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BEST PRACTICES
September 2020

FiberTite Induction Welded Roof Systems

FiberTite Roof Systems offer unique specialized application options across the spectrum of conventional system designs, utilizing induction weld attachment technology. FiberTite's induction welding alternative can be a standalone system or used to augment fully adhered and ballast roofing systems.

Induction Welded Roofing Systems can also bridge owner concerns about possible membrane flutter and distribute wind loads without the need for adhesives necessary in adhered roofing systems.

With an induction welded system, you have to alter your typical project approach. This is especially true for scheduling and running the job, particularly when compared to a traditional mechanically attached installation and adhered membranes.

FiberTite can provide larger 20' x 100' pre-welded rolls that permit greater initial production. However, caution must be given toward temporary ballast in the event the system is not bonded completely, daily. The roofing contractor must be well trained to ensure quality and production are not in conflict with one another.

The following is a list of general tips and guidelines for successful installation of a FiberTite Induction Welded Roof System. Consult the operators manual of your specific induction welding machine for additional and more detailed instructions.

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General guidelines for the successful installation of a FiberTite Induction Welded Roofing System:

- Chalk lines for plate placement will promote efficiency during the bonding process as improved plate alignment improves the ”rhythm” of the bonding process as the crew doesn’t have to search for plates. ▶▶
- It is best to install the membrane so the field seams are between and not directly upon the rows of Induction Weld (IW) plates.
- Do not overdrive fasteners as they will be more difficult to locate and also impair weld quality.
- If there is a radio on the job site you may hear interference or static when the induction welding tool is operating. This is normal. The tool meets FCC transmission requirements for the industrial tools but can cause static interference under certain circumstances.

- Induction welding tools need to run on a dedicated 20A circuit with no more than 100 feet of quality (12 ga. min.) extension cord per tool.
- ◀◀ • Generator should be a minimum 5,000 watt with one 20A GFCI circuit per tool. Two tools max per 5,000 watt generator.
- Generator power works better than “house” power because longer extension cords are often required from more permanent sources.
- Two tools are better than one.
- ▼▼ • DO NOT plug the tools into a 15A GFCI adapter.
- DO NOT plug the tools into a pigtail. ▼▼

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Operational guidelines for the successful installation of a FiberTite Induction Welded Roofing System:

- Always calibrate the tools at least once in the morning and once after lunch or whenever temperature changes more than +/- 15°F.
- Use the magnet to ensure bonding and be sure to allow the test sample to cool completely before separating it to evaluate bond strength.
- Use a marker when calibrating to check alignment.
- For optimum weld quality, the IW plate must be centered under the welding tool.
- It is helpful for each new operator to have a marker and outline the base of the tool on every 10th plate to check the alignment. After several times, the operator will develop the rhythm.
- The operators should make sure the magnet completely covers the plate. Misalignment will impair weld consistency.
- Keep the membrane clean. Any debris on the top of the membrane can be pushed into the surface by the magnet during the bonding process.
- Keep the magnets clean. ▶▶
  Shards or other debris can stick to the magnet and brand or otherwise mar the membrane at every weld.
- Weld in straight lines.
- Operator #1 lines all of the magnets up on the first row. Operator #2 begins work on the adjacent row after the first operator completes the first five welds. This procedure helps make sure that the magnets remain on the plates for at least one full minute. This method also minimizes motion and increases productivity.
- Cool the magnets periodically in a bucket of water.
- When making test welds make sure to test the plates in the same assembly as is being used for the roof system. *For example,* do not test the plate directly on concrete if they are being installed over insulation.
- Prior to proceeding with membrane attachment to the installed FTR IW plates, the induction welding tool must be calibrated.

A dirty magnet should be cleaned before using.

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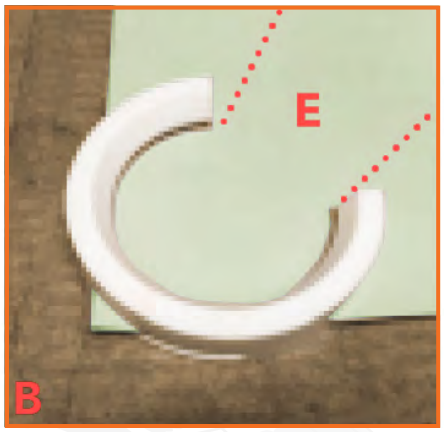
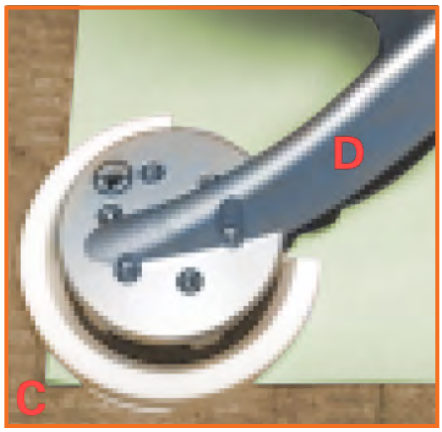
isoweld Tool Calibration

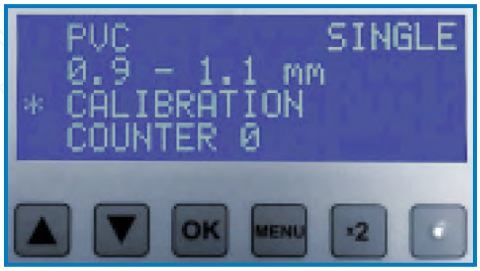
**Review the isoweld Operating Manual*

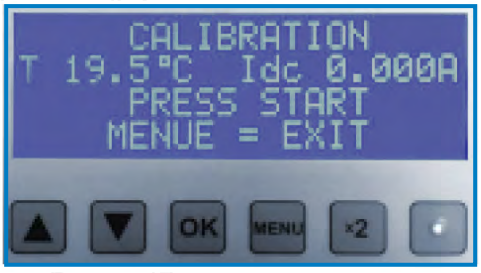
- It is not necessary to use a fastener with the plate during calibration.
- Set the isoweld tool to its PVC membrane setting.
- Use the calibration template and place an FTR-IW isoweld plate into the recess provided (A).
- Push the calibration template on to the corner of the FiberTite membrane (B).
- Place the inductor into the calibration device and ensure that it is positioned correctly (C).
  the arm (D) to the inductor must be resting in the recess (E) provided. ▼▼





- Press the "arrow up" or "arrow down" button to move to CALIBRATION. ▶▶
- Start the calibration function by pressing the "OK" button.
- You are now in the calibration program.
- Press the start button.
- The automatic calibration is completed when there is a beeping sound for 1 second and the display returns to standard view.





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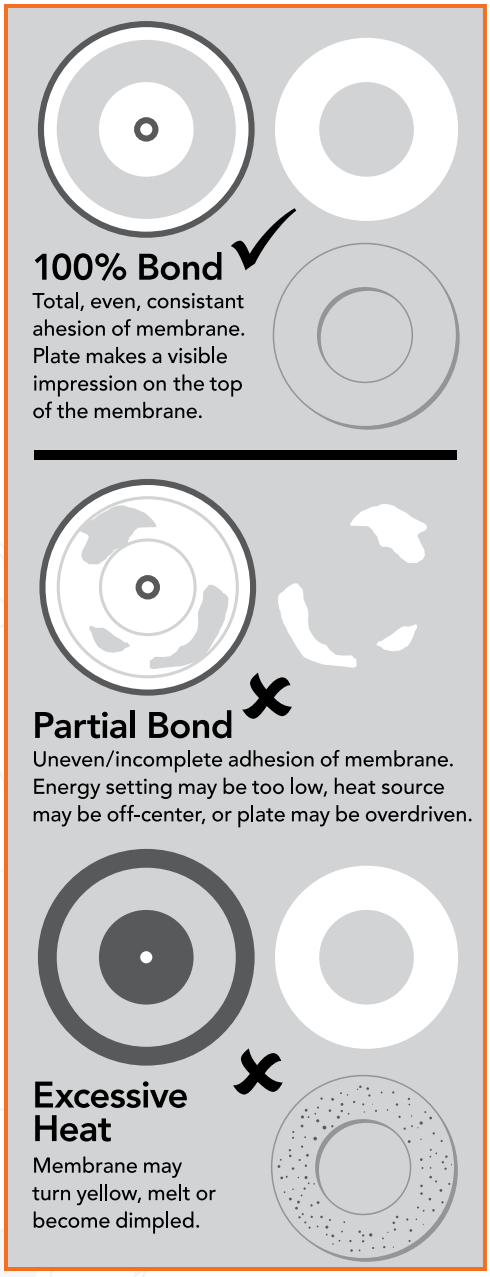
FiberTite Induction Weld (IW) plates are designed to secure roof insulation and roofing membranes in FiberTite Induction Welded Roofing System. Plates are 3" round, specially coated Galvalume Steel, installed with FTR Magnum Fasteners on steel, wood or structural concrete decks. All FTR Induction Weld plates have a recessed center and raised flat bonding surface.

FiberTite IW Roofing Systems are Factory Mutual Approved.

FTR IW isoweld™ plates meet FM 4470 criteria for corrosion resistance and feature a wide welding surface to promote a strong bond to FiberTite Roofing Membranes.

- The induction welding tool's magnet should completely cover the plate. Misalignment will impair weld consistency.
- Keep the membrane clean. Any debris on the top of the membrane can be pushed into the surface by the magnet during the bonding process.
- Keep the magnets clean.



For more information,
or to contact a FiberTite Roofing specialist,
visit **FiberTite.com**

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