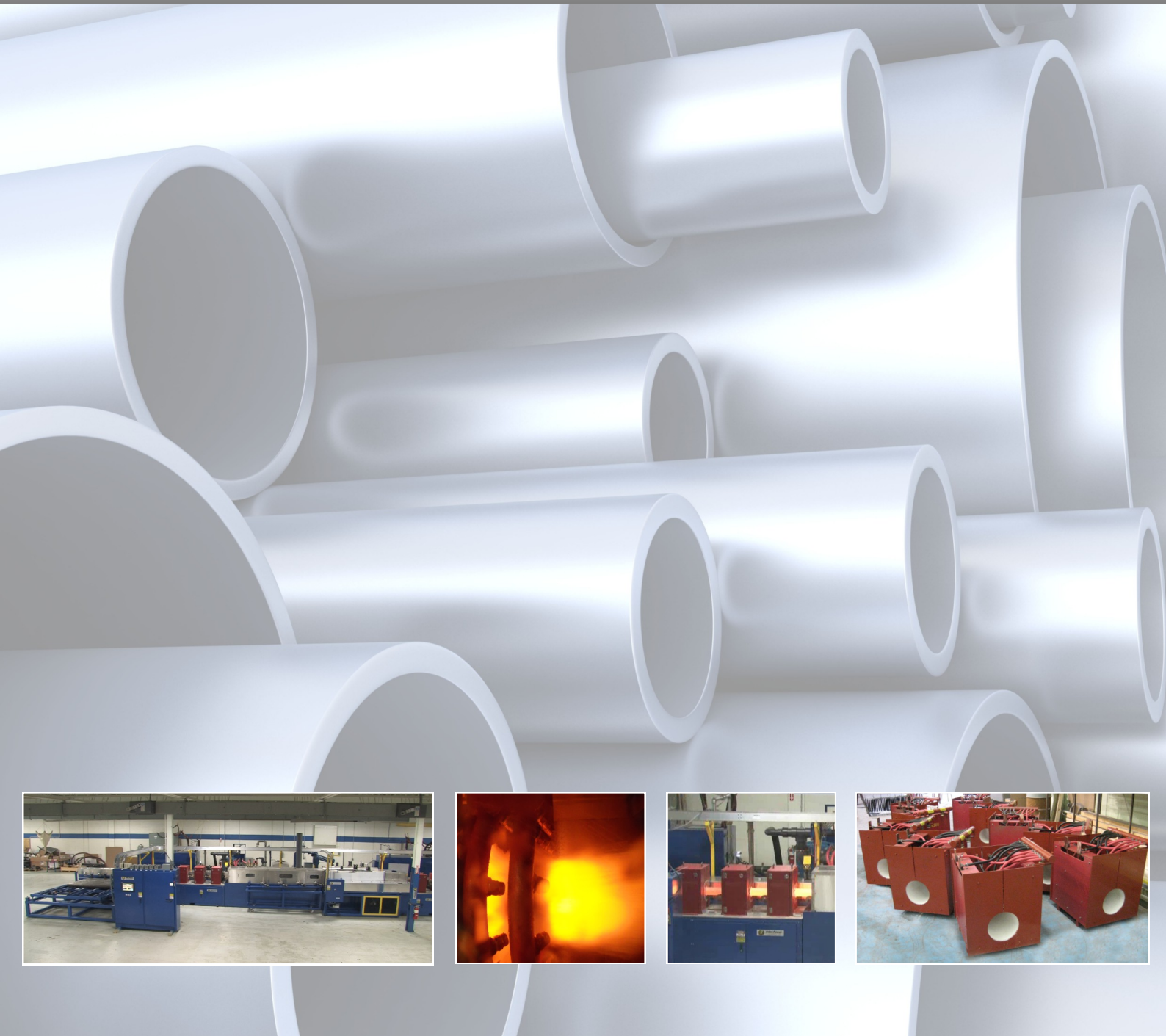
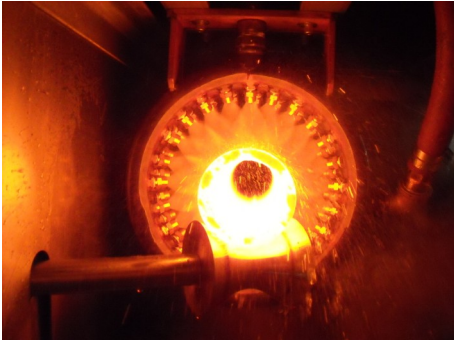


Tube and Wire



World Class Induction Heating Equipment

Introduction Interpower



Founded in 1995, Interpower Induction provides world class induction heating equipment and systems utilising the highest level of technology available and a personal service second to none. This unique combination of advanced induction technology and service is a competitive advantage built into everything we provide, giving you the customer the upper hand to compete in your industry.

With established manufacturing and service facilities in the USA and Europe, we are able to provide the full range of Interpower products and service worldwide.



With vast experience in the induction heating of tube and wire through annealing, hardening & tempering of both tube and wire as well as post weld heat treatment, we at Interpower are able to produce unique solutions to your individual heating requirements. From simple power supplies to complete turn key handling systems installed and commissioned on site, Interpower Induction is a company to be trusted in delivering the product to meet your needs.



Today, our worldwide customer base include end products within industries in forging, automotive including haulage vehicles, off road vehicles and public transport, wind turbines, aerospace, military, railroad, mining, marine, agricultural and hand tool manufacturing.

Applications to date include equipment for: forging; annealing; brazing; bending; bonding; curing; coating; coining; crystal growing; densification and sintering.



Interpower Inductions' highly experienced design and manufacturing team will be happy to discuss your direct needs. With a complete range of in house power supplies ranging from 5kW to 5000kW, Interpower Induction can support virtually any induction heating requirement you may have.

Interpower Induction Ltd

250 Lichfield Road • Brownhills WS8 6LH • UK
Phone: +44 1675-477-700 • Fax: +44 1675-470-645
Web: www.InterpowerEurope.com • Email: sales@InterpowerEurope.com

Interpower Induction USA

3578 Van Dyke • Almont, Michigan 48003 • USA
Phone: +1 810-798-9201 • Fax: +1 810-798-9301
Web: www.InterpowerInduction.com • Email: info@interpowerinduction.com

Interpower
INDUCTION

Power Link™

Energy Saving Power Supplies

Three words describe Interpower Induction Power-Link™ power supplies: RELIABLE. VERSATILE. AFFORDABLE. Inverters for fully integrated induction heating systems are custom-engineered to specific application requirements.

50Hz- 10kHz

Interpower Induction Mid-Frequency, current source, SCR power supplies are rated from 50 Hz through 10 kHz. Designed for continuous duty in harsh environments, these units are ideal for applications including forging, hot shearing, bar end heating and melting.

1 kHz- 100kHz

Interpower Induction High frequency, transistorised power supplies have power ratings of from 10 to 200 kW in a frequency range of 1 to 100 kHz. These versatile inverters support a variety of process heating applications, including general heat-treating, brazing, forming, and drying/curing operations.

150kHz-400kHz

Interpower Induction radio frequency power supplies are rated from 150 to 400 kHz. They can be configured to deliver 5, 7.5, 12.5, or 25 kW output power and are ideal for heating small diameter parts.

The Advantages Interpower Power-Link™ offer are:

Variable Frequency

The power supplies are designed for a range of frequencies with the operating frequency fixed only by the process, coil design and capacitor bank.

Reliable IGBT Technology

IGBT devices allow switch off at any point in the AC sine wave and does not need to switch crossing 0, this makes the IGBT a more reliable choice than thyristors.

Energy Efficiency Through Constant Power Factor of 0.95

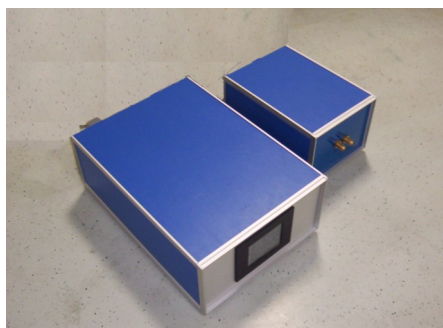
The power control stage of the power supply is critical to energy efficiency. Most power supplies achieve power factors of 0.95 approaching full load. Using the IGBT technology we maintain 0.95 power factor throughout the full range of the load, only paying for the power actually used.

Multiple Control Strategy Giving Better Process Control

The power supplies are designed to be controlled by either Volts, Amps or Power. This allows the operator to choose the best method for the process depending on the type of load applied.

Zone Control

Individual COIL CONTROL instead of one large power supply connected to a multi-coil line. Power can be managed with a high power distribution as required to provide the best heating profile allowing for ideal surface-to-core uniformity and the highest efficiencies available on the market today.



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Induction & Hybrid



Induction and Hybrid Heating Systems

There are generally agreed advantages and disadvantages to gas furnace and induction. Interpower is in a unique position to offer a third heating strategy that incorporates the best of both technologies and mitigates the disadvantages of both – The Hybrid Heating System. The benefits include improved metallurgy, greater flexibility, higher production and reduced operational cost.

The following profiles the key properties of a Hybrid System:

Heat Treatment of Casing and Tubing to Harden/Temper/Normalise/Anneal Optimum Heat

The intended product mix is perhaps the most critical of many factors that impact the profitability and effectiveness of heating solutions. All systems are typically capable of high volume processing of similar product.

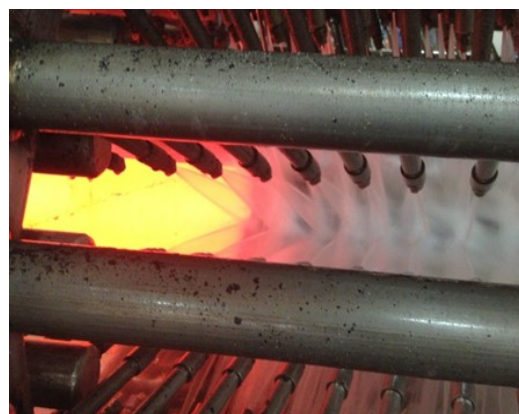
Interpower's strength grows when there is a need to offer a variety of OCTG (Oil Country Tubular Goods) products or adapt to changing market demand. Our induction heaters are inherently flexible in this way. The hybrid alternative is similarly adaptable while ensuring superior metallurgical results.

Dynamic Quench

There is no need to slow production to achieve a change in quench profile. Interpower offers the ability to set the flow and pressure in different zones from the control desk. This ensures the correct heat transfer for each size and grade of pipe.

Advanced Controls

The benefits of our exceptional heating and quenching systems are further enabled through advanced controls. Heating and quenching recipes are based on established models and refined through experience. Trending errors are easily observed and corrected on the fly. Data is collected on critical parameters and customers can see the process their product went through. Diagnostic assistance minimises downtime.



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Heating Systems

Retrofit

Adding induction preheat to existing gas furnaces has proven benefits in both energy savings and increased productivity. A company recently installed Interpower induction systems prior to its sensitizing and tempering furnaces. After the install, they achieved a 50% increase in production while improving its metallurgical homogeneity and straightness. In addition, there were significant savings in energy costs

Line Pipe Coating – Dry and Coat

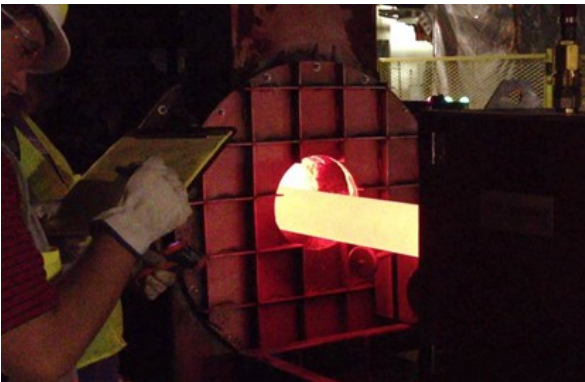
The rapid heat from induction is ideally suited to drying line pipe prior to shot blast and for preheat to cure fusion bonded epoxy and other coatings. One pipe is sufficient to set the system and coating can begin on the second, ensuring rapid start up. The low air temperature allows for low melting point pipe connectors to mask pipe ends safely and the absence of flame improves the safety close to the powder coating booth. Interpower offers systems for on-shore line pipe coating and bend coating.

Pipe Upset – Preheat

An Interpower pipe end heater rapidly and efficiently provides the temperature profile necessary for an accurate upset without excessive heating of the surrounding environment. Systems for medium and high volume production are available.

Pipe Handling/Material Handling

Interpower has capabilities for all material handling components for pipe processing with or without associated heat or quench systems. This includes loading tables, transfer mechanisms, walking beam conveyors, driven skewed roller conveyors, cooling tables etc. We will customise it to fit your space.



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Sign Link



Interpower Induction is the leader in equipment for monitoring induction heat treating processes. Interpower began production of the *Sign-Link*® signature monitoring systems 15 years ago and is now on its fourth generation of product. The general operation of this monitor allows the user to maintain quality standards by looking at the heating process in real time for the full extent of the process. This product differs from traditional and competitive products because it monitors the *signature* of the process in real time AT THE COIL, rather than a pass or fail based on compiled data averages at the power supply.

The way it works is that the monitor is “taught” what a good part signature is, and this is called the “master” signature. Once a master signature is made, all other parts that are processed will be compared against the master in real time. If a section of time falls out of specification during the heat process, the monitor will notify the user of the discrepancy. The *Sign-Link*® system is now operating on over 200 induction heat-treating machines in a variety of applications. The system helps companies comply with quality programs such as ISO 9001 and QS-9000

Although sophisticated, the monitor is user friendly. The software is written to be powerful yet straight forward. From the main menu, the user has the choice to go to parameters and retrieve an existing signature or “Learn” a new signature. Once the monitor is in the “Learn mode,” the user will heat treat a part and verify that the part is within the proper specifications. If the part is good, the signature is good and it is saved. If the part is not good, then the monitor will relearn the signature of the next cycle until a good part has been produced. When a good part has been produced, that signature will now become the “Master” that all other parts will be compared against.

The *Sign-Link* 4.0 Signature Monitor is the next generation of quality monitors based on a technique that was developed by Interpower Corporation. The new quality monitoring system is specifically designed for induction heat-treating processes and Forging. The system can monitor the most critical parameters in heating: Volts/Amps/Kilowatts, Quench Flow, Quench Temperature and part rotation if required. This model monitor contains electronics developed by Interpower that allow the user to connect directly to the induction-heating coil. Tests have proven that gathering the signal at the coil provides the most accurate and sensitive signal for detection of problems.

Once a signature is learned, it is shown graphically with an axis for V/A/KW verses time. In addition, all data can be logged to the file name that is chosen. This data includes part number, part name, Pass/Fail Status, Quench Flow, Quench Temp, Part Rotation, Time, Date, and all signature intervals. Of course, the system has password protection capability. The monitor utilizes a color touch screen for an operator interface. The system contains an industrial PC. For ease of file transfer, Interpower supplies the system capable of communicating via Ethernet.

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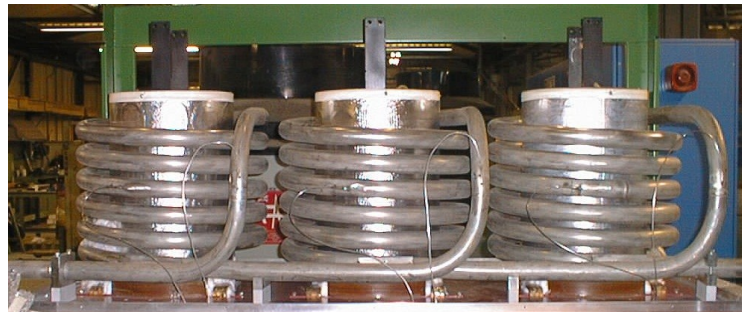
Melting Solutions

In 2012, Interpower Corporation acquired the UK company Melting Solutions who are a leading manufacturer of specialised heating, melting and material processing equipment. Formally trading under the name of IPW (Induction Processes Worldwide), the business has over 30 years of experience offering customers new equipment, upgrading of existing plant, design studies, consultancy and manufacturing within a variety of industries, Melting Solutions' portfolio has allowed Interpower to expand its business into new markets worldwide.

With induction heating alone, the back catalogue of products manufactured cover a vast array of industries including Aerospace, Petrochemical, Food, Pharmaceutical, Metals industry and Automotive to name a few. Melting Solutions offer heat treatment and product heating in a variety of ways using induction.

Examples of the equipment designed, manufactured and / or serviced to date include:

- Vessel Heaters – Continuous and batch heating
- Fluid Heaters – Continuous and batch heating
- Wire line equipment – heat treatment
- Electromagnetic Stirrers – Molten metal processing



Additional equipment includes machines for the aluminium extrusion industry including billet heaters, patented narrow cut log saws and friction stir welders that utilize a friction stir process to provide continuous billets.

Outside of the induction industry, Melting Solutions has a vast knowledge of gas and oil fired heating and melting within the aluminium industry offering complete secondary melting plants including tilt rotary furnaces, reverberatory and holding furnaces as well as casting machines to deliver efficient processing of aluminium dross and scrap.

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Locations



Interpower Induction USA

3578 Van Dyke • Almont , Michigan 48003 • USA

Phone: +1 810-798-9201 • Fax: +1 810-798-9301

Web: www.InterpowerInduction.com • Email: info@InterpowerInduction.com



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