

Service Reference

TOPIC: Overflowing Cells

It is important to check the fluid level in an E-coat system anolyte tank on a regular basis. Variations in the fluid level can indicate a problem at some point in the anolyte system and, more importantly, can impair overall system performance. There may be several causes for a fluid level that is either too high or too low. One possible cause of low anolyte level – an overflowing Cell – is addressed in this Bulletin.

Because the condition often is periodic, it may be difficult to identify an overflowing Cell. Clues include: rust on the strut channel or on the metal clamps that hold the Cell in place; a brown stain on the neck of the Cell or on the membrane's protective wrap; or fluid that is flowing freely from the top of the Cell.

Once the culprit is identified, the task turns to identifying why the Cell is overflowing. The problem could be with the return tubing, electrode tab, or nozzle. Or quite simply, the problem could be that there's too much fluid flowing into the Cell from the Supply Manifold. The chart below lists possible causes and recommended remedies:

CAUSE	REMEDY
Plastic tie wrap is secured around the tubing and is too tight.	Remove plastic tie wrap.
Blocked Return Tubing Overflow Nozzle	Remove the return tubing from the Cell. Use a screwdriver to clear any obstructions from inside the return nozzle.
Vacuum Lock in the Return Manifold	To eliminate the vacuum, add a breather standpipe or increase the size of the vent opening in the return manifold.
Electrode Tab Blocking Return Tubing Overflow Nozzle	Twist the electrode tab so that its flat side is not blocking the nozzle.
Return Tubing is kinked	Cut new lengths of return tubing if kinks cannot be straightened.
Return Tubing is stuck too far into manifold	Remove the tubing from the manifold, and cut its end at a 45 degree angle. Replace tubing, making sure that it sticks in only one or two inches.
Too much fluid flowing into Cell	Close individual Cell valve as necessary to lower desired flow rate.

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.

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