Thermal Tech & Temp

INDUCTION HEATING
EQUIPMENT & ACCESSORIES

- info@thermaltechtemp.com
- www.thermaltechtemp.com
- 1.800.674.9284

OUR STORY

ABOUT US

Thermal Tech & Temp Inc. has contributed to the heating industry for 20 years. We specialize in custom Induction Heating Equipment such as PWHT Blankets, Ovens, Furnaces, etc. We also custom fabricate induction accessories such as clamps, clam shells, and internal plugs. We take pride in the work we do by going to job sites and overseeing operations, just to make sure we are fitting the customer's needs.

Our determination doesn't end there. Thermal Tech & Temp Inc. is commited to achieving total customer satisfaction by delivering high quality, durable, and custom fabricated products.

You can find Thermal Tech & Temp Inc. on all of your social media platforms such as Facebook, Twitter, and Instagram. Feel free to give us a follow and stay up to date with our latest products and news! Our office is located in Crown Point, Indiana and can be reached at the locations listed below!

Stay in touch with us on our various social medias, shoot us an email, or give us a call!

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WELCOME

Purpose:
Education on Thermal Tech & Temp accessories and their use in conjuction with the Miller ProHeat 35, Induction machine.

Today's Topic:
Thermal Tech & Temp clamps and clam shells, portable ovens/furnaces, induction blankets, and internal induction plugs.

Presenter:
Bill Gomez, Thermal Tech & Temp INC.

Format:
Live, presentation and demo, Q&A to follow

WELCOME

Concept of Induction Heating

- Heats metal from just below the surface
- Generates electrical “eddy” currents
- Changes polarity thousands of times per second
- The Miller Proheat 35 induction heating system in conjunction with the Thermal Tech & Temp induction accessories, sets the bar in welding/fabrication and construction industry for:

    -Preheating of welds

    -Post-weld heat treatment

    -Coating removal

    -Shrink fit applications

Notes:

FLAME VS INDUCTION

FLAME

• Dangerously hot fumes and combustible gas create employee safety issues.
• Flame must be removed
• Hot/Cold spots
• Slow time-to-temperature; often hours vs. minutes.
• High hourly consumable fuel costs.
• Hot, uncomfortable work environment; operator fatigue.

INDUCTION

• Safe coils, significantly improving work environment
• Heating while welding
• Consistant, continuous heat
• Quick time-to-temperature; often minutes vs. hours.
• Performs at full output for a fraction of the cost
• Induction only heats target metal not workspace.

Notes:

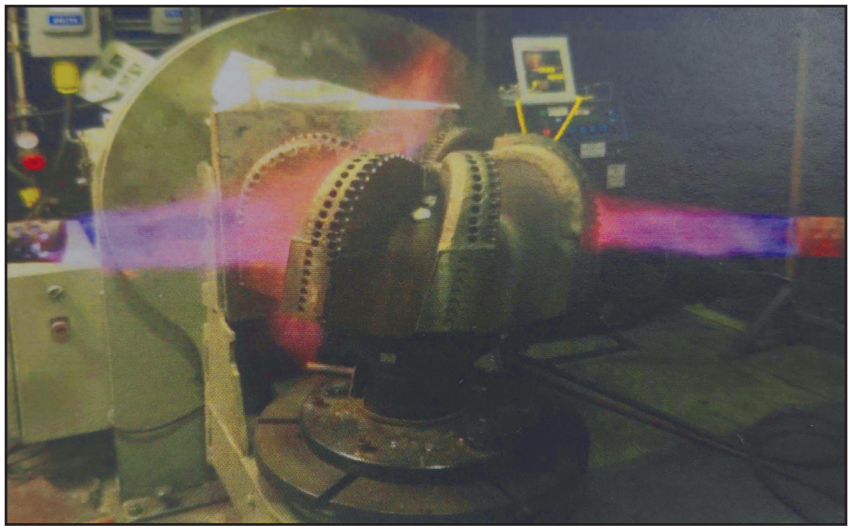
FLAME VS INDUCTION

SAFETY CONCERNS

Until recently, open flame remained the primary pre-heating method. Since safety is a major concern while using open flame, Thermal Tech & Temp has developed a much safer, cost effective and energy efficient method.

Notes:

BEFORE



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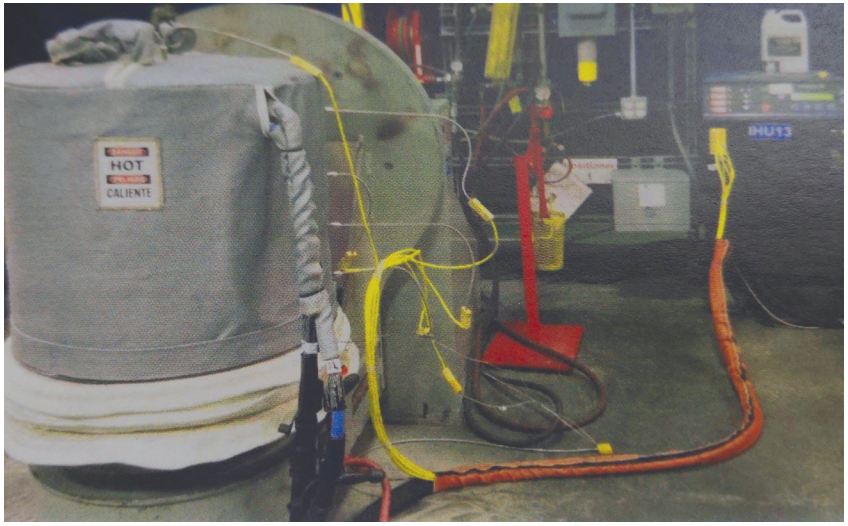

INDUSTRIAL CHALLENGES

SAFETY - Open flame is unsafe and coincides with:

Burn Hazzards - real lost time accidents and medical costs
Fire Hazzards - cannot leave unattended
Combustible Fuel - requires special handling / explosion hazard
Fumes - not healthy to breath / asphyxiation risks

Costs - Capital costs low, capital costs high

Time - takes longer to heat your parts / wasted labor costs
Energy - most energy is heating the air / only 20% heats part
Environment - fumes create clogs in air filters, increaing AC costs
Fuel - combustible gases cost more per hour than electricity

Quality - High rework rates cost money

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Energy - most energy is heating the air / only 20% heats part
Environment - fumes create clogs in air filters, increaing AC costs
Fuel - combustible gases cost more per hour than electricity

Notes:

INDUCTION OVENS

KEY FEATURES:

- Quick heat up times.
- Portable unites that can be moved easily.
- Convenient preheat and stress release.
- Space saver.
- Controlled cool down times.
- No fumes/venting.
- No open flames.
- Cost effective.
- Increased staff safety.
- Custom made for your application.
- Powered by Miller ProHeat 35.

Notes:

INDUCTION OVENS

High Temp Tape

TTT-TAPE-1

- Non-adhesive
- 100% fiberglass yarns
- 1” width x 100’ length
- Resists up to 1000°F
- Nominal thickness of 1.5mm

TTT-TAPE-2

- Silicone adhesive
- Barrier to hot wire contacts
- 2” width x 54’ length
- Temp performance: -100° to 500°F
- Total thickness of 5mm
- Film thickness of 3mm

Notes:

Kevlar

Key Features:

- Stronger in colder temperatures
- Worn by firefighters for heat resistance
- Used as body armour by police, security, & SWAT
- Used in gloves, sleeves, jackets, chapes, etc.
- Can protect from cuts, abrasions, and heat

Specifications:

WEIGHT: 22 oz/sy +/- 10%
THICKNESS: .08 inches +/- .001
COUNT: 20 x 11
WEAVE: Aramid Fiber Blend on Fiberglass Core Yarn
COLOR: Yellow
TENSILE STRENGTH: Warp: 225 lbs./inch
Fill: 150 lbs./inch
TEMPERATURE RESISTANCE: 600° F

Notes:

Tuffsleeve Protective Jacketing

Key Features:

- Lightweight- 80ft coil cover is 5lbs
- Easily shapes to surfaces
- Highly Abrasion Resistant
- Flame & Moisture Resistant
- Repels oil, sparks, and grease
- Freedom in shaping for induction coils

Values:

UPPER USE TEMPERATURE:	480°F (249°C) Continuous Service
WEIGHT:	20.0 oz/yd² (680 g/m2)
THICKNESS:	0.018” (0.46mm)
WIDTH:	60” (1524 mm) Typical
TENSILE STRENGTH (WARP):	370 lbs/in (3240 N/50 mm)
TENSILE STRENGTH (FILL):	300 lbs/in (2714 N/50mm)

Notes:

INDUCTION CLAMPS/CLAM SHELLS

INDUCTION CLAMPS

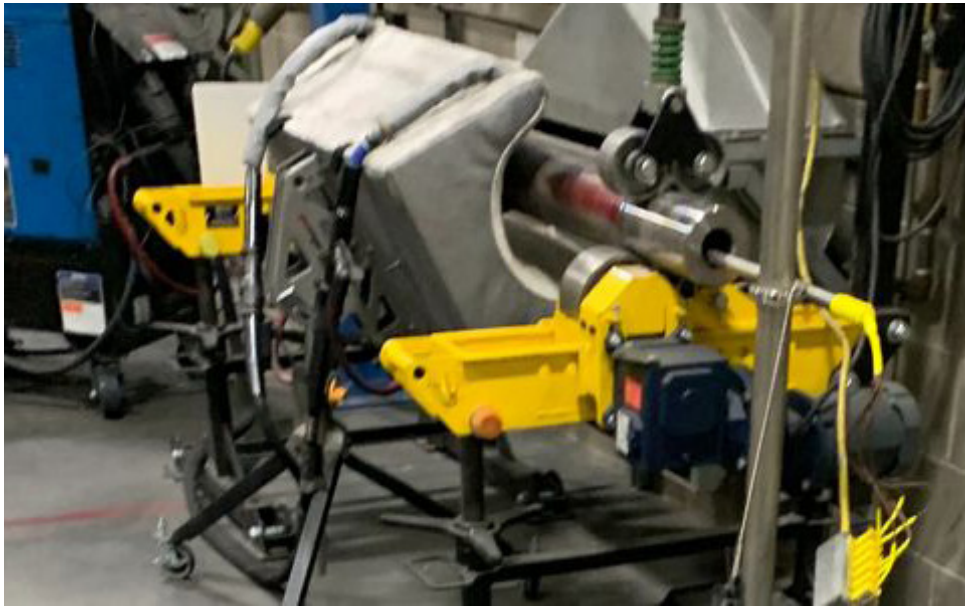
- Faster setup time.
- Takes only a third of the time to temperature than gas flame.
- Fully controllable and uniform heating.
- Can be digitally recorded if required.
- Fast return on your investment.
- No hydrogen created.
- Low running costs.

INDUCTION CLAM SHELLS

- Uses Miller ProHeat 35.
- Preheat up to 1200 degrees farenheit.
- Custom made to fit your specific application.

Notes:

INDUCTION CLAMPS/CLAM SHELLS

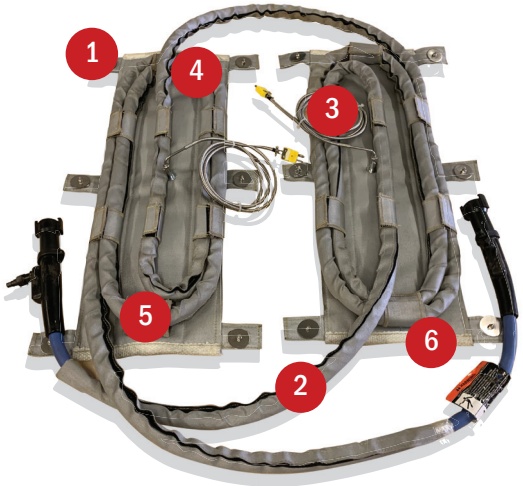


INDUCTION BLANKETS

KEY FEATURES:

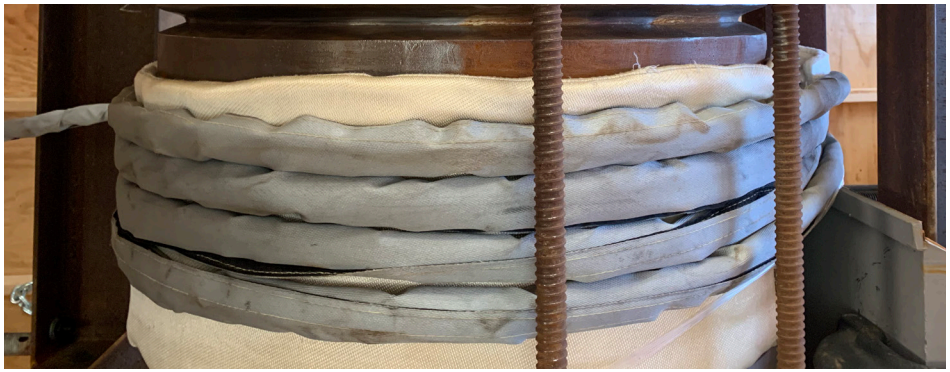
- Custom made to fit your application.
- Able to be reconfigured without the use of a peg board. This increases safety because peg board is a recipe for disaster when adding wood products to a design.
- Made with durable/high temperature materials.
- Improved welding environment.
- No exposure to open flame or explosive gasses.
- Easy setup with flexibility to fit various pipe diameters and plate lengths.
- TTT has designed blankets with high strength and high temp magnets.

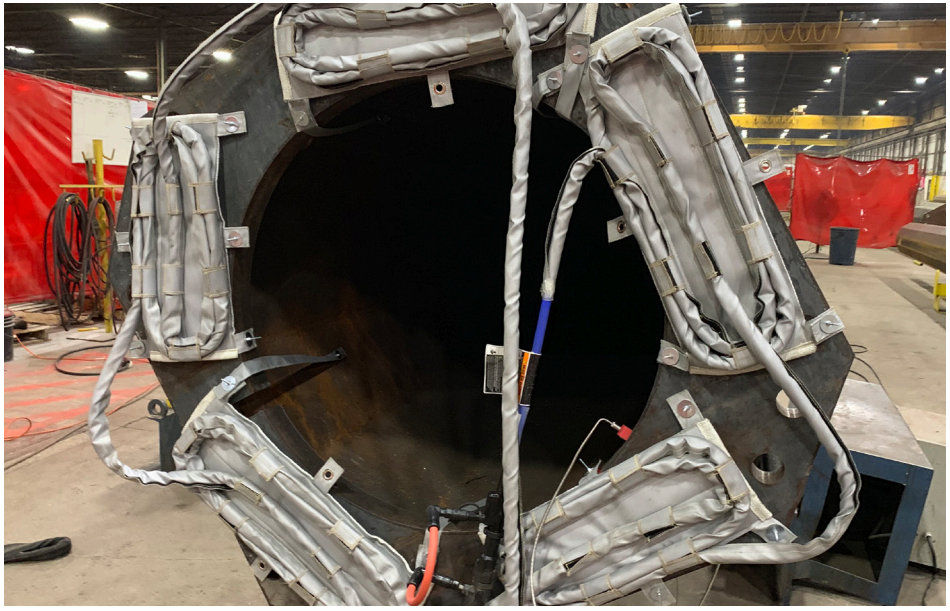
1. MAGNET
2. INDUCTION COIL
3. THERMAL COUPLE
4. BAYONET
5. VELCRO TABS
6. 32OZ SILICONE COATED FABRIC



Notes:

INDUCTION BLANKETS





INTERNAL PLUGS

KEY FEATURES:

- Custom made to fit your application
- Allows even pre-heat
- Powered by Miller Proheat 35

Notes:

THANK YOU!

WE LOOK FORWARD TO WORKING WITH YOU

-Open for Q&A
-Schedule dates for demos

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