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Suggestions for Coating the Inside of a Tube/Cylinder

- 1. If the tube/cylinder is porous material, see if it draws up water quickly. If so, the tube should be first pre-wetted with water.
- 2. The tube/cylinder should be fixed with a 'false bottom' ... such as by using "Duck Tape" to seal off one end ... or fitting a plastic piece into the tube to seal off one end. For some large tubes, the weight of coating could be significant, so the bottom area should be sealed tightly.
- 3. Pour the coating into the tube/cylinder ... at least to 1/3 of the volume and preferably completely fill the tube.
- 4. Emptying the coating from the tube/cylinder: If only partly filling the tube, begin rotating the tube while quickly emptying it, such that the coating runs out all over the surface to be coated. Ideally, the residual thickness of the wet coating should be less than 1/32" (less than 0.031" or 31 mils) and preferably only 0.01" (10 mils).
- 5. Instead of #4, just pour the coating fully into the tube, and then invert the tube while placing it onto a vibrating table with a "catch basin" (or evaporating dish) on the table. Since our coatings are thixotropic, the vibrations thin out the coating fairly uniformly, and causes the excess coating to flow out of the tube evenly, leaving a relatively even-coated inside of the tube.

EXAMPLE of lab-vibrating table:

Alternately, for large cylinders/tubes, a <u>'wand' extension'</u> for DeVilbiss pressure-fed spray guns (which we suggest for our coatings) can allow spraying of the inside of tubes as a different way to coat them ... The wand is inserted completely through the tube and spraying started. Since the spray is 360 degrees circular spraying, as the wand is withdrawn back through the tube/cylinder, the inside walls are evenly coated.