BEST PRACTICE

Keeping Your Vapor Degreaser and **Equipment Cost-Effective**

Tom Coulton

By maintaining your solvent-cleaning equipment, you can ensure a more efficient machine, reduce solvent drag out and provide a safer work environment.

When using a vapor degreaser or dip/spray process where solvent is used to degrease components, it is important to provide proper equipment maintenance and housekeeping. Below are some important steps to follow:

1. Excess solvent drag out can be caused by equipment malfunctions such as incorrect temperature of cooling coils. On an air-cooled unit, make sure the condenser is kept clean and the airflow is continuous. On a water-cooled refrigerated condenser, the water should be flushed annually to remove any residue. Have a qualified refrigeration professional review the defrosting cycle and make changes if needed.

2. Look for any pinhole leaks on the equipment, especially in the in the water separator. Remove any residue buildup from the heat source. If you are using an electric source, check for any erosion or noticeable damage. If you have a steam-heated system, check the steam coils for any erosion or excess residue. A faulty heating element can cause your tank to go acidic.

3. Cleaning your equipment is an ideal way to maximize machine efficiency and solvent consumption. By cleaning and neutralizing your tank and coils, you will provide a longer life for your acid acceptors in the solvent. Mixing warm water with soda ash and cleaning the tank will neutralize any acid formations that may have built up in the tank or piping. If you have a still reclaiming your solvent, it should also be cleaned periodically (as needed), as it will develop a sludge buildup that needs to be boiled off and removed. Note that if you enter the tank, you need a confined space permit and you should have a ppm meter to measure the solvent fumes after the tank has been emptied prior to the preparation of the cleanout. Only qualified and trained personnel should perform a cleanout.

Photo courtesy of Tom Coulton.

Neutralizing a vapor degreaser with soda ash.

4. Perform routine acid acceptance testing as you clean your parts. It is a simple, 10-minute titration, which will quantify the stabilizers. Testing will also alert you to the quality of stabilizer and detect whether you are in normal working conditions, or if new solvent or stabilizer booster should be added. If you are cleaning fine aluminum or light metal parts, you should perform this test more frequently as the light metal chips that fall into the tank can break down the stabilizers in the solvent faster.

5. Perform periodic air monitoring of the solvent in the work area. This can be done through passive badges, which calculate the parts per million of solvent exposure to the area, or workers, in an eight-hour workday. By sending badges out to a lab to do the analysis, you can compare the exposure levels to the recommended levels on the MSDS (material safety data sheet) of the solvent.

If you would like to tighten your equipment to reduce solvent drag out, there are several effective practices to achieve an efficient system. These include:

- Adding secondary chillers to help contain the solvent
- Using an automatic hoist and lid to control the dwell time of the parts and to cover the equipment when not in use
- Standardizing the amount of parts put into the basket so they are not overloaded, causing longer vapor blanket recovery
- Being careful not to overspray your parts; this can cause excess solvent loss

Proper housekeeping of solvent equipment will provide an effective and safe workplace, and reduce the chance of equipment failure. **PCM**

Tom Coulton *is president of Tech Chem (Solon, OH), a company that supplies vapor degreasing services and products including solvent, stabilizer booster, on-site cleanouts, acid acceptance kits, safety testing, etc. He can be reached at tcoulton@techchem.net or visit the Web site at www.techchem.net.*