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Compactor Reduces Waste Handling, Disposal Cost for Furniture Manufacturer

S. Bent and Brothers Inc., a large New England furniture manufacturing company, has significantly reduced its hazardous waste handling and disposal costs by using a compaction machine built by Compacting Technologies International (CTI) of Portland, Ore.

Roger R. LeBlanc, administrative assistant at S. Bent's Gardner, Mass., headquarters, reports that prior to installing the compactor in early 1990, his company was spending nearly \$100,000 per year to manage, store and dispose of hazardous waste. Now, the annual cost has been sliced to well under \$30,000.

The waste materials, paint booth air filters and overspray particulate, are generated by the company's furniture spray finishing process. The spraying is done in large booths where air is drawn through large paper filters to help control overspray. The filters eventually become partly saturated with solvent and clogged with overspray particulate, and while they are cleaned several times during each shift they must be changed often.

Since the spray materials contain nitrocellulose and traces of xylene and toluene, the used filters are considered hazardous by the federal Environmental Protection Agency (EPA) and the state Department of Environmental Protection and must be handled accordingly. The filter-containing drums cannot be landfilled, but since the filter materials have a high Btu content, they are ultimately shredded and blended with a lower Btu fuel for use in cement dry kilns.

The steel drums fit snugly in the machine's steel contain-

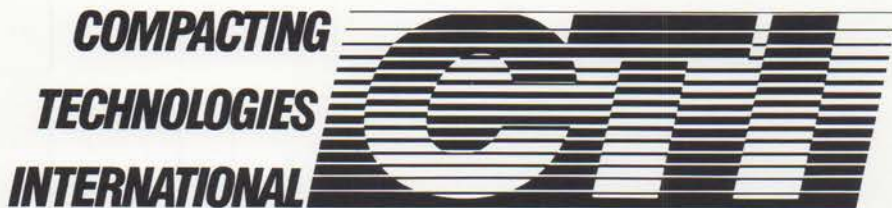
ment chamber and rest on a steel anvil that conforms to the underside of the barrel. The hydraulically driven compression plate conforms closely to the internal diameter of the barrel to prevent the escape of any waste material during compaction. Additional material can be added through a loading chute and compacted until the drum is full.

A microprocessor in the top half of the unit monitors safety functions and the compaction cycle. When there is little resistance from the material under compaction, the pump operates in the low pressure range. The machine automatically switches to the higher pressure when it has a harder time pushing the platen down. This two-stage hydraulic system, according to CTI, is more energy efficient and puts less strain on the hydraulic pump.

When the total compaction force reaches a certain pressure, the microprocessor signals the motor to go into a hold-down or continual push cycle. This sustained push is held for a preprogrammed amount of time improving the compaction ratio.

The compactor consistently gives compacting ratios of 14 to 1 on the filters and 4 to 1 on overspray powder. "So instead of shipping 14 barrels of used overspray filters we're now shipping just one," says LeBlanc. With this performance, the machine paid for itself in two or three months. Beyond the \$405 per barrel disposal costs, the company has realized labor savings by not having as many filled drums to store, label, prepare for transit and manifest.

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