



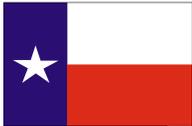
# System Application



SMITH & LOVELESS INC.

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## PISTA® Reduces Expense, Hassles for Major Brewer's Glass Bottle Plant



**Application Profile:** Houston Bottling Plant  
**S&L Equipment:** PISTA® Grit Removal System  
**Installed:** 2004



When a glass bottler subsidiary of a major U.S. brewer sought to reduce their hauling costs and hassles associated with its industrial washdown water, they contacted Smith & Loveless for tangible solutions. Specifically, the company wanted to recover the cullet (broken glass chips) accumulated in its large production process and prevent difficult-to-handle sludges, which had become cost-prohibitive. Because this Texas bottle manufacturer produces more than

System Design Profile	
Flow Rate:	400 GPM Cullet Water
Constituents:	80 Mesh Cullet 10 mg/l Concentration
Equipment	PISTA® Model 1.0A with Complete Handling Components
Construction:	316 Stainless Steel Turnkey Installation

600 million beer bottles annually, an effective solution would yield major cost-savings.

Cullet at the plant is normally collected during the routine facility washdown and stored in a basement chamber

with a sump. Over time, the cullet-concentrated sludges became exceedingly maintenance intensive to handle—particularly in an annual oil/water separation process—and too costly to haul off-site because of the complexity of sludge composition. Additionally, it also prevented waste streams from being discharged to the city utility without surcharges. Because the cullet's particle size (consistently in the 80 mesh range) is similar to grit normally found in a municipal wastewater plant, Smith & Loveless recommended its PISTA® Grit Removal System to remove the cullet from the washdown and prevent the costly hassles. Smith & Loveless assisted the company's engineering division with a complete turnkey solution, assuming the design, site work and installation oversight in order to expedite the project's completion.

The PISTA® system incorporates a patented design to generate a circular vortex within its chamber in order to separate small non-soluble particles from a water stream. In this case, the PISTA® vortex literally sweeps the cullet across the chamber basin and into a small, center opening of the collection hopper. The cullet water is pumped at 400 gallons per minute (or 576,000 gallons per day) and more than 95% of the cullet is

*This turnkey PISTA® System features stainless steel construction, including the capture chamber and dewatering screw conveyor. The whole system works to remove more than 95% of the cullet from the waste stream and reduce burdensome hauling and maintenance costs.*

removed and captured in the hopper. The system also features post-capture handling components, including a remote mounted turbo pump, a concentrator device and dewatering screw conveyor. These components work efficiently in concert to pump the collected cullet, concentrate and wash it, and finally dewater it prior to being collected in a bin for simple hauling. The clean cullet removed by the PISTA® system provides the potential for the company to recycle it back into production in the future while meeting the current demands of eliminating excessive costs and maintenance hassles that plagued the operation prior to installation.

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Smith & Loveless Inc. System Innovators for global pumping, water and wastewater treatment