Navy Environmental Quality Fact Sheet

Do you clean parts with solvents?

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

- ***Meeting environmental compliance regulations*** -- Reduce hazardous waste disposal and air emissions. Regulatory areas include RCRA and NAAQS.
- ***Improving workers' safety and health*** -- Reduce exposure to harmful solvents and chemicals.
- ***Increasing productivity*** -- Reduce labor hours up to 50%.
- ***Saving money*** -- Decrease operational costs, eliminate solvent purchases and reduce hazardous waste disposal costs.

Aqueous Jet Parts Washing Equipment

Aqueous jet parts washers use biodegradable detergent solutions to remove dirt, grime, oil and grease from a variety of parts. This eliminates the costly purchase and disposal of solvents. No VOCs are needed and workers are not exposed to solvents. Some sludge will collect in the bottom of the washer and will have to be disposed of as hazardous waste. Washers range in size from 75 to 400 gallons. Aqueous jet parts washers consist of a cabinet with spray nozzles along the walls and ceiling. Heated, high pressure water and detergent is directed at parts placed in baskets or on rotating shelves to remove grime. Some units have a rinse cycle and a drying cycle of hot air. Some detergent solutions contain rust inhibitors. The purifying/recycling closed-loop washers with oil skimmers and filters can reuse the same detergent solution over and over, further minimizing operating costs. Aqueous Jet Parts washers are being used successfully at many Navy installations. ***Several different aqueous jet parts washers are available through the Navy Pollution Prevention Equipment Program (PPEP).***

How can you achieve these improvements?

Implement Aqueous Jet Parts Washing Equipment.

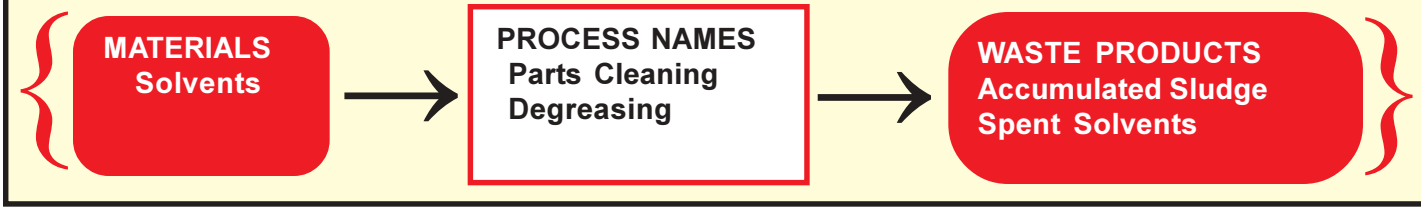
How does this equipment work?

The parts washer sprays hot detergent solution onto parts in an enclosed chamber to remove grime, oil, and dirt. Oil skimmers and filters remove contaminants from the detergent solution for reuse.

How will this equipment save you money?

Aqueous jet parts washers can eliminate the use of solvents and their associated disposal costs. The equipment pays for itself in less than one year based on average equipment cost of between $8,500 and $13,500. For a complete economic analysis refer to the PPEP Book.

Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can eliminate worker exposure to harmful solvents. Implementation will result in the following pollution reductions:

- Reduce solvent use and disposal
- Reduce air emissions related to solvent use

Which shops can benefit most from this technology?

This technology can be used in processes that clean parts. Typical shops include:

- Automotive Maintenance
- Aircraft Maintenance
- Vehicle Maintenance
- Ship Part Maintenance

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel**. Contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.
- **Activity Pollution Prevention Manager**. Request this equipment through the Navy P2 Equipment Program (PPEP). Depending on the application, the Environmental Program Requirements Cookbook may contain project submission information for annual budget requests sent to your claimant.
- **For Additional Technical Information**. More information about this technology can be found on the Joint Service P2 Opportunity Handbook Data Sheet 8_II_A_1 (Web: http://p2library.nfesc.navy.mil/P2_Opportunity_Handbook/8-II-A-1.html) and in the PPEP Book (Web: http://www.lakehurst.navy.mil/p2/index.htm).

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 implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

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