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POLLUTION PREVENTION

IN RHODE ISLAND

Case studies of the Rhode Island On-Site Technical Assistance Program

Boat Builder Acetone

Fiberglass boat builder implements on-site solvent reclamation and doubles production without increasing acetone usage.

Industry \ Contact

SIC Code: 3732 Fiberglass Boat Builder, Rhode Island

Contact: RI Port Authority Marine Trade Pollution Prevention Research Project

Client #2

Technology Description

The Company provides fabrication, modification, and repair services for fiberglass reinforced plastic (FRP) boats. The product line consists of dinghies (7-9 ft) and sailboats (30 ft) as well as special orders. The Company has been in business for ten years, employs 13 people, and has experienced a significant increase in production in the past five years.

The spent acetone was previously stored on-site prior to hauling via waste services contractor. The spent acetone is now reclaimed on site via a still purchased used for \$2,000.

Feedstock Materials

110 gallons per month virgin acetone

Costs

Cost of a new 5-gallon capacity still produced by Finish-Thompson is approximately \$3,700.

Operation \ Maintenance

Approximately thirty minutes per day of still operation.

Savings

220 gallons of acetone usage per month (projected, given increased production) with no still (\$770) vs. 110 gallons of acetone per month with the still (\$385).

Payback Period

At the reported rate of feedstock reduction, a new Finish-Thompson still would be repaid in under ten months.

Impact

Reduction in the consumption of acetone through reclamation has helped the company avoid a significant increase in purchase of virgin material. Still bottom residues produced during reclamation are lower in volume than the waste acetone previously generated. This represents lower waste disposal costs.