

Textile Plant Uses New Air Floatation Technology to Improve Wastewater

Challenge

This Southeast United States specialty denim manufacturer was paying fine for levels of biological oxygen demand (BOD) and total suspended solids (TSS) that exceeded its National Pollutant Discharge Elimination System (NPDES) permit. Production was also limited by the inability of the wastewater treatment plant to process more than 60 gpm (0.2 m³/h). The plant used one reverse skimming dissolved air flotation (DAF) unit with a separate contact tank for chemical addition.

Solution

GE Water & Process Technologies conducted a site survey and engineering audit to determine the best solution, and jar tests were performed to determine the type of chemical treatment that was needed. System modifications and chemistry changes were implemented, and the air floatation unit was modified to incorporate the new entrapped air floatation (EAF) technology licensed from Stewart Water Solutions Limited to maximize the reduction of BOD and TSS.

Results

The textile manufacturer was able to resume full production while meeting all NPDES permit requirements with no surcharges. The project savings from sludge reduction, reduced chemical usage and the avoidance of new capital equipment totaled US\$500,000.

About GE Water & Process Technologies

Water & Process Technologies, a unit of GE Infrastructure, is a leading global supplier of water, wastewater and process system treatment solutions. Water & Process Technologies delivers customer value by improving performance and product quality and by reducing operating costs and extending equipment life through a broad range of products and services. These products and services are used to optimize total water/process system performance, safeguard customer assets from corrosion, fouling and scaling, and protect the environment through water and energy conservation. For more information on Water & Process Technologies, visit gewater.com.

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