



Do you remove paint using chemical paint stripping?

Would you like to improve this process in the following areas?

- **Meet environmental compliance regulations.** Eliminate use of hazardous chemical solvents and their associated air emissions. Reduce production of waste solvents. Media areas include air and hazardous waste programs.
- **Improve workers' safety and health.** Eliminate exposure to hazardous solvents and paints.
- **Increase productivity.** Reduce labor hours for paint stripping operations.
- **Save money.** Eliminate solvent purchase costs. Reduce waste solvent disposal costs.



Plastic Media Blast Booth

Naval activities generally use methylene chloride stripping and mechanical sanding to remove dry paint and surface corrosion from aircraft parts and ground support equipment. These processes can have many adverse environmental effects including hazardous waste generation and air emissions. Plastic Media Blasting (PMB) is a dry abrasive blasting process designed to replace chemical paint stripping operations and other abrasive blasting techniques that can damage delicate substrates. PMB uses much softer reusable plastic particles at low blasting pressures of 20-40 psi. PMB can be performed in a variety of enclosure sizes, including a small glove box and larger walk-in booths. The Plastic Media Blast Booth uses direct-pressure nozzles through which plastic media, fluidized with compressed air, is projected. Separators and filters remove paint wastes and corrosion from the blast media. The blast media can be recycled and reused up to ten times before it is broken down and must be disposed of as solid waste. Plastic Media Blast Booths are being used successfully at several Navy installations at aircraft maintenance activities. **This equipment is available through the Navy Pollution Prevention Program**

How can you achieve these improvements?

Use a Plastic Media Blast Booth (also refer to Fact Sheet 5-2 for the Glovebox Plastic Media Blaster).

How does this equipment work?

Plastic media and compressed air are used to remove paint and light corrosion.

How will this equipment save you money?

The PMB Booth reduces labor hours for paint stripping operations, eliminates solvent procurement costs and reduces hazardous waste disposal costs. The cost depends on the size of the booth. A booth to strip F-4 aircraft is approximately \$1,400,000 and can pay for itself in less than two years. For a complete cost analysis, refer to Joint Service P2 Opportunity Handbook Data Sheet 5-05.

Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This P2 method can eliminate worker exposure to harmful paints and solvents. Use will result in the following pollution reductions:

- Eliminate use of hazardous chemical solvents and associated fugitive air emissions.
- Plastic blast media can be reused many times before it must be separated and disposed of as solid waste.

Which shops can benefit most from this technology?

This technology can be used in processes that use solvents to remove paint and light corrosion from aircraft and ground support equipment parts and components. Shops that could benefit include:

- Aircraft parts maintenance
- Automotive parts maintenance
- Support equipment parts maintenance
- Facilities parts maintenance

How can this technology reduce regulatory compliance concerns?

This technology reduces VOC emissions and waste generation. Regulatory compliance benefits include:

- Reduction in hazardous waste helps facilities meet the requirement of waste minimization under RCRA, 40 CFR 262.41 (a) (6).
- May help facilities reduce their generator status and lessen the tasks required to comply under RCRA, 40 CFR 262 (i.e. record keeping, reporting, inspections, transportation, accumulation time and emergency measures).
- May help reduce facility-wide air emissions below applicable major source threshold. (Facilities that are not a major source for any pollutant do not need a Title V permit).
- May reduce or eliminate local VOC compliance requirements in ozone nonattainment and maintenance areas.

Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by using pollution prevention technologies and methods to reduce compliance requirements. This fact sheet is one in a series designed to encourage activities to use pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

For additional information, contact:

Joint Service P2 Opportunity Handbook Data Sheet Number 5-05 (Web: http://p2library.nfesc.navy.mil/P2_Opportunity_Handbook/5_5.html) and the PPEP Equipment Book (<http://www.lakehurst.navy.mil/p2/index.htm>)

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