PChem SOPs

Cleaning

CLE001

Procedure for cleaning NovaCentrix PChem PSPI-xxxx series sprayable conductive coatings from spray guns and air brushes

Last update: 11/5/14

Purpose:

PChem PSPI-xxxx series spray inks are water based formulations containing dispersed hydrophobic particles. Thus they require the use of surfactants in the water being used to rinse/clean equipment after use in order to avoid precipitating out residues that will be much more difficult to remove from the surfaces. Since many air brushes and spray guns have brass wetted parts, it is also recommended to avoid tap water. Instead use deionized or distilled water to prevent reaction of halide ions with the brass parts. Likewise non-ionic surfactants tend to be less corrosive to metals than anionic.

Equipment used:

Deionized or distilled water (tap can be used as substitute)
Nonionic surfactant (Triton X-100, etc.) or anionic surfactant (less desirable as some could react with brass)
Paper towels, dry wipes, or rags
Isopropanol (IPA)

Procedure:

1. Pre-prepare an adequate amount of dilute (1%-2%) surfactant or “soap” solution. How much “adequate” is will be determined by the size of spraying equipment you are using; an air brush will require less solution than a spray gun. Typically a few hundred milliliters to a liter is enough

2. After finishing spraying your parts or interconnects with the ink pour the remaining ink back into your container.

3. Next wet a wipe, rag, etc. with soap and water and wipe the bulk ink residue from the inside of your ink well/cup.

4. Immediately pour some of your pre-prepared nonionic soap solution into your ink cup and spray some soap solution through the equipment.

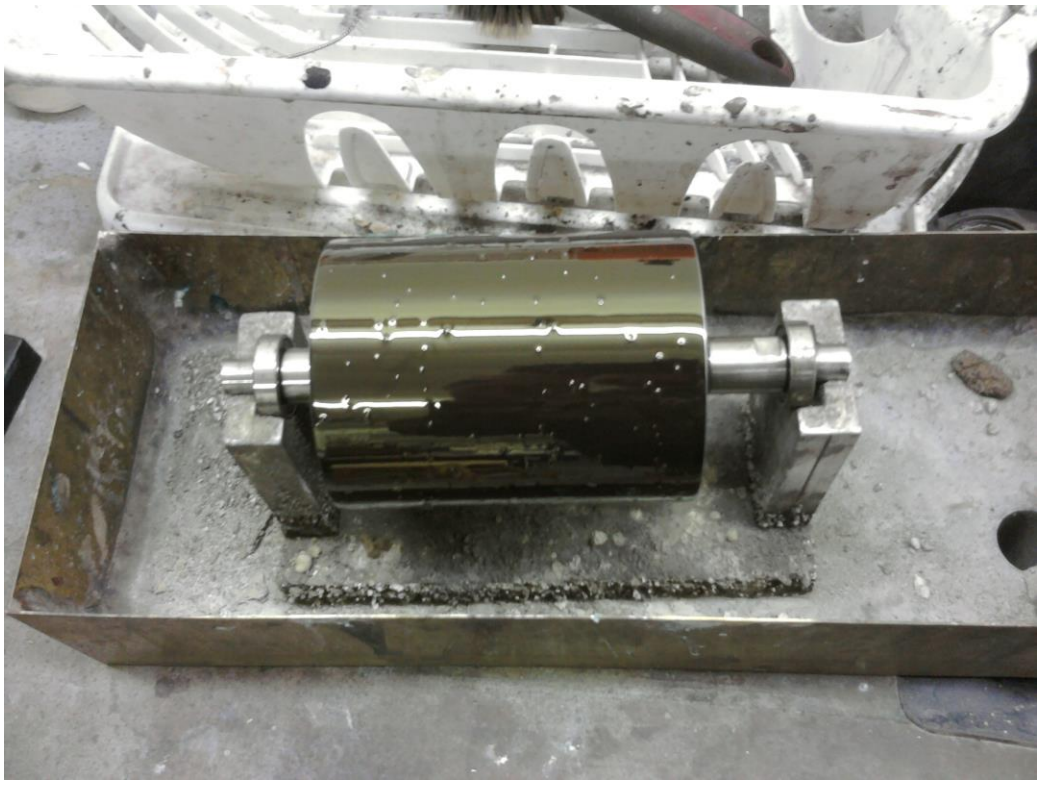
5. Soak and continue spraying soap solution through the equipment until the spray does not appear to contain any silver.

6. It may also help to break down the wetted parts and sonicate them in soap solution.

7. Next spray deionized water or isopropyl alcohol through the equipment or rinse the parts to remove any soap residue that remains.

Notes:

The spray equipment should not be allowed to dry at any time there is silver ink in it. Keep the orifices and channels wet with ink until ready to clean, then immediately clean with the soapy water.



Step 1 – Anilox coated with a thick layer of ink and mounted in the cradle/basin

Step 2 – Excess ink wiped from anilox

Steps 3 and 4 – anilox squirted with soap solution and wiped with sponge

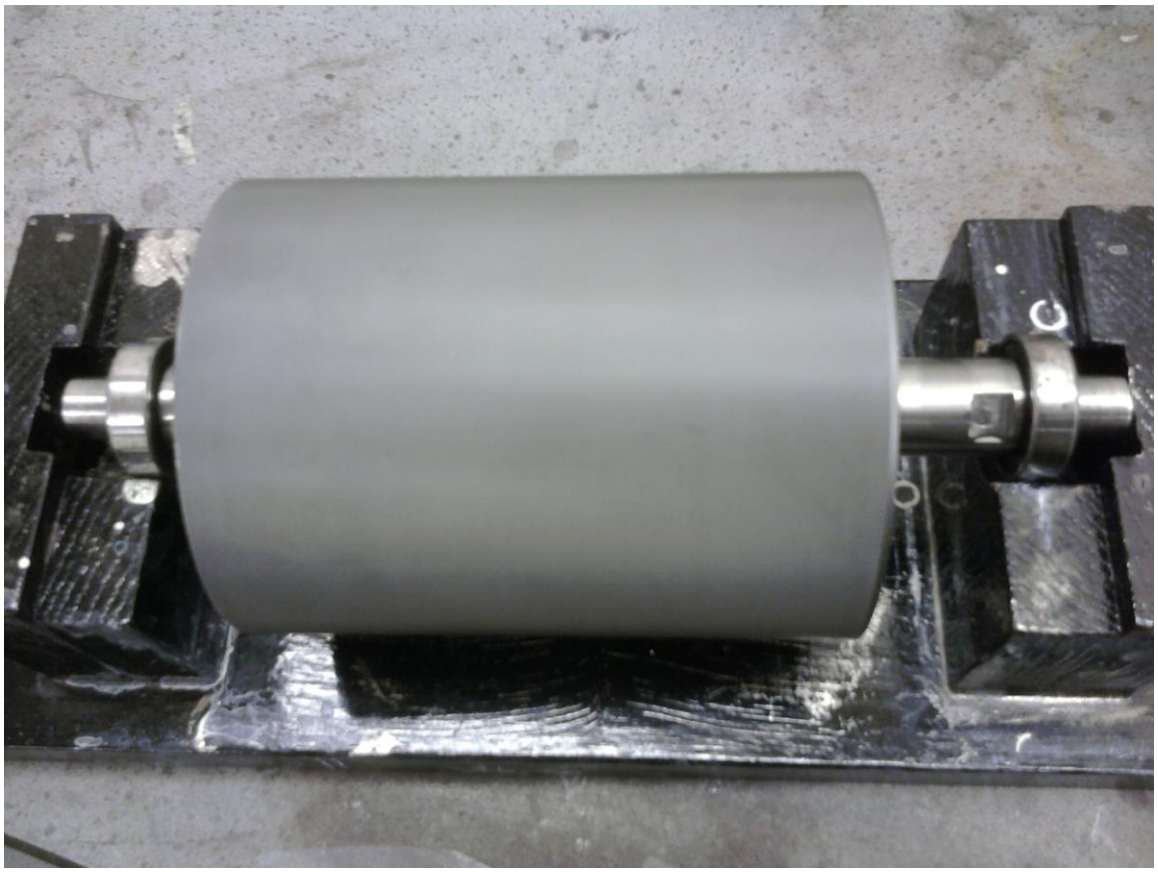

Brown bubbles - Anilox is not clean yet.

Step 6 - Repeat of steps 3 and 4

White bubbles – anilox is clean

Step 7 – IPA rinse


Step 8 – drying anilox



Clean anilox (1.6 BCM)