Cleaning Hydraulic Fluid on a Marine Dredge

Spinner II® Centrifuge Keeps Machinery Operating 24/7



Scenario



Manson Construction Company is a major marine construction specialist operating in coastal regions throughout North America and internationally. Manson Construction has more than 100 years of experience and operates from five locations. The company maintains a large fleet of heavy-duty dredges, derricks and barges used in dredging, land reclamation and construction projects. During a project in California, Manson Construction turned to Spinner II centrifuges to solve a problem in a machinery hydraulic system.

During a dredging project in Oakland, CA, the Manson crew experienced problems with hydraulic system failures on the *Valhalla*, a 256 ft. (81 m) clamshell dredge. According to Equipment Manager Charlie Butcher, "We had some issues with foreign material plugging the orifice in the control pilot system for our dredging bucket tag line tensioner, which is a constant tension system used to keep the bucket from turning when suspended.



"Upon inspection of the entire system, we found the return filtration micron rating was not sufficient to prevent plugging of the variable control orifice used to control the tension on the bucket by the operator."

Solution

The Manson crew addressed the problem by first opening up and cleaning the entire hydraulic system, including the tank and suction filters. The next step was to control further build-up of debris in the system.

"We installed a closed-loop kidney filtration system using a Spinner II Model 3600 centrifuge and an electric-motor-driven pump," continued Butcher. "We also installed a staff tank desiccant breather filter which removes the moisture entering the tank and filters the air to 3 microns."

The Spinner II Model 3600 centrifuge is capable of removing both large debris and ultra-fine solid particles smaller than 1 micron. The system continuously cleans up to 16 gpm (60 L/min) while the unit is operating.

Results

The Spinner II centrifuge system has resolved hydraulic fluid problems on the *Valhalla*.

"Since the installation and operation of the filtering system, we have had no problems with this unit working 24/7 for more than a year. It has greatly reduced our hydraulic system failures and downtime working on the plant cleaning the debris out of the system.

"Thank you for a great filtering system."

SPINNER II® PRODUCTS

T.F. HUDGINS INCORPORATED
SINCE 1947

P.O. Box 920946
Houston, Texas 77292-0946
Toll-free: 800-231-SPIN (7746)
Tel: 713-682-3651
Fax: 713-682-9702
www.SpinnerII.com

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