

GREEN FOUNDRY CASE STUDIES

WASTE MANAGEMENT & BENEFICIAL REUSE:

Reduction of Waste from Single-Use Absorbent Rags and Recycling of Oil Separated During Laundering



BEFORE

Description

Historically, old rags were used in the machine shop as absorbents. The rags, typically cut up t-shirts, were only good for a single use. They were picked up daily and disposed of as a Special Waste at a Special Waste Landfill. The machine shop is now on a green, total closed-loop absorbent washing system that extracts the oil from the absorbent material, launders it, and returns it to the facility for reuse. The oil is sent to an oil refinery for reuse. The reusable absorbents come in two different sizes. The smaller pad has 8x to 10x the absorbency of the old rags, and the larger pad has as much as 20x the absorbency.

Environmental Benefits

- The reduction in waste going to the landfill is estimated annually as 300 gallons of oil recycled and 30,550 pounds of rags (not including absorbed material weight).

Cost & Savings

- Rag cost and disposal was approximately \$25,700 annually. New system laundry fee is \$200 per 55 gallon drum, with an estimated drum accumulation of 3 per month for a total cost of \$600. Absorbents provided with recycling program are free. New absorbent material is more absorbent for an estimated demand of 50%.
- Overall savings are estimated as \$18,516 annually.

Other Benefits

Productivity—employees do not have to constantly replace rags so cleaning time is reduced. Eliminates the need for daily pick-up of rags for disposal. Opens space for storage. Decreases the need for forklift drivers to move multiple skids of rags monthly.

Health and Safety—better Hygiene in the Department which reduces slip hazards. Eliminates ergonomic issues from having to dump full containers of rags (strains on torso and arms).

Team Moral—employees in the department are very happy with the new absorbents and their life span. Areas stay cleaner for longer periods of time.

Applicability

- This program can be implemented by any facility using single-use rags for oil absorption and clean-up. Machining and maintenance departments would be ideal candidates.
- An evaluation of local and regional environmental regulations should be completed prior to implementation to determine the appropriate use, reuse, and disposal of absorbent material and spent rags.

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