



Installation Reference - Membrane Electrode

Topic: Installing Cable Lead Diodes and Heat Sinks

Please read all the instructions listed below carefully to familiarize yourself with the project before attempting to perform any of the work.

Required Materials

- UFSc P/N 300018 Cable Lead, 75 Amp, Pigtail, Diode
- UFSc P/N 283001 Heat Sink, Al, 75 Amp, Diode
- UFSc P/N 505501 Electrode, SS Bolt Hardware, 5/16

Required Tools

- 1/2" Socket (1/2" drive)
- 9/16" Wrench
- 25-30 in/lb. Torque Wrench (1/2" Drive)

Creating different voltage zones within a paint tank can optimize film build. It can also inadvertently cause paint to be deposited on the lower-voltage ME Cells because current flows from higher voltage to lower voltage. This can reduce the effectiveness of the lower-voltage ME Cells and can create "dirt" in the paint tank. Diodes, which allow current to flow in only one direction, can be used to stop the reverse current flow through the lower-voltage ME Cells. Available from UFS Corporation as part of a quick-disconnect cable lead accessory, Diodes can easily be attached to the Electrode. In some cases the heat generated by the Diode is too much to be dissipated by the Electrode Tab. If this is so, a Heat Sink (and 5/16" Stainless Steel Bolt Set) should be specified too.

Instructions

1. Turn off power to E-coat DC rectifier. Follow your company's Lock Out / Tag Out procedures for electrical equipment maintenance.
2. Remove Diode Pigtail Assembly from package.
3. Attach the Heat Sink to the inside face of the Electrode Tab and secure with the 5/16" SS nut, compression washer and bolt. If the compression washer does not go completely flat when fully tightened, it has been installed backwards.
4. Insert the Diode's stud into the top hole of the Heat Sink so that the Diode is pointing away from the center of the Electrode. Place the spring washer on the stud then place the nut on the stud. Using the two wrenches, tighten the Diode assembly to the Electrode to a torque of 24–30 in/lb., taking care not to harm the Diode.
5. When servicing the TECTRON™ ME Cell, be sure to use the Electrode Puller service tool or similar device to lift the Electrode from the ME Cell. **DO NOT PULL THE DIODE TO LIFT THE ELECTRODE. THE DIODE WILL BREAK IF SUBJECTED TO STRESS.**

For more information see the original manual that came with the equipment or call UFSc (219) 464-2027 ext. 24.

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Think and act in a safe manner. Always disconnect power and use a lockout before you work on the E-coat system, or any of the related subsystems. Observe any confined space conditions. Use the appropriate safety equipment and clothing for the task.

UFS Corporation
330 North 400 East
Valparaiso, IN 46383 USA

Phone: 219-464-2027
Fax: 219-464-8646
Email: info@ufsc.com

