

# Controlling Graphite Waste

## CLIENT PROFILE

A leading producer of tubular products mainly dedicated to oil and gas applications. The facility includes an electric arc furnace and a rolling mill that produce seamless oil country tubular goods (OCTG), line and standard pipe, coupling stock, and mechanical tube..

## OPERATIONAL CHALLENGE

Approximately 2 tons of graphite per day is sprayed onto mandrel bars in the pipe mill for lubricity in the production process. What is not internally recycled flows into the graphite pit, and is then pumped to a partitioned roll-off box for solids settling. Due to insufficient settling time, the majority of graphite overflows out of the roll-off box into the pipe mill scale pit, acting as a water contaminant.

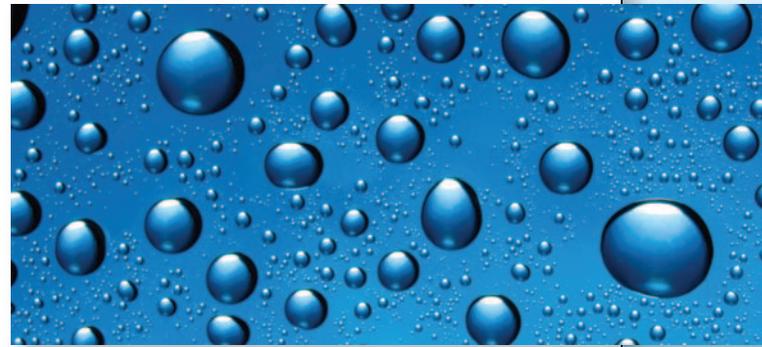
## CHEMICAL SOLUTION

Kroff Chemical Company, Inc. engineered a solution to dewater the graphite slurry in the box through a filter press. Filter cloth selection was critical to the process, and is allowing for recovery of a 99-percent pure graphite "cake", with a moisture content of 37 percent, and filtrate water discharging to the scale pit at less than 1 percent graphite.

## BOTTOM-LINE RESULTS

As a direct result of Kroff's filtering process, the system keeps graphite waste out of the pipe mill water system and improves water quality while reducing chemical treatment costs. The reduction in graphite in the pipe mill water system reduces outfall cBOD, oil

and grease, and total suspended solids discharged to the local publicly owned treatment works (POTW). The result is a process that not only introduces cleaner water to the POTW, but provides the opportunity to recycle a higher percentage of graphite.



*Kroff Chemical Company, Inc. provides custom-blended chemicals and specialty services that improve clients' critical water and process system performance, which helps maximize efficiency of operations and lower costs of operation.*

*Kroff Chemical's services focus on energy efficiency, regulatory compliance, waste minimization and water reuse, fully automated and integrated chemical applications, and a safety-conscious approach.*

*With the support of Kroff Chemical Company, Inc., facilities operate with less staff, but they operate safely, efficiently and profitably. Clients focus more on their core competencies and look to Kroff Chemical Company, Inc. to treat, operate and maintain their critical water and process systems.*