Technical Bulletin

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Induction Welding Calibration Guidelines

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Calibration Guidelines when using Mule-Hide Induction Weld Plates:

1. Cut a piece of membrane that will be used on the job.
2. Lay the membrane over the substrate being used on the project.
3. Place 5 plates under the membrane at least 10" apart. On the top side of the membrane mark the center of the plate.
4. Center the Induction Welder over the plate. During average ambient temperatures, place the welder setting on 00 and begin the welding process. Immediately following the welding sequence, place a heat sink magnet over the top of the plate.
5. Identify and note the welder setting used at each plate.
6. Continue the calibration process for the remainder of the plates increasing the setting by +01 for each plate.
7. Once the plates have had adequate time to cool, flip the membrane over and peel the plates off using a pair of channel locks or similar tool securing the membrane with your foot.

The goal of the calibration process is to find the setting that will create the optimal bond. If that bond isn't achieved in the first sample set, the operator may need to increase or decrease the settings from the start of the initial calibration selection.

Ambient temperature, thickness of membrane, and voltage are significant variables in the performance of the welds. If the temperature changes ±15°F after the initial calibration, the machine should be recalibrated to ensure a proper bond. Every machine used on the job should be calibrated separately.

A good weld must have a complete 360° coverage of the bottom side of the membrane to the raised area on top of the plate. A bad weld will have missing areas of bond between the plate and the membrane. Care should be taken not to weld the membrane too hot. Significant discoloration of the ISO and possible smoke may result from an induction weld setting that is too high (too much heat). Never weld directly over EPS or XPS without an adequate barrier.

Good Weld

Bad Weld

Bad Weld