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Service Reference

Topic: Cleaning Instructions for Precious Metals Anodes (PMx)

Required Materials

- Acetone Solution (10% acetone/90% D.I. Water – for cleaning oil from the surface)
- Nitric Acid Solution (5% nitric acid/90% D.I. Water – for cleaning paint solids from the surface)

Required Tools

- Soft Bristle Brushes – with a 2" diameter bristles and a handle long enough to reach inside of the Electrode
- Clean Rags
- Cotton Gloves

BEFORE YOU START: Please keep in mind that PME is quite fragile and susceptible to scratching. Even small scratches and nicks in a PME electrode can cause extremely rapid erosion. Make sure to wear cotton gloves at all times while handling the Electrode. Remove all jewelry that may come in contact with the Electrode, especially rings and watches.

Set up an area in which to work. The area should be free of dirt and objects that can scratch the precious metal coating on the Electrodes. Sawhorses covered with padding and clean, lint-free cloths are an ideal work surface. Turn off the power to the anode cells and lockout the DC rectifier with your own lock. Remove cells from the membrane shells.

1. Clean oil from the electrode's surface by saturating a clean cloth with the acetone solution and gently wiping Electrode surface. Be sure to reach all parts of the electrode. Wrap the bristles of the long-handled brush with a cloth to clean inside the electrode. (This step is important: any remaining oil will become fluid-borne once the Cell is re-filled with anolyte, thus re-contaminating the Electrode.) Change rags frequently.
2. Rinse the Electrode inside and out with D.I. Water.
3. Clean the paint solids from the Electrode's surface by gently scrubbing the inside and outside surface with a soft brush that has been immersed in the nitric acid solution. The PME coating is porous; therefore it is important to thoroughly (but gently) scrub the electrode to ensure that all paint solids have been removed. Do not scrub too hard as this may inadvertently remove the PME coating, which may cause the titanium to dissociate.
4. Rinse the Electrode inside and out with D.I. Water.
5. Re-install the Electrodes in the TECTRAN™ Cells. Ready the e-coat system for operation.
6. Once the system is turned back on, monitor the amperage and voltage readings. If the system still operates at unusually high readings, please call UFS for additional information.

Bulletin 990140 Literature\Service Reference\Cleaning Instructions for RuO Electrodes

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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 & clothing for the task.

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