

Tugboat Winch

VECTOR® COUPLING

PROBLEM

One of the World's largest diesel engine distributors, located in Canada, required a reliable coupling for use on a commercial tugboat's hydraulic towing winch system. The coupling connects the winch's hydraulic pump to the front of one of the tug's twin

1500 HP diesel propulsion engines that transmit 450 HP to the pump. The winch system utilizes heavy-duty synthetic nylon rope, up to 3 in. diameter, to tow massive cargo vessels through harbor channels as they move in and out of port.

The coupling needed to accommodate a large amount of radial and axial misalignment due to the sway of the resilient mounted engine as the tug moves through the current and waves.

SOLUTION

After a careful review of the challenging application requirements, Stromag engineers recommended the use of a Stromag Vector® 20 coupling, which has a maximum torque rating of 14,603 ft.lbs. (19,800 Nm) and an extremely high misalignment capacity.

The highly flexible Vector coupling utilizes Stromag's GE elastic element concept with high tensile strength fabric embedded into the rubber. This design has years of proven performance in diverse applications worldwide. The coupling provides zero backlash, flywheel-to-shaft and shaft-to-shaft connections. The radial arrangement of the coupling's flexible element within a compact design allows for installation and removal without the need to move the drive units.



HIGHLIGHTS

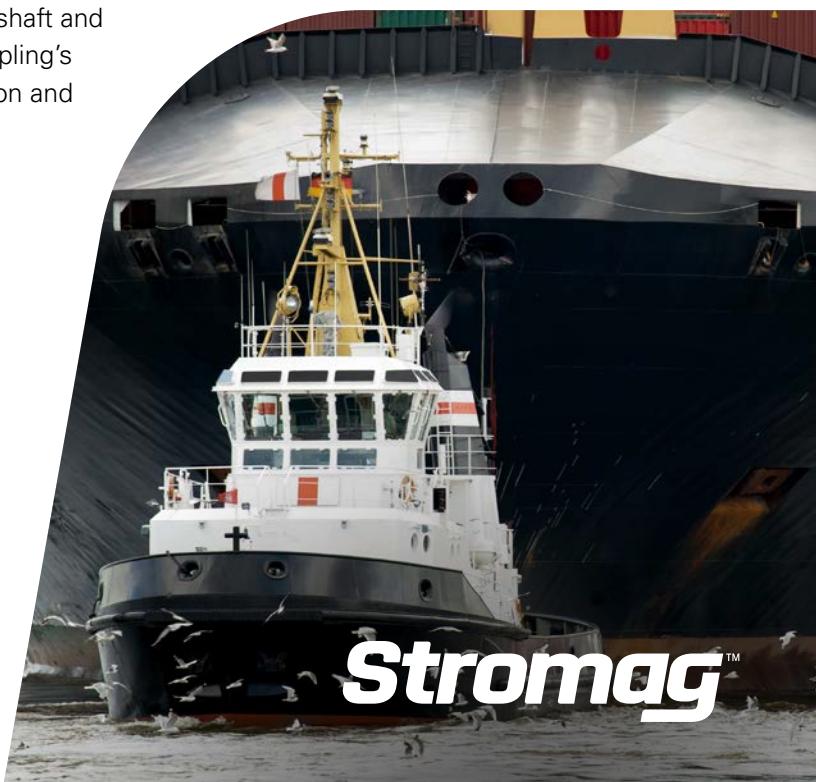
- Compact flexible coupling design
- Special rubber-fabric element enhances service life
- Low reactive forces
- Zero backlash
- Easy to install
- Accommodates large shaft displacements in all directions

Regal Rexnord

Hansastraße 120
59423 Unna - Germany
+49 2303 102-0
customercare.eu@regalrexnord.com
stromag.com | regalrexnord.com

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