

TANKEROperator

MARCH 2009

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Incorporating:
The TANKEROperator
Annual Shipping
Review

Safety, the major benefit of synthetic mooring lines

The weight of wire requires extensive crewing for handling and securing the lines. Easily corroded by salt water, wire requires periodic lubrication to keep rust and corrosion at bay. The cost of maintenance, which includes relubing, the hire of special spooling trucks for end-for-ending of the lines and the maintenance of deck hardware abraded by the wire, is ongoing.

With these problems in mind, the benefits of switching to high-performance synthetic mooring lines are more appealing to both owner/operators and seafarers, who are finding dramatically shorter mooring times, safer mooring operations, reduced maintenance and cleanup and significant cost savings.

Mooring time improved

Northern Marine Management, the shipmanagement arm of Stena Bulk, recognised the benefits of switching from wire rope to high-performance synthetic mooring lines when they replaced the wire rope on the 'P MAX' *Stena Performance* with Samson's AmSteel®-Blue, which is made with Dyneema®, a high-modulus polyethylene (HMPE) fibre.

The installation took place over four days in February 2008. For the crew, the results were immediate: their first mooring took about 30 minutes where before it took as long as 2.5 to three hours at the same port. Handling the lightweight lines that are size for size 1/7th the weight of wire was simple and safe. After the ship was secured, clean up was nearly eliminated because there was no grease to foul the decks and hardware. To date, more than 10 Northern Marine vessels have been outfitted or retrofitted with AmSteel®-Blue mooring lines.

With 15 new tankers under construction, BW Shipping, who manages a worldwide fleet of 53 vessels and Samson began a cost/benefit analysis concerning the advantages of switching from traditional wire mooring lines to synthetic mooring lines in 2006–2007.

There are several problems associated with the use of wire ropes for mooring operations.

Possibly the greatest problem associated with wire ropes is crew safety. Back injuries caused by the extreme weight of wire are common. Fishhooks, caused by broken strands, are a frequent cause of severe hand and other injuries. When heavy, hard to manage wire breaks under a load, it recoils with tremendous energy, causing potentially life-threatening injuries.

The costs associated with crew safety add up quickly. While it is difficult to anticipate the cost of litigation as a result of worker

injury, many companies are seeing the benefit of reducing their exposure to expensive claims by using synthetic lines that are much lighter, safer and easier to handle.

"The initial doubts were about the higher costs involved and the actual quality of the product, as we were unfamiliar with this type of rope. The price issues were covered by an in-depth cost-benefit analysis that looked at all the costs involved with mooring wires, which we had not previously considered in detail," said Captain Paul Jones, BW Shipping's marine department's general manager.

First, the cost differences for maintenance between wire and synthetics were examined. According to Capt Jones, "There can be significant savings in maintenance, greasing, and crew time since there is almost no work



Mooring a vessel can be a messy business.

to be done.” The company could expect to save approximately \$20,000 to \$50,000 per vessel every two years, since the synthetic mooring lines do not need refurbishing like the wire version.

Next, they looked at the savings of more efficient mooring operations. Since the synthetic lines are lighter and easier to handle, they estimated that deckhands could cut port deployment time by one hour. Over the course of the year, this added up to an annual savings of \$81,000. It was calculated that BW Shipping’s return on investment would be reached in approximately four years.

This was a key finding considering the life expectancy of wire is four to five years and after the initial purchase there continues to be ongoing costs associated with wire. Although the life expectancy of synthetic mooring lines is unknown at this point in time, in some cases they have been in service for more than 11 years.

The overall cost benefits derived from reduced mooring times and increased safety of mooring operations that come from using high-performance synthetic mooring lines influenced BW Shipping’s decision to outfit



Samson’s AmSteel®-Blue on a test winch.

11 of the newbuilding tankers with Samson’s AmSteel®-Blue.

“When you look at the whole picture and the actual cost involved over time and couple it with the personal safety issues, it makes it worthwhile,” said Capt Jones.

The safety issue ranked highest with BW Shipping. “With ships of all types and sizes,

there is one common factor — the crew involved. We feel that we need to look at how we can make life both easier and safer for them when mooring. All feedback to date has been very positive and the crew can see the benefits of deploying these ropes in terms of time saved and ease of handling,” he added.

TO

SAMSON HIGH-PERFORMANCE SYNTHETIC MOORING LINES

Faster Mooring + Fewer Crew + Longer Life = REAL \$AVINGS\$

RETIRE THE WIRE AND SAVE ON MOORING COSTS

Samson high-performance synthetic ropes replace wire mooring lines with a lighter, safer alternative that’s proven to reduce mooring times by as much as 2/3rds. With fewer crew required, reduced handling injuries, and a service life that’s at least 3 times that of wire ropes the savings are real. When you add up reduced maintenance, no damage to deck hardware, no grease or re-lubing, and the best service and support in the industry, it’s easy to see why crews are celebrating when Samson comes aboard.

For more information visit www.samsonrope.com/offshore

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