Resources for Minnesota's coating industry

This checklist includes resources available on the Painting & Wood Finishing pages of our Web site. Use this reference sheet to share the waste-related information available to Minnesota's coating industry.

MnTAP is a business outreach program at the University of Minnesota that helps Minnesota businesses develop and implement industry-tailored solutions that maximize resource efficiency, prevent pollution, and reduce costs and energy use. Our technical staff, industry specialists with backgrounds in science and engineering, can help you develop solutions to reduce waste and maximize efficiency at your facility. By reducing waste and increasing efficiency, you can save on disposal and raw material costs, decrease regulatory compliance burdens, and create healthier and safer working conditions.

This reference sheet includes resources available from MnTAP on painting and coating issues related to waste reduction, disposal, procedures, and regulation. The full articles are available on our Web site's Painting and Wood Finishing page. <www.mntap.umn.edu>

Coatings & Equipment

Award Winners

- Armament Systems Division, United Defense, 2004 Governor's Award Winner
- Hoffman Enclosures, Inc., 2005 Governor's Award Winner
- Tennant Corporation, 2006 Governor's Award Winner

Fact Sheets

- Collision Repair: Reducing Waste & Costs [28]
- Spray Painting & Coating Waste Reduction Alternatives [85]

Intern Summaries

- Wenger Corporation Saves by Reducing Powder Paint Use & Rework [IS-00]
- Increasing Transfer Efficiency through Part Placement, Spray Adjustment & Overspray Reuse at Medallion Kitchens [IS-92]
- Crenlo Saves Nearly $100,000 by Reducing Paint Filter Waste & Water [IS-03]

Reference List

- Liquid Coating Equipment Suppliers [9]

Source Newsletter Articles

- Liquid to Powder: Streater [2006 issue 1]
- Waterbased Finishing Systems [1998 August]

Paint Stripping

Fact Sheets

- Paint Stripping: Reducing Waste and Hazardous Materials [56]
- Safer Stripping and Cleaning Chemicals for Coatings and Polymers [55]

Intern Summary

- K-Bar Saves Over $44,000 by Reducing Paint Waste and Burnoff [IS-02]

Pretreatment/Cleaning

Case Studies

- Soak Step Reduces Solvent Waste from Cleaning Paint Straining Equipment [84]
- Solvent Waste Cut with Spray Nozzle Selection when Cleaning Paint Straining Equipment [112]

Fact Sheets

- Metal Phosphatizing Operations [64]
- Solvent Recycling: Selecting an On-site Still [62]

Get It Plated Right Fact Sheet Series

Originally written for plating, most of the cleaning principles in this series apply to other coating operations as well.

- Cleaning and Design for Plating
- Cleaning Processes

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- Dried-on Process Fluids and Fluid Combinations
- High-Temperature Processing Burns on Soils
- Holes, Seams, Threads, Recesses and Tubing Assemblies
- Particulate Contamination on Part Surfaces
- Selecting Materials for Plated Parts

Intern Summaries

- Lou-Rich, Inc. Saves Over $42,100 by Reducing Water and Chemical Use [IS-03]
- Reducing Solvent Emissions in Painting Operations at Crenlo [IS-93]
- Reducing Water Use Saves Hoffman Engineering $32,000 Annually [IS-96]

Online Calculators

- Solvent Distillation Cost Calculator <www.iwrc.org/SBPPC/costCalcs/solvent.cfm>
- Gun Wash Unit Cost Calculator <www.iwrc.org/SBPPC/costCalcs/gunwash.cfm>

Reference Lists

- Aqueous Cleaning Equipment Manufacturers [3]
- Solvent Recycling Equipment [15]
- Solvent Degreaser Alternatives [27]
- Spray Gun and Equipment Cleaning System Suppliers [79

Unused Paint

Fact Sheet

- Old Paint and Paint-related Materials: Options for [69]

Online Resources

- Materials Exchange - most current listings available online <mnexchange.org>
- Recycled Latex Paint <http://www.moea.state.mn.us/lc/purchasing/latexpaint.cfm>

Source Newsletter Articles

- Reprocessed Paint [WI99]
- Reusing Contaminated Raw Materials at Valley Design Powder Coating [SU98]

Wood Finishing

Awards

- Andersen Corporation, 1997 Governor's Award Winner
- Automated Building Components, 1997 Governor's Award Winner
- Marvin Windows & Doors, 2005 Governor's Award Winner

Case Study

- Crystal Cabinet Works Eliminates Methylene Chloride Based Adhesives [96]
- Artisitic Finishes: Waterborne and UV-Cured Coatings

Fact Sheet

- Waste Reduction and Cost Savings Ideas for Wood Finishers [39]

Intern Summary

- Wood Finishing Lacquers: Waterbased Substitutes at Aaron Carlson Company [IS-91]

Online Resources

- Herman Miller Adds Powder Coating <www.pfonline.com/articles/060202.html>
- Powder Coating on MDF <www.powdercoating.org/wood/content.htm>

Reference List

- Low-VOC, Low-HAP and Waterborne Wood Finish Suppliers [7]

Source Newsletter Article

- Working with Vendors to Change Wood Finishes [WI97]

Videos

Contact MnTAP to check out a video at 612.624.1300.

- Pollution Prevention for Wood Finishers: Pine-Tique Case Study video
- Pollution Prevention for Wood Finishers video

Regulatory Information

Many of the following resources have been developed by the Minnesota Pollution Control Agency and the U.S. EPA to provide answers to regulatory questions.

Fact Sheets

- Paint Booth Filters: Managing
- Managing Empy Containers
- Disposal of Industrial Wastewater and Alternatives
- Laboratories: Selecting [19]
- Towels, Wipes and Sorbents: Managing [34]
- Aerosols: Managing Waste [37]
- Paint and Ink Wastes: Evaluating [44]
- Basic Hazardous Waste Requirements for Businesses [48]
- VSQG Collection Program Requirements for Generators [57]
- Air Emissions Registration Permits [120]
- Air Quality Permit Rules [121]

Online Resources

- Listed Metals in Specified Products <www.pca.state.mn.us/waste/listedmetals.html>
- National Emissions Standard for Hazardous Pollutants (NESHAP) for Wood Furniture Manufacturing Operations <www.epa.gov/ttn/atw/wood/riwood.html>

Training and Associations

Additional information about waste-related issues can be found through the following organizations.

- Chemical Coaters Association International (CCAI) <www.ccaiweb.com >
- CCAI, Twin Cities Chapter <www.ccatc.com>
- Finishing.com <www.finishing.com>
- Laser Paint <www.paint.iwrc.org/Laser/>
- National Paint and Coating Association <www.paint.org/index.htm>
- North Dakota State University, Department of Coatings and Polymeric Materials <www.cpm.ndsu.nodak.edu>
- Painting and Decorating Contractors of America <www.pdca.org>
- Paints and Coatings Resource Center <www.paintcenter.org>
- Powder Coating Institute <www.powdercoating.org/splash.htm>
- Society of Manufacturing Engineers, Finishing Processes Technical Group <www.sme.org>
- Spray Technique Analysis and Research for Defense (STAR4D) Training <www.star4d.org/>
- U.S. Environmental Protections Agency (EPA) Coatings Guide, Research Triangle Institute <www.epa.gov/nrmrl/pubs/600r01030/600r01030.pdf>
- Virtual Paint <www.virturalpaint.us>
- Radtech International <www.radtech.org>

For More Information

MnTAP has a variety of technical assistance services available to help Minnesota businesses implement industry-tailored solutions that maximize resource efficiency, prevent pollution, increase energy efficiency, and reduce costs. Our information resources are available online at <mntap.umn.edu>. For personal assistance call MnTAP at 612.624.1300 or 800.247.0015