Paint Gun Cleaner

Old Way

Paint guns, fittings and hoses were cleaned with solvents containing volatile organic compounds (VOCs). The contaminated solvents were collected and disposed through a licensed hazardous waste contractor. Thus the old way contributed to increased VOC emissions and generated a waste stream that required management as a hazardous waste

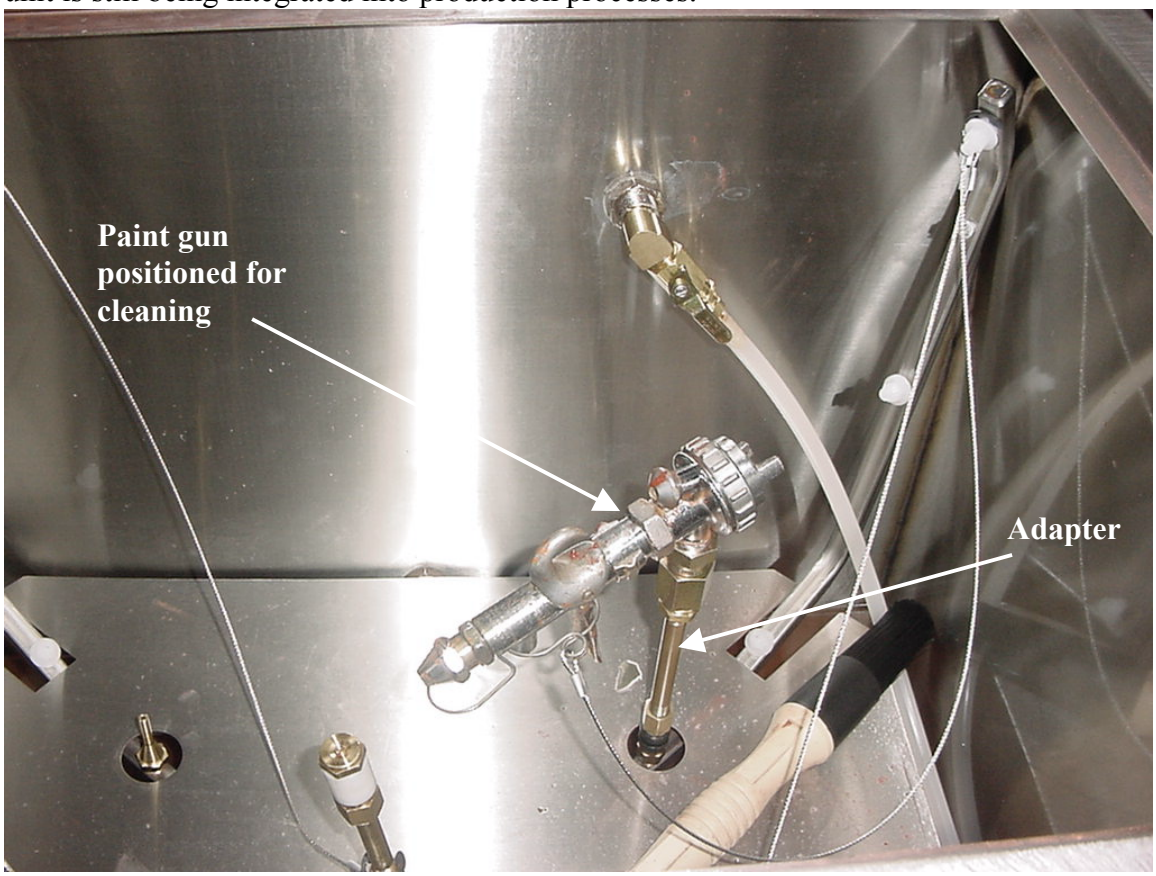
New Way

A commercially available paint gun washer was purchased. The unit utilizes a low VOC, low toxicity, low vapor pressure, and high flash point formulation. This formulation is immiscible with paints so the paint particles can be filtered out and the cleaner can be used for up to a year or more. The solvent is recirculated through the paint guns by an air-operated pump. A timer shuts the pump off.

IT-200 Paint Gun Cleaner (NSN 4250-01-466-6473), Inland Technology Incorporated, 31.5' L x18" W x42" H is stainless steel construction. It incorporates Dual System Design that allows more than one paint gun to be cleaned at a time. Inland Technology phone number is (253) 383-1177, or (800) 552-3100. The unit uses a patented solvent "EP-921" (NSN 6850-01-381-4408).

Experience

When the unit was received the Inland Technology, the field service technician called and arranged a training session. During this visit the unit was assembled and demonstrated. This was a valuable step in developing support for use of the unit. The unit was modified locally with casters. This makes it easier to move the unit to different paint booths in the same or other buildings. Filters and used solvent from the paint gun cleaner are compatible with existing waste streams. A users manual was received with the unit. The Material Safety Data Sheet and operating instructions have been laminated and attached to the system for ready reference. An adapter provided by Inland and shown in the picture below allows the cleaning solvent stream to be piped to the paint gun. This provides more solvent contact with the inside of the paint gun and better cleaning. The unit is still being integrated into production processes.



Benefits

This project eliminates the use and disposal of high volatile organic compound thinners. This reduces VOC's emitted to the atmosphere. The low toxicity and low vapor pressure provide reduced worker exposure. Toluene and Methyl Ethyl Ketone were replaced by the EP-921. Savings are obtained from reduced waste disposal costs ($700), reduced labor costs ($833), and reduced material costs ($1,000). As shown in the Economics

paragraph below the return on investment is about two years based on actual unit cost and estimates of savings.

Economic Analysis

Base quantity waste stream	1380 pounds/year
Annual Pollution Reduction	1380 pounds/year
Unit investment cost	$4,984
Caster installation cost	$125
Annual unit recurring costs	$780
Total unit savings	$2,533
Payback	$5,109÷$2,533= 2 years

Outlook

The unit has been well received but utilization has been small primarily due to low production painting activity. The pollution prevention coordinator will continue to monitor cleaning effectiveness, attempt to further quantify cost savings and request funds for procurement of additional units contingent on production activity.

Point of Contact

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