



CASE STUDY

“K” LINE LNG SHIPPING (UK) NAVIGATES NEW LOCKS WITH SAMSON



*New AmSteel[®]Blue mooring lines
on re-surfaced and prepped winches
ready for deployment*



BACKGROUND

The 2016 expansion of the **Panama Canal** locks shortens the passage from the Atlantic to the Pacific Ocean by 9,000 miles for vessels that exceed the size limits of the old locks. This is a welcome alternative to “going ‘round the horn” through the Straits of Magellan, or cartage operations from coast to coast. For vessels from Asia heading to the east coast of the United States, it significantly shortens transit times compared to the alternate route through the Suez Canal. With container and bulk carrier vessels growing larger with each generation, the need for expanding the locks has evolved, and the effect on global shipping has been immense.

WIRE IS OUT. SYNTHETIC IS IN.

New regulations for the locks also mandated that mooring lines be upgraded; steel wire ropes are not allowed on vessels transiting the new locks.

Samson field technicians work with crews to install new mooring lines with proper tension



Retrofitting to light-weight, high-performance AmSteel[®]Blue brings safer, more efficient mooring operations, longer service life and dramatically reduced maintenance costs.



INDUSTRY RECOGNIZES SAFETY AND RELIABILITY OF SYNTHETIC ROPES

The Panama Canal Authority, through ACP Advisory to Shipping No. A-08-2017 of March 6, 2017, alerted vessels owners and operators that “Vessels are required to have six manila or synthetic mooring lines forward and six aft, in good condition prior to commencing transit,” and that, “The size and strength of these lines shall be suitable for the vessel’s size in order to safely dock, moor at a lock approach wall, or secure the vessel in a lock chamber.”

“K” LINE SELECTS AMSTEEL[®]-BLUE

“K” Line LNG Shipping (UK) (hereinafter referred to as KLNG UK) currently manages 8 LNG carriers, some of which needed to be equipped to maintain their ability to trade efficiently anywhere in the world. Compliance with the Panama Canal Authority mandate was critical. All KLNG UK vessels with steel-wire mooring lines and the potential to transit the canal were retrofit with Samson high-performance AmSteel[®]Blue synthetic mooring lines. The two new build vessels KLNG UK will manage are also to be Panama compliant. Their HMPE mooring ropes have recently been approved to be upgraded to AmSteel[®]Blue from the proposed yard supply.

With previous experience retrofitting other vessels in their fleet with Samson AmSteel[®]Blue, KLNG UK recognized the value Samson brings to the table. Jonathan Heath, Marine Superintendent in KLNG UK’s Ship Management Division said, “Samson has a proven record with LNG and tanker experience,” which was important to them in this highly-scrutinized industry. AmSteel[®]Blue also comes with the most complete package of pre- and post-sales customer care in the industry. Retrofitting to light-weight, high-performance AmSteel[®]Blue brings safer, more efficient mooring operations, longer service life and dramatically reduced maintenance costs.

Samson AmSteel[®]Blue is a 12-strand single braid rope made with 100% Dyneema[®] SK78 fiber. It is a size-for-size replacement for steel-wire ropes that is at least as strong, but weighs 85% less. Easy and safe to handle, injuries from broken, fish-hooked strands and excessive weight are eliminated. With no re-lubrication required and virtually no damage to deck hardware from abrasion, maintenance costs are greatly reduced. Because it is non-jacketed, it is easy to inspect. Best of all, with reasonable care, AmSteel[®]Blue typically outlasts steel wire rope by a factor of three.

ALL HANDS ON DECK FOR TRINITY GLORY’S RETROFIT

The latest member of the KLNG UK fleet to undergo retrofit is the *Trinity Glory*. It is a study in collaboration—efficient installations, good training, and the value of close cooperation between supplier and customer. Samson’s field support technician boarded the vessel during a maintenance period at the yards of Malaysia Marine and Heavy Engineering. While yard cranes were loading the 25 spools of new mooring lines aboard, all deck hardware was surveyed for compliance to Samson’s surface standards.

SURFACE PREP: A MUST

Steel-wire ropes typically leave deck hardware with severe surface damage: grooved and often rusted, pitted and scarred from severe abrasion. Samson field service technicians surveyed the hardware and trained the KLNG UK crew on how to prep the surfaces to the acceptable standard 300 micro-inch surface level. The standard was quickly established on all deck hardware that would come in contact with the rope.

PARTNERS IN TRAINING

The following day, Samson and KLNG UK joined forces at the forward mooring winches for a class on proper installation techniques for the ropes. Using existing hardware—bits, fairleads and chocks—to pre-tension the lines while loading and packing the drums was demonstrated. How to maintain pre-tension levels while loading winch drums, how to pack the drums, and cross-winding techniques to keep lines from diving in use were all thoroughly discussed. By the end of the first day, 7 mooring lines had been installed. More importantly, the crew showed complete competency in the installation techniques required. By the end of the following day, all 25 mooring lines had been installed.

Classes were also held for the officers and crew on best practices for handling and achieving the highest performance from the ropes. The importance of passing this information to following captains, officers and crew during rotations was stressed. This promotes safer, more efficient mooring operations and maximum working life of the ropes. All this dovetails nicely with KLNG UK's "K"ARE Project—a company-wide safety culture awareness initiative which encourages everyone to take an active role in the safety of the vessel and its crew. Enhanced communication amongst the on-board crew and their shore-based operations is stressed.

Yuzuru Goto, Managing Director of "K" Line LNG (UK) says the goal is "Not to punish, but to help our people collaborate to manage failures before the situation becomes critical and leads to a major accident."
—LNG World Shipping July/August 2017.

The "K"ARE Project to promote a safety culture had its initial workshop on board the *Trinity Glory*.

KLNG UK's Chief Officer aboard the *Trinity Glory* said, "It was a great professional cooperation...the support was excellent, received on a daily basis during Mr. Maassen's (Samson field support technician) attendance." It's all part of The Samson Advantage—the industry's most complete package of pre- and post-sales services combined with superior products like *AmSteel®Blue*. The initial hardware surveys, guided installations, crew training in handling, inspections and care result in safer, more efficient mooring operations and longer-lasting mooring lines. A customized mooring manual accompanies every installation, with full documentation and specifications for the new lines, technical information and bulletins, splicing, care and handling information.



Proper surface prep helps ensure the longest service life for these critical lines

"It was a great professional cooperation... the support was excellent, received on a daily basis during Mr. Maassen's (Samson field support technician) attendance."



Cross-winding techniques help eliminate diving on the drum

SAMSON CASE STUDY “K” LINE LNG SHIPPING (UK) TURNS TO SAMSON TO MEET PANAMA CANAL TRANSIT REGULATIONS



“A valuable investment, providing safe and efficient mooring operations—everyone is happy and stress levels have gone down.”



AmSteel®-Blue {872}

WITH
Dyneema®

OUTFITTING THE FLEET WITH SAMSON

The crew and management of the KLNG UK *Trinity Glory* are very pleased with their new *AmSteel®-Blue* lines. Besides being compliant with regulations to transverse the new Panama Canal locks, according to the Chief Officer, mooring time is significantly reduced—with man hours saved because greasing is unnecessary, as is the process of removing old grease from wires and the chemical cleanup required with wire ropes. They have found Samson, and *AmSteel®-Blue*, “A valuable investment, providing safe and efficient mooring operations—everyone is happy and stress levels have gone down.”

KLNG UK still has additional vessels scheduled to be retrofit with Samson lines; the next on the schedule being the *Trinity Arrow*, and the successful partnership between KLNG UK and Samson continues. With information on best practices for safe handling, installing and maintaining the new ropes being disseminated through the crews as they are rotated through the vessels, retrofit installations will become even more efficient. It positively impacts the climate of safety that is critical in complex operations like vessel mooring and transiting the new locks on the Panama Canal, and dovetails nicely with the safety culture at KLNG UK.

FOR ADDITIONAL INFORMATION:

For more information on Samson’s complete line of high-performance ropes, visit our website, SamsonRope.com, or contact our customer service department at CustServ@SamsonRope.com



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