

CASE STUDY

KFS: KLEERFLO SUCTION (DEMAND SIDE) FILTER

RE-USE OF MINE PROCESS WATER - GENERAL PURPOSE AND GSW, PMG MINE, RUSTENBURG



Client: PMG Mine
Industry: Mining – Final Filtration – Process Water and Gland Service Water
Region: North West Province
Product: KFS 7E3/250/10-08/25
Installation Date: 2008

Challenge

- Mines recycle process water and use some of it for Gland Service Water (GSW).
- The recycled process water may have high suspended solids levels.
- The suspended solids cause damage to equipment.
- Specifically, dirty GSW will reduce the life of the slurry pump stuffing box components and gland packing.
- For this application, filtration is required on the suction side of the pump that supply process water to the plant.
- Filtration on the demand side of pumps runs the risk of starving the pump of water, especially during the self-cleaning (backwash) cycle.

Application

- **Final Filtration** / Filtration of **Process Water** / **Gland Service Water** / installed on **suction (demand-side)** of the pump that deliver the water to the plant.

Solution

- Design of the KFS filter is rooted in the principle of inherent simplicity:
 - no rotating parts
 - very few moving parts
 - no close tolerance elements
 - no electric motor
 - high quality, durable, stainless steel wedgewire screens.
- KFS filters are designed specifically for tough industrial applications.
- Low maintenance- and running costs.
- Long uninterrupted filter runs, efficient filtration and filtrate in compliance with client acceptance standards.
- Integral processing of oversized particles – so no manual pre-screens required.
- KFS filters are designed to provide filtration on the suction (demand) side of high-pressure pumps without the risk of starving the pumps during self-cleaning (backwash) cycles.
- The mine installed a Kleerflo Suction Filter – model **KFS 7E3/250/10-08/25**.
- Filtration provided at 250µm.

Results

- Cleaner process water resulted in lower maintenance costs on pumps and plant equipment and a decrease in downtime.