MAKING A CONSCIOUS CHANGE THROUGH CONVERSION TO EALS

RSC ENVIROLOGIC® CASE STUDY WITH SEASPAN MARINE

Vessel fleets face an increasing number of environmentally focused regulations, adding complexity to their operations and creating urgency around compliance. These regulatory requirements, however, do not offset an operator's need for products that perform consistently well.
With the right readily biodegradable* lubricants, marine transportation companies can see performance benefits that can save time and money, while further protecting the environments in which they operate.

BASED ON THE QUALITY PERFORMANCE OF THE LOADER, SEASPAN MARINE IS NOW LOOKING TO EXPAND THE USE OF RSC BIO SOLUTIONS' HYDRAULIC OIL INTO DECK-MOUNTED CRANES, ANCHORS AND OTHER ON-SHIP MACHINERY APPLICATIONS.

BACKGROUND

Seaspan Marine is a prominent marine transportation company serving the west coast of North America, from Mexico to Alaska and the Canadian Arctic. In addition to providing ship docking and ferry services to the port of Vancouver, Victoria Esquimalt and other British Columbian ports, Seaspan Marine transports forest products, as well as a variety of other cargos. This cargo is delivered via a large and diverse fleet of tugs and barges specially tailored to move the individual products in a safe, efficient, cost-effective and environmentally responsible manner.

CHALLENGE

The U.S. Environmental Protection Agency (EPA), under the Vessel General Permit (VGP), requires that all vessels

*As per OECD 301B or ASTM D7373

over 79 feet use an "Environmentally Acceptable Lubricant" (EAL) in oil-to-water interfaces unless technically infeasible. The 2013 VGP revision also requires any above water line hull cleaning or deck wash-downs resulting in discharge to be conducted with "minimally toxic, phosphate-free and biodegradable" cleaners and detergents as defined in the permit.

These regulations are further extended to non-recreational or non-military vessels less than 79 feet in length that are operating as a means of transportation through the recently announced updates to the 2014 Small Vessel General Permit (sVGP).

With these announcements, it is becoming more and more apparent that the U.S. is leading the way in the adoption of biodegradable products, such as EALs, in marine applications. For multi-national operators, the country in which they operate that has the most stringent product requirements determines their product selection.

Seaspan Marine's operations take them into Washington, Oregon and Alaska, so to be 2013 VGP-compliant they started to explore the use of EALs in their oil-to-water interfaces.

SOLUTION

A number of manufacturers approached the company about EALs, so Seaspan Marine looked at all of the major brands to see what would be required for the conversion from petroleum based oils to EALs.

Ultimately, in March 2014, the company decided that RSC Bio Solutions' products were the best fit for their fleet's applications. For the hydraulic system of its barge log-loading machine, Seaspan Marine chose to use RSC EnviroLogic® HF 46 HP† hydraulic fluid, while choosing RSC EnviroLogic® HF 68 HP†† hydraulic fluid for stern tube applications.

Seaspan Marine considered a number of factors when selecting the RSC Bio Solutions' RSC EnviroLogic products. The products are fully compliant with the EPA EAL requirements and compatible with a majority of the systems that Seaspan Marine would convert. Additionally, a minimal amount of cleaning and flushing of the existing systems is required in order to introduce the RSC EnviroLogic EALs. With the conversion of a number of older vessels, the ease and timeliness of that conversion was very important.

As these products are critical to marine operations, distribution plays a large part in ensuring that quality, compliant products are available. Seaspan Marine needed a product that would be supported in a location with a readily available supply. RSC Bio Solutions' products were available in Seattle and offered by regional, national and multi-national distributors.

"Like all marine operators, we're fairly conservative, and we don't change easily with systems that are already operating fine to something that may or may not change the performance parameters. With a boat, you can't just park it on the side of the road and call somebody. The crew onboard is relying on that machinery for

†Previously EnviroLogic® 3046 Hydraulic Fluid
††Previously EnviroLogic® 3068 Hydraulic Fluid

the safe operation of their vessel, and so experimentation has to come in a very measured kind of way."

John Fowlis
Vice President, Fleet Maintenance,
Seaspan Marine

RESULTS

The quality of performance is always a concern when switching to a new product, but Seaspan Marine has seen equal or superior performance from the EALs compared to petroleum based products. In fact, they've found that the hydraulic system of the log loader was actually running cooler with RSC Bio Solutions' product, which prolongs the life of the machinery in this demanding application.

Based on the quality performance of the loader, Seaspan Marine is now looking to expand the use of RSC Bio Solutions' hydraulic oil into deck-mounted cranes, anchors and other on-ship machinery applications. They plan to be fully EAL-compliant in their stern tube applications in early 2016, converting the seals and fluids of the impacted vessels as they go through their regular docking cycles.

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RSC ENVIROLOGIC® HF 46 HP HYDRAULIC FLUID†

RSC EnviroLogic® HF 46 HP is a high performance, readily biodegradable*, synthetic ISO 46 grade hydraulic fluid. It is intended for severe service, extreme high temperature (250°F), low temperature (-40°F) and high pressure (5000+psi) applications.

RSC ENVIROLOGIC® HF 68 HP HYDRAULIC FLUID††

RSC EnviroLogic® HF 68 HP is a high performance, readily biodegradable, synthetic ISO 68 grade hydraulic fluid. It is also intended for severe service, and it allows similar oil change intervals and duty cycles in typical propulsion systems.

For more information about RSC Bio Solutions, visit us at rscbio.com or call +1 704.684.6100.

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