



CONSERVATION OF RESOURCES

Improving Bulk Fluid Condition at Lumber Mill

Technical Application Bulletin

PROJECT BACKGROUND

DISCOVER

- Forest, land, and timber products company with high-level particle contamination in bulk fluid storage vessel.
- Upper management ordered all locations to improve bulk fluid cleanliness practices after consultation with fluid supplier.



DIAGNOSE

- 2,000 gallon bulk fluid reservoir with 100-1,700 gallons of ISO VG 68 fluid at a given time
- Fluid contamination levels averaging an ISO 4406:1999 cleanliness class of 21/20/18 but required a solution that achieves a class of 16/14/11
- Implementation constraints included maintenance budget, fluctuating fluid volume and 16/14/11 fluid cleanliness class target.

INDUSTRIES



DESIGN

What We Did: Schroeder recommended the KLD, the Dual Stage Kidney Filtration Skid.

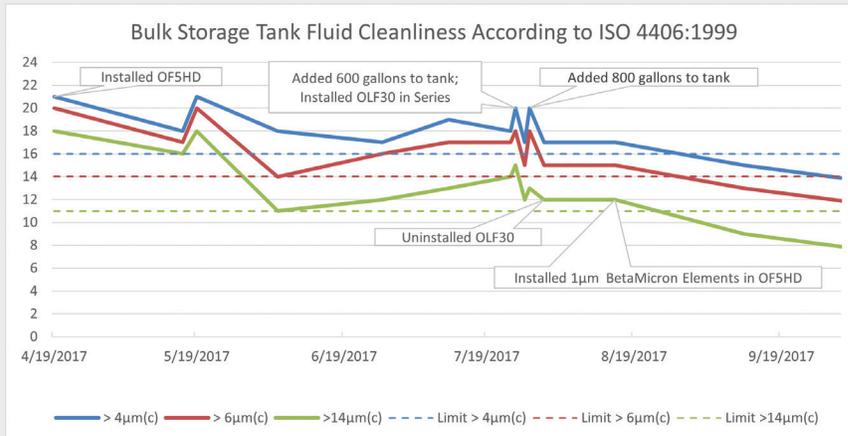
Course of action

1. Due to these constraints and application conditions, SI recommended the KLD filter system solution, with 5 μ m and 3 μ m staged filtration, at a flow rate of 10gpm.
2. Schroeder estimated that by operating the KLD continuously with KGZ element technology and a progressive filter element strategy, the customer could achieve the targeted fluid cleanliness class.



DELIVER

- The KLD solution was implemented and provided a three-class cleanliness improvement within one month.
- The customer progressed the filter element configuration by using 3µm rated filtration in both stages. This yielded immediate results but did not reduce contamination to the targeted level over time.
- To combat an unexpected rise in contamination, Schroeder mounted an OLF30 in series with the KLD to help contain and reduce the bulk contamination. The OLF30 filter was uninstalled after the bulk contamination event was contained.
- The customer then changed the element configuration by using 1µm rated filtration in both stages, ultimately reducing the contamination an impressive cleanliness level of 13/11/7.



ROI

Underlying assumptions:

- The estimated service life extension does not consider fluid handling methods beyond the point of storage, system design, or other contributing factors.

PRODUCT SPECS

KLD Offline Filtration System:

Flow Rate: 10 gpm flow rate

Dual-Stage Filtration

Element: 27" high capacity, high efficiency KGZ filter element technology

Power Supply Voltage: 120 V AC / 60Hz / 1 Ph.

Compatibility: For fluids up to 2,500 SUS

CUSTOMER BENEFITS

- Met upper management demands by achieving exceptional fluid cleanliness
- Improved system component service life by a minimum factor of 7
- Conserved maintenance, labor, and production resources

FURTHER APPLICATION AREAS

- Industrial fluid power systems
- Bulk fluid preservation and reclamation
- Industrial power transmission systems (i.e. gearboxes using lighter-weight lubricants)