



Gehl Company

Using Plastic Media Blasting to Strip Paint from Parts

Standard Industrial Classification (SIC)	Agricultural Equipment Manufacturer/3523
Process	Paint Stripping
Type of Waste	Sodium hydroxide contaminated with stripped paint
Strategies	Process Modification - Plastic Media Blasting Material Substitution - Plastic Media
Background	Gehl Company is a manufacturer of trailed agricultural implements headquartered in West Bend, Wisconsin. Gehl strips paint from parts rejected by quality control before remanufacturing them. The parts were soaked in a 300 gallon hot sodium hydroxide bath to strip the paint. The paint stripping was a batch process that operated about 30% of the time.
Motivation	This paint stripping method generated up to 19,000 pounds per year of sodium hydroxide contaminated with paint. The waste was classified as hazardous due to a high pH and disposal costs were about \$36,000 annually.
Changes Implemented	Gehl replaced its troublesome sodium hydroxide paint stripping bath with a plastic media blasting cabinet. Plastic media blasting systems fire small plastic particles at a surface. The abrasive action of the particles striking the surface strips the paint without damaging the surface texture.
Problems Encountered	A non-hazardous solid waste is now generated. This waste is currently disposed of in a landfill. At this time no potential reuse for the paint waste has been identified.
Material/Energy Balance	<p>Original Process</p> <p>Feedstock Sodium hydroxide</p> <p>Waste Paint-contaminated sodium hydroxide 19,000 lbs/yr (1989)</p> <p>Disposal Managed by third party at a cost of \$36,000/yr</p> <p>Pollution Prevention Approach</p> <p>Feedstock Plastic blast media 4000 lbs/yr used at \$2.00/lb (1991)</p> <p>Waste Paint chips and spent blast media</p> <p>Disposal Landfill</p>

Economics	<p>Capital Cost \$8000 for the plastic media blasting unit.</p> <p>Operating/Maintenance Cost Not available</p> <p>Payback Period 3 month payback based on an estimated annual waste disposal savings of \$32,000.</p>
Company Address	Gehl Company 143 Water Street West Bend, WI 53095-0179
Contact Person	Larry Lang Phone: 414/334-6608
Additional Publications Available From Pollution Prevention Clearinghouse	<p><i>Reduction of Total Toxic Organic Discharges and VOC Emissions from Paint Stripping Operations Using Plastic Media Blasting</i></p> <p>EPA Project Summary</p>
Pollution Prevention Resources	<p>Free, On-site Technical Assistance University of Wisconsin Extension Solid and Hazardous Waste Education Center Milwaukee area: 414/475-2845 Remainder of state: 608/262-0385</p> <p>Pollution Prevention Information Clearinghouse Wisconsin Department of Natural Resources Cooperative Environmental Assistance 608/267-9700 or e-mail: cea@dnr.state.wi.us</p>



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