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NEW DEVELOPMENTS IN SYNTHETIC ROPE TECHNOLOGY

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### **SAMSON PERSONNEL SAFEGULF CERTIFIED**

*Ready to deliver  
The Samson Advantage to  
oil rigs and FPSO locations*

### **SATURN-12**

*Samson develops the next  
generation in HMPE lines*

### **NEW VULCAN "FIRE-WIRE"**

*Vulcan, all the benefits of  
high-performance synthetics,  
plus flame resistance*



**samson**  
THE STRONGEST NAME IN ROPE

## Samson Certified to Deliver on Offshore Rigs and FPSOs

Many of our customers aren't aware of how far Samson will go to deliver The Samson Advantage, which promises world-class service and support whenever, wherever you need it. In order to fulfill that promise on offshore rigs and floating production, storage, and offloading (FPSO) vessels, Samson staff have participated in accredited programs required for contractors by oil and gas companies.

Six members of the Samson sales and engineering departments, Dennis Sherman, Kris Volpenhein, Casey Crozier, Dylan Dundas, Neil Fontenot, and Justin Gilmore, have received certification from Safe Gulf and Helicopter Underwater Egress Training at the University of Louisiana, Lafayette, Marine Survival Training Center.

### SafeGulf Certification

Seeking to establish consistent, minimum health, safety, and environmental training requirements, BP, Chevron, Shell, and ExxonMobil developed a standard program for all contractors who intend to work on operator premises in the Gulf of Mexico. SafeGulf is an eight-hour classroom program that brings awareness to a number of safety issues ranging from accident awareness to lockout-tagout procedures and emergency response plans to OSHA standards. Life on the offshore platform is examined, in addition to environmental impact and terrorism.

Samson takes these issues seriously too, and the Samson offshore team is listed in the SafeGulf Database, per SafeGulf requirements.

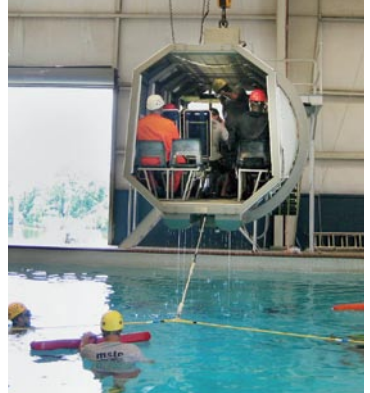
### Helicopter Underwater Egress Training

In order to install and service ropes on offshore platforms and FPSOs, travel via helicopter or offshore supply vessels is necessary. As a part of helicopter safety, special training for emergency exits in the event of a crash over water is mandatory for helicopter transport.

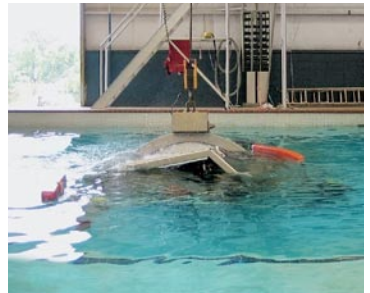
In August, the Samson offshore team took the eight-hour Helicopter Underwater Egress Training course, which consists of four hours in the classroom and four hours of simulator training. The group received training on how to survive at sea for long periods, including how to flip a life raft, how to enter the water off of a compromised platform from heights in excess of 90 feet, how to stay afloat by inflating clothing, and how to survive in cold water conditions as a group or individual.

Once in the Modular Egress Training Simulator, or helicopter "dunker," Samson team members were placed in a pool a number of times while the simulator inverted. "You must sit and hold your breath while the simulated fuselage is flipped upside down in a 10-foot pool. At that point, you have to unbuckle your harness, jettison the door or window, and swim to the surface," explains Dennis Sherman, Offshore Sales Director. "The first time is a bit disorienting, but it's amazing how quickly you acclimate to the situation. The key is not to panic."

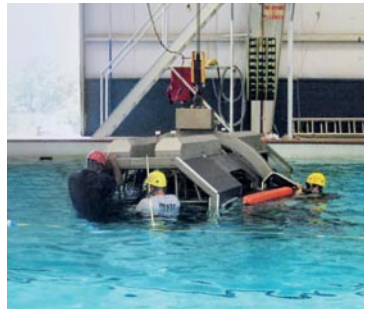
All Samson personnel passed with flying colors, and are certified for two years at a time. At the end of the two-year period, a refresher course and recertification is required.



*Samson offshore team prepares for impact.*



*The submerged simulator.*



*All safely exited from the simulator.*



HIGH-PERFORMANCE SYNTHETIC ETOP SOLUTION

# SAMSON'S VULCAN

## It takes the wire out of fire wires

### SAFER, LIGHTER, AND QUICKER THAN WIRE

Samson's Vulcan replaces the wire rope emergency tow-off pendant with a lightweight, easy-to-handle synthetic rope that is easier to rig and quicker to adjust.

Designed specifically for use in high-temperature or fire environments, Vulcan can take the heat while eliminating the weight, the fish-hooks, and the injuries associated with handling wire rope.

Take the wire out of your fire wire.

For more information, contact Samson customer service, or visit our website at [SamsonRope.com](http://SamsonRope.com)



**samson**

THE STRONGEST NAME IN ROPE

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NEW DEVELOPMENTS IN SYNTHETIC ROPE TECHNOLOGY



## Saturn-12: Performance Beyond Standard HMPE Lines

Samson's new Saturn-12 is the only product of its type in the list of HMPE tug lines available today. What makes Saturn-12 so unique? The answer is Samson's proprietary Samthane Type E coating, which reduces internal abrasion and increases the rope's residual strength by as much as 20%.

### What is Internal Abrasion?

Internal abrasion is caused by the movement of internal and external yarns in relation to each other. As a rope is exposed to rough surfaces, external abrasion takes place when the movement of the outer yarns is slowed relative to the movement of the internal yarns. Heat is created from the friction—and heat is among the biggest enemies of synthetic rope. Upon inspection, external abrasion is usually obvious, but internal abrasion isn't as easily observed. Any compromise of the rope's strength due to internal abrasion may go unnoticed.

### IMPROVING ON THE BEST TUG LINE AROUND

*AmSteel®Blue is recognized worldwide as the gold standard for tug lines. With the long-term success of AmSteel®Blue, why would Samson want to improve on it?*

*It's because Samson is committed to the customer. Through the partnerships Samson builds with customers, we hear what they need to be more successful in their businesses.*

*Samson invests in research and development resources to find ways in which products can be improved, resulting in solutions for our customers.*

*In this throwaway society, isn't it refreshing to find a company that plans for the long life of their products instead of obsolescence?*

*It's what we call The Samson Advantage. Our customers call it peace of mind.*

"Abrasion has been a problem with HMPE tug lines," explains Samson Commercial Marine North American Sales Director Terry Crump. "Two years ago, we started looking into ways that would increase the abrasion resistance of AmSteel®Blue. We came up with a new coating that significantly reduces internal abrasion."

### Setting the Bar High

Samthane coating has been part of Samson's success story for years. The family of abrasion-resistant coatings is specifically formulated to match end-user requirements and specific rope constructions. The Samthane Type E coating used to make Saturn-12 is a natural progression of Samson coating technology.

"The specially formulated coating lubricates the fibers' surfaces to enhance their abrasion resistance," says Samson's Vice President of Research and Development Dr. Rafael Chou. "Full penetration of the coating into the fibers provides better protection of each individual strand, both externally and internally."

This exclusive solution to improved abrasion resistance could only come from Samson's R&D team, the most innovative and technically advanced in the industry. The development of Saturn-12 sets the bar high in rope technology, where extensive lab and field-simulation work was dedicated to the development of the coating, in addition to excellent process control to ensure consistent quality of the product.

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"As a result of the efforts made by Samson R&D, we're seeing an increase of 15–20% in the rope's residual strength," Crump explains.

### Enthusiastically Received

"Our customers are very enthusiastic about Saturn-12," says Doug Looker, Samson's West Coast Sales Representative. "I've got tugs using it up and down the coast."

Crump agrees. "All reports have been favorable," he says. "G&H Towing, Crowley, and Hawaiian Tug and Barge/Young Brothers are all extremely happy with Saturn-12. They are getting more pulls out of the line than they would with any other standard HMPE line."

A complement to Samson's other working lines made with Dyneema® fiber, Saturn-12 can be used either as a pendant or as a main line. It maintains the light weight, high strength, and low stretch of AmSteel®Blue and provides the same efficient connections and controlled response. With customer reports of Saturn-12's great performance, can it get any better? Looker and Crump say it can.

### Dynamic Duo

"The ultimate in abrasion resistance is to use Saturn-12 with Dynalene," says Looker, referring to Samson's unique chafe product made with Dyneema® fiber. While Saturn-12 provides internal abrasion resistance, Dynalene protects against external abrasion, where Saturn-12 comes in direct contact with the harsh surfaces on most tug vessels. The combination can only extend the life of the towline.

"Yes," agrees Crump. "Saturn-12 is already outperforming all standard HMPE lines out there, but add Dynalene and you have the Dream Team in a tug line. The performance will be spectacular."



## INTRODUCING SATURN-12

### We made the best tug line in the business EVEN BETTER

#### ABRASION RESISTANCE UNLIKE ANY STANDARD HMPE TUG LINE IN THE INDUSTRY

Saturn-12 incorporates a new Samthane Type E coating, which reduces internal abrasion and the heat it generates, and increases residual strength 15 to 20%.

You can expect the best to get better only when it's Samson:  
The Strongest Name in Rope.

WITH  
Dyneema®



**samson**  
THE STRONGEST NAME IN ROPE

Dyneema® is a registered trademark of Royal DSM N.V.  
Dyneema® is DSM's high-performance polyethylene product.

# SYNTHETIC EMERGENCY TOW-OFF PENDANT

## Samson's New Vulcan is Safe and Effective

Emergency tow-off pendants (ETOPs) provide a means of towing a ship away from the dock in the event of a fire. Required by most, if not all, ship terminals, wire rope is currently used in this application, though steel-wire ETOPs have proven problematic.

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. These adjustments are often made manually and the handling of the heavy wire ropes has caused spine and back injuries to deckhands.

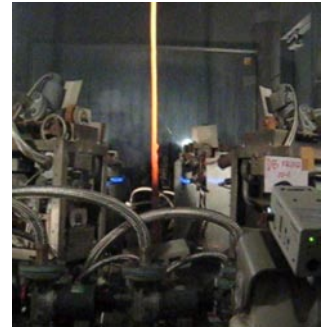
Technical Manager Danielle Stenvers presented recent research and development of Samson's synthetic emergency tow-off pendant Vulcan to the Oil Companies International Marine Forum (OCIMF) in October. OCIMF guidelines indicate that a synthetic ETOP would be considered an alternative if the pendant could provide adequate fire resistance.

Vulcan is made with Technora® fiber, which possesses inherent heat-resistant properties, and is enhanced with a fire-resistant coating. The product is both safe for deckhands and effectively resists heat and fire damage.

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 used in this application.

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

*Vulcan, made with Technora® fiber, which possesses inherent heat-resistant properties, and is enhanced with a fire-resistant coating. The product is both safe for deckhands and effectively resists heat and fire damage.*



*Open-flame test equipment.*

### ADVANTAGES OF VULCAN SYNTHETIC EMERGENCY TOW-OFF PENDANT OVER WIRE

Time	Money	Safety
Faster to deploy and retrieve	No relubing	Fewer back, hand pinching, and impact injuries caused by wire rope (fish hooks)
Lighter and much easier to physically handle	Reduces maintenance costs	Reduced crew down-time and compensation claims

### MORE ECONOMICAL TO MARINE CARRIERS OVERALL



## SAMSON IN ACTION

### RECENT EVENTS

#### > OCIMF Presentation

London, England: October 7, 2009  
"Emergency Tow-Off Pendants"  
Danielle Stenvers

#### > MTS/IEEE Oceans 2009

Biloxi, Mississippi: October 26 – 29, 2009  
PAPER PRESENTATION  
"Use of Synthetic Rope in High-Temperature  
or Fire Environments"  
Neil Fontenot

### UPCOMING EVENTS

#### > WorkBoat Show

New Orleans, Louisiana: December 1 – 4, 2009

## Samson Sponsors International Rope Technology Workshop

Samson is sponsoring the Marine Technology Society's 8th International Rope Technology Workshop to be held December 3–4 in Galveston, Texas.

The International Rope Technology Workshop provides an important opportunity for networking and exchanging information on the latest advances and understanding in rope technology. Participants were brought together from all around the world and across the entire industry.

Dr. Rafael Chou was a co-chair of the 8th International Rope Technology Workshop.

## NEWS FROM ANOTHER DIVISION

### AmSteel® II Plus Pulls More than its Weight

Hydro One of Toronto, Ontario, Canada, is one of North America's largest suppliers of electricity. Having historically used AmSteel®, a 12-strand single braid made with Dyneema® fiber, as a rigging line, they decided to try two 30,000-ft lengths of 7/8" AmSteel® II Plus, a lightweight, double braid made with a Dyneema® fiber core and a polyester cover, on a typical stringing job. These lines pulled two-conductor bundles with pulling tensions of up to 15,000 lb. The use of AmSteel® II Plus was a lightweight solution, relieving the weight burden of the previous steel wire bull line, and, because of its high strength-to-weight ratio, it increased the safety of the pull. Hydro One's choice also saved them money during the installation of conductors on this project due to reduced handling and better utilization of equipment.



## BEHIND THE LION: THE PEOPLE OF SAMSON

*Individual achievements and community support*

### Samson Reaches All-Time High in Support of the United Way

Samson, a long-time supporter of United Way, hit an all-time high for the 2010 campaign. The campaign organizing committee conducted several events to raise awareness of the partner agencies. Two bake sales, a book sale, a chili feed, and a silent auction were among these events, and four rallies were held with speakers from some of the agencies participating. Between the pledges, the funds from the events, and the company contributions, Samson's donation increased 18% from the 2009 year, for a total of \$42,706.



*United Way organizing committee. Left to right: Kellie Edwards, Janet Lippert, Teresa Looker, Merry Schnell; clockwise from standing: Jeanie Johnson, Karma Reavis, Amber Pitton, Brittany Milam.*