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EPA Proposes New Air Emissions Standards for Plating and Polishing Area Sources

On March 14, 2008, EPA issued a proposed rule for plating and polishing area sources. The plating and polishing processes that are subject to the proposed plating and polishing area source rule are those “processes performed at an affected plating and polishing facility that uses or has the potential to emit” any compound of any of the following metal HAPs: cadmium, chromium, lead, manganese and nickel. Processes that use other metals are not subject to the requirements of this proposed rule. Similarly, processes that are currently subject to the Chromium MACT standard are not subject to the proposed area source requirements.

After numerous discussions between EPA officials and NASF leadership, EPA has developed a proposed rule that imposes standards to ensure continued reductions of potential metal HAP compound emissions from plating and polishing processes. It also appears that the proposed rule will have a minimal impact on most surface finishing operations. A copy of the proposed rule is available on the NASF website at www.nasf.org. Provided below is a brief summary of the proposed rule.

Applicable GACT Standards

In the proposed rule, EPA has identified regulatory requirements set by generally available control technology (GACT) standards that include management practices and additional regulatory requirements for specific plating and polishing processes.

Management practices

All plating processes (both electrolytic and electroless) that use or have the potential to emit any *cadmium, chromium, lead, manganese and nickel* compound (*i.e.*, metal HAP compounds) must comply with the management practices set forth in the proposed rule. The management practices

are provided below as they appear in the proposed regulation.

- (1) Minimize bath agitation when removing any tank parts.
- (2) Maximize dripping of bath solution back into the tank by extending drip time when removing the tank objects and using drain boards (also known as drip shields).
- (3) Optimize the design of barrels, racks and parts to minimize dragout of bath solution, such as by using slotted barrels and tilted racks, or by designing parts with flow-through holes to allow the tank solution to drip back into the tank.
- (4) Use tank covers, if already owned and available at the facility, whenever practicable (*i.e.*, not during lifting or lowering parts).
- (5) Minimize or reduce heating during tank operation and when tanks are not in use.

NASF intends to submit comments to clarify these management practices so that facilities can more readily demonstrate compliance with this requirement.

Additional regulatory requirements for specific plating and polishing processes

In addition to the management practices discussed above, the proposed rule has other regulatory requirements for some specific plating and polishing processes.

Non-Cyanide Electrolytic Processes Operating at a pH of Less Than 12: Non-cyanide electrolytic processes that operate at a pH of less than 12 and that use or have the potential to emit a metal HAP compound must use a wetting agent or

fume suppressant in the bath. The facility must record that the wetting agent is used according to the manufacturer’s specifications and instructions. Facilities must also record the amount and time of when wetting agents are added to replenish the bath. Facilities may also demonstrate compliance by installing an emission control device that achieves equivalent control of metal HAPs.

Flash or Short-Term Electroplating Processes: Flash or short-term electroplating processes that use or have the potential to emit a metal HAP compound (*e.g.*, Woods nickel strike) must limit plating time in that tank to no more than one hour per day or three minutes per hour. As an alternative, the facility can use tanks covers on these flash or short-term electroplating processes for 95% of the plating time.

Cyanide Plating: Facilities that use cyanide in a bath that uses or has the potential to emit metal HAP compounds must measure the pH of the bath upon start-up and record the result in the facility’s annual compliance certification.

Dry Mechanical Polishing: Dry mechanical polishing processes that use or have the potential to emit metal HAP compounds must install and operate a particulate matter (PM) capture system with cartridge, fabric or HEPA filter or other equivalent control device. The facility must operate the control device according to manufacturer’s specifications and operating instructions.

Thermal Spray Processes: Thermal spray processes that use or have the potential to emit metal HAP compounds must install and operate a particulate matter (PM) capture system with a water curtain, fabric filter, HEPA filter or equivalent control

device. The facility must operate the control device according to manufacturer's specifications and operating instructions.

Notification and recordkeeping requirements

Owners and operators of affected sources must comply with several notification and recordkeeping requirements.

Initial Notification: Facilities subject to the requirements of this rule must submit to EPA or an authorized state an initial notification that includes the name and address of the owner or operator, the location of the facility, the relevant applicable air emission standard for the facility, a brief description of the affected source and the fact that the facility is an area source. The notification must also include the compliance method for each affected source (e.g., use of wetting agent or control device). The initial notification must be submitted no later than 120 days after the publication of the final rule in the Federal Register.

Notification of Compliance Status: Facilities subject to the requirements of this rule must submit to EPA or an authorized state a notification of compliance status. This notification should include a list of the affected sources, the HAPs used or emitted, the methods used to comply with the management practices or equipment standards, a description of the emissions capture and control system (if applicable) and a statement from the facility owner or operator regarding compliance with

the applicable standards. This notification must be submitted within 60 days of the demonstration of compliance with the relevant provisions.

Annual Certification of Compliance: Facilities subject to the requirements of this rule must submit to EPA or an authorized state an annual certification of compliance. This certification should include a description of how the facility has complied with the applicable regulatory provisions. The certification should also report any deviations from the compliance requirements during the year and the corrective actions taken to remedy the deviation.

Recordkeeping: Facilities subject to the requirements of this rule must keep and maintain these records for a minimum of five years.

Title V permit exemption

The proposed regulation also includes an exemption from federal Title V permit requirements for plating and polishing area sources subject to the provisions of this rule. This exemption is intended to avoid

unnecessary duplication and administrative burden, particularly for small businesses impacted by this rule.

Compliance date

Facilities with plating and polishing processes subject to the requirements of this rule will have to comply the applicable regulatory provisions no later than two years after the *final rule* is published in the Federal Register. Under the terms of the court order, EPA must finalize the rule by June 15, 2008.

Comment deadline

EPA is providing a 30-day comment period and comments must be submitted by April 14, 2008. NASF is in the process of preparing comments that provide further clarifications on the requirements, particularly to assure that compliance with the management standards and other regulatory requirements can be clearly demonstrated. If you have any questions regarding the proposed rule, please contact Christian Richter or Jeff Hannapel at: crichter@thepolicygroup.com or jhannapel@thepolicygroup.com.

Test Your Plating I.Q. #440

By Dr. James H. Lindsay

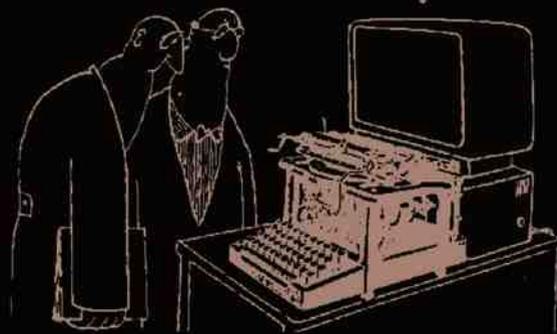
Vibratory Finishing

1. What are two important operating variables in vibratory finishing?
2. Compared to conventional tumbling, vibratory process cycles are faster. Why?
3. What are the two primary equipment configurations for vibratory finishing?
4. How is the vibratory action applied to the parts and media? (More than one answer)
5. The higher the frequency, the _____ the cut, but the _____ the surface.

Answers on page 28.

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