

currents

NEW DEVELOPMENTS IN SYNTHETIC ROPE TECHNOLOGY

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Benefits abound when synthetic slings are chosen for heavy lifts

PEOPLE MAKING THE DIFFERENCE

Staffing changes fortify Samson's strengths



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Vulcan Field Trials Successful

Samson's synthetic emergency tow-off pendant Vulcan is currently under trial on the U.S. West Coast and the results so far have been excellent.

Vulcan is made of 100% Technora® and is enhanced with Samson's patented heat-resistant coating, which is applied to the strength-member core. Samthane coating is also applied to the jacket to provide protection against abrasion, ingress of foreign material, and damage caused by exposure to ultraviolet light. Prior to heat exposure Vulcan's new rope breaking strength meets or exceeds the industry standards.

Required by most if not all ship terminals, the ETOP is positioned along side the vessel and monitored in order to maintain a specific distance from the water. Adjustments are made to the ETOP as the ship's ballast changes during the loading and offloading of cargo. Wire rope has traditionally been used in this application, though steel-wire ETOPs have proven problematic.

"ETOPs are rarely used for their intended purpose," says Craig Kelly, director of international sales for Samson. "However, crewmembers must continually handle them when coming into terminals and for training exercises. Handling heavy wire ropes is difficult, cumbersome, and can cause a number of physical injuries. Vulcan is 60–70% lighter when compared with wire rope, which significantly reduces the various mooring-related injuries associated with handling wire rope in this application."

Over the last several months, field trials have been conducted on the U.S. West Coast with excellent results. "We really like the Vulcan ETOP," says Capt. Pete Hall of OSG. "Two people can easily move it around the deck and over the longitudinal's. One person can deploy and if needed one person can retrieve. The line is flexible and light, and the length with eyes on both ends means no more figure eighting on the bits. Plus, there's plenty of line for a tug to work with."

Recent field trials have confirmed that Vulcan is easier and safer to use than the traditional wire, with only one crewmember required to deploy and retrieve the line. By all accounts, Vulcan is a hit with the crews of both the ships and tugboats using it.

Samson R&D Strikes Again

In developing Vulcan, the Samson R&D team established testing procedures, invested in specialized test equipment, and developed a partnership with one of the two testing facilities in the world capable of performing flame testing. These measures aided Samson in accurately describing the performance of both synthetics and wire rope under high temperature and flame conditions. Tests conducted on Vulcan under varying conditions concluded that in order for synthetic ETOPs to maintain the same strength as wire in a high-heat or fire environment a larger diameter synthetic rope is required. However, the larger diameter ETOP is still only 1/3 the weight of the standard wire.

The table below describes the advantages of Samson's Vulcan ETOPs over wire in terms of saving time and money while increasing crew safety.



In addition to being lighter in weight compared with wire rope, Vulcan WILL SIGNIFICANTLY REDUCE THE VARIOUS MOORING RELATED INJURIES ASSOCIATED WITH HANDLING THIS PRODUCT.

Advantages of Vulcan Synthetic Emergency Tow-Off Pendant Over Wire

TIME	MONEY	SAFETY
<ul style="list-style-type: none"> > Faster to deploy and retrieve > Lighter and much easier to physically handle 	<ul style="list-style-type: none"> > No relubing > Reduces maintenance costs 	<ul style="list-style-type: none"> > Fewer back, hand pinching, and impact injuries caused by wire rope (fish hooks) > Reduced crew down-time and compensation claims
MORE ECONOMICAL TO MARINE CARRIERS OVERALL		



HIGH-PERFORMANCE SYNTHETIC ETOP SOLUTION

SAMSON'S VULCAN

It takes the wire out of fire wires

SAFER, LIGHTER, AND QUICKER THAN WIRE

Rigging and adjusting fire wires—emergency tow-off pendants—using wire ropes is a dangerous and cumbersome process. Samson's Vulcan replaces wire rope ETOP lines with lightweight, easy to handle synthetic ropes that are safer, easier to rig, and quicker to adjust.

Vulcan is a synthetic rope designed specifically for use in high-temperature or fire environments. It is a replacement for wire rope used as an emergency tow-off pendant that eliminates the weight, the fish-hooks, and the injuries that are common when handling wire ropes.

For more information, contact Samson customer service, or visit our website at SamsonRope.com



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Synthetic Slings: A Safe Alternative

by Dennis Sherman

Taken from *Heavy Lift and Project Forwarding International*, November/December 2010.

No one involved with heavy lifts wants to see a payload dropped or a single worker injured, but what are the alternatives to wire rope slings? The answer is simple: high-performance synthetic rope slings.

HMPE lines are as strong as wire at 1/7th the weight. They have essentially eliminated handling injuries in addition to making moorings easier and more efficient by reducing the time it take to moor by as much as 2/3rds when compared with wire rope.

Discrepancy in Factors of Safety

While these applications have proven the advantages of synthetic rope over wire, the offshore industry seems reluctant to consider them for heavy lift slings because of misconceptions about their performance.

As a result, a wide discrepancy in the factors of safety between wire and synthetics exist. Certification bodies recommend a factor of safety (FOS) as low as 3 for wire lifts used repeatedly. For synthetics, however, an FOS up to 7 is recommended, which tends to overcompensate on the safety factor, unnecessarily increasing the diameter, strength, and cost of the rope.

While Samson is actively seeking to have these recommendations revised, as long as the disparity in the FOS between synthetic rope and wire slings exists and companies abide by them, the payload is sure to be safely lifted by the synthetic sling.

Extra Lifting Power and Gentle on the Payload

The 144-mm diameter AmSteel®Blue slings used in the Greater Gabbard project are proof that this is true. With an FOS of 7 and a minimum breaking load of 2,331 metric tons, the slings provided ample strength to lift the monopiles weighing 519 to 676 metric tons each. Lloyd's third party supervision of break tests supported that the rope's minimum breaking strength exceeded the strengths required.

When Seaway Heavy Lift decided to use Samson 144-mm diameter AmSteel®Blue slings to install 140 monopiles for the Greater Gabbard project in the North Sea, one of the considerations was how the sling would affect the monopiles during operations. Wire slings are often in direct contact with the payload in such lifts, but with synthetic rope and removable chafing protection, both the sling and the payload are protected from damage. The monopiles went through installation virtually without a scratch.

Efficient Installation and Easy on the Crew

The jacket installation performed in the Pan Yu natural gas field in 2008 was done with a synthetic rope sling made with Samson Quantum-8. The rope slings were 120-mm in diameter with grommets and protected eyes at both ends to lift the jacket that was 75-m square, 213-m high, and weighed 16,213 metric tons. *CONTINUED...*

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China Offshore Oil Engineering Corporation reported that the synthetic slings outperformed both the cable-laid wire slings and the synthetic webbing slings they used in previous jobs. However, these lightweight, easy handling slings were attached manually by the workers on the job with no injuries, resulting in a faster, more efficient installation—a very positive outcome where windows of clear weather are so narrow.

Superior Safety through Inspection and Certification

One of the greatest benefits to using synthetic rope lifting slings is that they can be inspected for damage and retired before a payload is dropped due to failure.

The 144-mm diameter AmSteel®Blue slings used in the Greater Gabbard project are proof that this is true. Two slings were fabricated for the lifting the monopiles weighing 519 to 676 metric tons each. The slings were certified by Lloyd's to meet or exceed the minimum breaking strength required to perform the job.

After 60 lifts, only one sling had been used. It was inspected by the fabricating master splicer and recertified by Lloyd's to finish the job—and the job was indeed finished with the single sling. After further inspection, that sling was determined to still be in excellent shape and will be used in future projects along with the sling that was saved as a back up.

With regular inspections, the higher FOS, the recertification process, and lower injury rates for crews, Samson high-performance synthetic slings are sure to promise safe lifts every time.



Samson takes the HEAVY out of heavylift slings

LIGHTWEIGHT PLUS FASTER, SAFER, AND MORE EFFICIENT

Heavylift slings made with Samson lightweight, high-strength, high-performance synthetic ropes are proven to make complex installations more efficient and a lot safer. Hookups are generally faster, requiring no additional handling equipment.

Neutrally buoyant, flexible slings make ROV handling much easier and faster, requiring less power to manipulate. Best of all, they typically outlast cable-laid slings or other synthetics by a wide margin.

Samson partners with your design team to configure and certify slings tailored to your application. We bring experience and knowledge gained from extensive testing.

For more information and product specifications visit
SamsonRope.com/Offshore



CASCADE/CHINOOK SUBSEA INSTALLATION SLINGS

Early in the design phase, while formulating installation procedures, Samson and Southwest Ocean Services (SWOS) were in contact with the operations and installation team at Technip. Since the "handshake" was to be accomplished with ROV's, the use of wire rope slings for this phase of the installation would have presented many rigging and handling issues due to the weight and stiffness of the wire. SWOS worked with Technip's design team to develop a "synthetic solution," not only for the sling, but for the custom chafe protection and the project-specific ROV handling slings.



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At Samson, People Make the Difference

Samson knows that it's the people behind the technology, products, and service that set us apart from other rope manufacturers. We recognize that to be the best, we have to hire the best and put that talent to good use. Recent company-wide changes in staffing are a great example of how this philosophy is exercised.

Technical Expertise for Offshore

In order to put Justin Gilmore's expertise with the technical side of offshore product development to the best use, he has accepted the position of technical sales manager. Gilmore has worked for Samson more than 15 years, most recently holding the position of engineering manager. In his new position, he will assist customers with customized solutions to the many unique, demanding applications of offshore oil and gas exploration and production.

Greg Mozsgai, who was hired as the senior research engineer in 2008, has moved into Gilmore's former position of engineering manager. Mozsgai will be responsible for overseeing and providing leadership to the application engineering and technical support teams.

R&D Department under New Management

Another development in the R&D department is with the promotion of Danielle Stenvers who has been with Samson for more than 10 years. In her tenure, Stenvers has taken on increasing responsibility and has now accepted the position of R&D manager. In her expanded role, she will be responsible for all R&D functions, including the patent program, overseeing the labs and testing facilities, and supervising all R&D engineers.

Two new R&D engineers join Stenvers's team with the additions of Frank Choltco-Devlin and Lu Liu. Choltco-Devlin comes to Samson with a bachelor's degree in mechanical engineering and experience in product design, project management, and applications in the snowboarding industry. Liu recently graduated from North Carolina State University with a PhD in fiber and polymer science. Liu has experience working with fiber finishes, high performance fibers, and specialty engineering materials.

Samson Takes Customer Service Seriously

To ensure the best customer service, we recently hired customer support manager Randy Stevens and promoted Vicki Prather to the position of customer service supervisor. Stevens has spent the past 12 years leading customer service departments in B2B environments in addition to more than 10 years in procurement, inventory management, and logistics for the U.S. Army. Prather has been with Samson for 17 years and held roles in scheduling and customer service.

Marketing Coordinator to Focus on Partnership Development

Amber Pitton is filling a new position with her promotion to marketing coordinator. Pitton has spent the past two years as the marketing department administrative assistant and tradeshow coordinator. In her new role, she will work in conjunction with the marketing manager and the sales leadership to develop and implement a new partnership-development program. Pitton will focus on supporting our key partners and distributors by assisting them with marketing efforts and developing new communication tools to aid in sales, training, and technical resources.

It is because of these and all the passionate people at Samson that we are the leading high-performance cordage manufacturer in the industry. Nobody does it better.

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Justin Gilmore



Greg Mozsgai



Danielle Stenvers



Frank Choltco-Devlin



Lu Liu



Randy Stevens



Vicki Prather



Amber Pitton

SAMSON IN ACTION UPCOMING EVENTS

OFFSHORE

- > **Australasia Oil and Gas**
Perth, Australia: February 23–25, 2011
- > **Subsea Tieback**
San Antonio, Texas, USA: February 22–24, 2011

MOORING

- > **Gastech**
Amsterdam, The Netherlands: March 21–24, 2011

NEWS FROM ANOTHER DIVISION: RECREATIONAL MARINE



Photo courtesy of Ainhoa Sanchez.



Photo courtesy of Dustin K. Ryan.

Congratulations to Brad Van Liew! Van Liew Takes First Leg of Velux 5

Sailing 7,500 nautical miles from La Rochelle, France, into Cape Town, South Africa, in 28 days, Brad Van Liew won the first leg of the Velux 5 Oceans race with his Samson-rigged raceboat *Le Pingouin* on November 14, 2010.

A veteran extreme ocean racer, this is Van Liew's third time circling the world in this race. In 1998, he competed in *Around Alone* with a third-place finish in class two, and in 2002, he took first place with wins in every leg of the race. Samson supported the extreme ocean racer in that race when Van Liew realized that his success hinged on quality runners and other critical lines on his Open 50. He replaced every line on the boat with Samson products mid race.

Le Pingouin is completely rigged with Samson lines as well, from the jib sheets and runners to the main halyard. Van Liew is using AS-90 made with Dyneema® fiber; WarpSpeed®, also made with Dyneema® fiber and a polyester cover; and AmSteel®Blue with Flavored ICE, a blended cover designed to take the heat and abrasion while protecting the rope core.

Putting those lines to the test with Zbigniew "Gutek" Gutkowski tight on his rudders, Van Liew battled 40-knot winds as well as light air that delayed his victory by a couple of days. Regardless, he docked in Cape Town three

days ahead of Gutek. Exhausted but jubilant, he was happy to see his family waiting for him with a cold beer and a burger. The next leg of the race takes the intrepid sailors from Cape Town to Wellington, New Zealand on December 12.

Join us in congratulating Brad on his victory and wishing him fair seas in the next leg of his epic journey!

BEHIND THE LION

The Lion Roars for United Way

For many years, Samson has supported the United Way with corporate and employee contributions. The last couple of years has brought some changes to the program including the incorporation of several events designed to help raise awareness of what the United Way does for our community and to raise extra funds in support of that. This year, events included two bake sales, a book sale, a chili feed, and a silent auction. Speakers from some of the agencies participated by coming in to discuss their programs. Through these events, employee contributions, and matching corporate funds and gifts, Samson raised a total of \$43,151.86. Considering the difficult economy that has impacted everyone in one way or another, this is no small feat. The generosity of everyone at Samson has roared loudly in support of our local community.

GIVE. ADVOCATE. VOLUNTEER.
LIVE UNITED 