



# ropecordNEWS

THE CORDAGE INSTITUTE

Dedicated to the Advancement of Rope and Cordage Products

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## Highlights of the Cordage Institute Annual Conference

The 2014 Annual Conference of the Cordage Institute was held May 21-23, 2014 at the Hyatt Regency Tamaya Resort & Spa in Santa Ana Pueblo, New Mexico. The productive conference included a Business and Industry Meeting, the Annual Technical Seminar, and Technical Committee Meetings. Photos from the 2014 Annual Conference can be seen [HERE!](#)

Andy Barker, with Rocky Mount Cord Co., Koen Van Goethem, with I-Coats NV, and Sparky Christakos, with Gladding Braid, were elected to serve two year terms on the Board of Directors.

The Business and Industry Meeting included table top displays by Associate Members, an informative Panel Discussion on the Continuous Improvement of the Cordage Institute lead by Cordage Institute fiber producers and manufacturers, and a presentation titled "Manufacturing - We Who Hung the Moon" by Dr. Donald McNeeley with the Chicago Tube and Iron Company.

The busy program for the Technical Seminar included the following technical presentations:

- "Hybrid Intelligent Design Elements, Illustrated by the Example of High-Tensile Fiber Ropes with a Novel Termination" by Professor Karl-Heinz Wehking, University of Stuttgart
- "Aramid Fiber Guy Lines Built for One World Trade Center" by Greg D'Elia, Phillystran, Inc.
- "Rope Brakes to Stop Large Vessels After Launch From Inclined Building Ways" by Dr. Walter Paul

- “High Profile Lifts” by John Ketchum, I&I Slingmax
- “CI 2009N: Performance Requirements for Marine Grade Nylon Yarn for Fiber Rope” by John Flory, TTI
- “The Latest from DSM Dyneema” by Bill Fronzaglia, DSM Dyneema

As always, the Annual Gale Foster Memorial Golf Tournament was a great success. We would like to extend a special thank you to **Koen Van Goethem**, the Golf Captain, for organizing the tournament, and to **I-Coats NV** for sponsoring the golf prizes.

Mark your calendar for the 2015 Annual Conference, which will be held in conjunction with EUROCORD, on May 31 - June 3, 2015, in Atlanta, Georgia!

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**WELCOME RECEPTION SPONSORS**

The Cordage Institute wishes to extend a sincere thank you to the below sponsors of the Welcome Reception and Dinner at the Annual Conference.

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**TTI Testing Achieves ISO 9001 Certification**

TTI Testing was recently approved by Lloyd’s Register Quality Assurance to the ISO 9001:2008 Quality Management System Standard, which is applicable to “provision of inspection, testing services, and forensic analysis for wire and fiber ropes, chain, electro-mechanical cables, and related interface components in the onshore and offshore markets.”

TTI Testing is an independent research and testing company. It was founded in 2008, and is owned by Tension Technology International, Ltd. Tension Technology International was founded in 1986, and has offices in the UK, USA, and the Netherlands.

TTI Testing is located in Wallingford, England, about 40 miles west of London’s Heathrow Airport. The laboratory has 10,000 square ft. of high-bay covered space. It houses testing equipment for tensile break strength and extension, tension-tension fatigue, tension-torsion fatigue, bend fatigue, and abrasion.

Principal equipment includes a 135,000 lbs. tensile test machine having a 46 ft. total bed length and a 6.5 ft. stroke, and a similar 45,000 lbs. tensile test machine having a 23 ft. total bed length and a 6.5 ft. stroke. Both machines have separately-applied pretension to remove initial stretch. Both machines are fatigue rated and can apply software-controlled dynamic tensile loading.

There are two specialized 22,500 lbs. tensile testing machines. One is equipped to conduct high-speed dynamic testing up to a 10 in. stroke. The other is equipped to conduct torque and twist testing up to 300 lbs. ft. torque. There is also a 56,000 lbs. cyclic bend-over-sheave testing machine, as well as several special machines for conducting yarn-on-yarn abrasion testing.

TTI Testing also performs consulting, research, development, and forensic failure analysis on tension elements, including wire and fiber ropes, chains, electromechanical cables, and related components.

For further information, contact Dr. Isabel Ridge by phone at 44-7846-236035 or by email at [Ridge@TensionTech.com](mailto:Ridge@TensionTech.com).

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## Swiftships Demonstrates Special Operations Craft

By: Ken Hocke, Senior Editor, *Workboat.com*

Swiftships has built a 35 ft. x 8 ft. aluminum special operations craft (SOC) prototype that can be operated by remote control. The remote controlled version of the yard's Anaconda (AN-2) is the first step in developing an autonomous watercraft.

Designed by Morgan City, LA based Swiftships, and in partnership with the University of Louisiana Lafayette (ULL), the AN-2 is designed to support the efforts of military operations on inland waters by providing power, speed, greater mobility and ease of deployment. The new technology coupled with Swiftships' prototype will permit brownwater military missions to be implemented effectively without any human crew being put in danger, according to the shipyard. The new boat can be sent around a curve in a river, for example, where enemies could be waiting.



"We have control over the vessel through an iPad," Joshua Vaughan, an assistant professor at ULL, said during a demonstration exercise at Swiftships in February. "It's an all-in-one autonomous vessel run by remote control. Using GPS coordinates, it's able to avoid obstacles."

Vaughan is leading a team to develop the autonomous system. The technology the team is developing would use lasers, cameras, ultrasound and other sensors that gauge currents and waves to detect obstacles in the water such as logs or oncoming boats. The information would flow to a computer system that reacts quickly, steering and accelerating the boat like an experienced human pilot.

Eric Geibel, Swiftships director of special programs, said the technology has commercial applications such as surveying and emergency response. "The application of autonomous technology has far reaching implications for the entire inland shipping industry," he said.

Main propulsion for the prototype comes from twin Yanmar 6LY3-FTP electronic diesels, producing 480 hp at 3,300 rpm each. The engines connect to two Rolls-Royce FF-280 waterjets through ZF 305-3 marine gears, producing a top speed of 51 knots.

The boat, which has a fuel capacity of 200 gallons, can also have a pilot and carry up to 14 crew and/or passengers. After several years of building almost exclusively for the military, Swiftships got back into the commercial market last year.

The yard is currently building a 200 ft. × 34 ft. × 14 ft. aluminum fast supplier for Y&S Marine, Belle Chasse, LA.

Capacities will include 51,240 gallons of fuel as cargo; 8,400 gallons ship's fuel; 42,750 gallons water as cargo; and 1,900 gallons ship's water.

Main propulsion will be supplied by four 12-cylinder Caterpillar 3512B diesels, producing 2,250 hp at 1,800 rpm each. The Cats will connect to four Michigan/Hy Torq nibral propellers through Twin Disc MGX-61000 marine gears. The supply boat will have a running speed of 28 knots.

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## Crude Oil: Barges are Well-Positioned Assets

*By: Kevin Horn, Workboat.com*

The energy sector continues to push into new frontiers, which is having a big effect on barge operators and other domestic transport suppliers.

The recent pickup in rail tank car movements of crude oil is a remarkable break with tradition. BNSF Railway, which currently handles the largest volume of crude oil shipments of North Dakota Bakken shale oil, has announced that it would purchase up to 5,000 state-of-the-art rail tank cars. The new tank cars are designed and equipped for increased safety for domestic oil shipments. Historically, U.S. railroads have regarded tank cars as specialized equipment and have not provided the equipment, leaving it up to the shippers.

The shift by BNSF into rail tank car ownership represents a major capital commitment (likely around \$1 billion) and suggests that the company sees the long-term viability of this market, upwards of 25 years, which is the expected service life of the equipment. BNSF's tank car position is also a response to recent accidents that involved older equipment, including its own derailment.

Oil refiners, particularly on the East Coast who are dependent on unit trains of crude oil from North Dakota, have also been investing in new tank cars as well as new terminals. Some investments have been made in East Coast river terminals to facilitate transshipment of unit trains of crude oil to domestic barge for transfer to other refiners.

Committing capital to help facilitate shipments of domestic crude at East Coast refiners is much cheaper compared to imported oil. The savings are based on the price spread between North Dakota domestic oil and imports compared to rail freight and terminal costs.

It is possible that domestic crude shipments could be \$5 to \$15 per barrel cheaper than imports. With such savings, East Coast refiners that are connected by rail and barge to North Dakota may reduce or stop its oil imports.

The barge industry continues to be well positioned to move domestic crude, whether it's in competition or coordination with rail. Success in this market requires having the right assets in the right place.

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## The Bounty: Recklessness vs. Negligence

*By: Tim Akpinar, Workboat.com*

The probable cause of the sinking of the tall ship Bounty was a reckless decision by the captain to sail into the forecasted path of Hurricane Sandy.

That is what the National Transportation Safety Board concluded recently in its findings on the tragic October 2012 loss of the tall ship some 110 miles off Cape Hatteras, NC. The NTSB said that a lack of effective safety oversight was also a contributing factor. The ill-fated sailing vessel was a replica of the original Bounty, built for the 1962 film about the historic 18th century mutiny.

In describing the conduct that led to the loss as reckless, the NTSB used a term that is legally more serious than the standard of negligence, something we typically see in Jones Act cases and general cargo damage claims.



The sailboat's crew had an electronic position-indicating radio beacon in the life raft that allowed the Coast Guard to direct ships toward their location. Rorke said there was poor visibility, 25 ft. waves and winds reaching about 40 mph. He also said the life raft had to be patched up and that they were holding on "for dear life."

"We were bailing water. It was life and death," he said in the recording of the rescue's debriefing. "We're very grateful. We are very, very lucky."

Rorke said the sailboat sank after the bulkhead broke up and the vessel began taking on water.

The ordeal ended about 12:30 a.m. after the Tilda Kosan diverted course from its planned trip to Mexico. The ship found the life raft after making three passes in dark, stormy conditions. It was about 36 miles away from the life raft when it first joined the search.

Rorke had high praise for the Coast Guard, which coordinated the rescue.

"They were fantastic, absolutely fantastic. They didn't play around. They were super quick," he said.

Time was of the essence. The radio beacon only lasts for about 48 hours.

"The presence and proper activation of the emergency position-indicating radio beacon was instrumental in saving the crew members of the Blue Pearl," Petty Officer 1st Class James Hines, a search and rescue controller at the 5th District Command Center in Portsmouth, said in a statement. "This stresses the importance of a properly registered EPIRB, which provided us with an emergency point of contact and information on the boat."

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## **Navy Denies Access to Dozens with Criminal Histories Under New Rules in Wake of Shooting**

*By: Captain Peter Squicciarini, Workboat.com*

Dozens of transportation workers have been denied access to Navy bases on the East Coast because of their criminal records since more stringent rules were put in place following a fatal shooting aboard a destroyer in Virginia. The Navy has said a civilian truck driver who was a convicted felon shot and killed another sailor in a shoot out in March.

The Navy says 48 people using a Transportation Worker Identification Credential were not allowed onto installations in Virginia, Connecticut, New Jersey, and Rhode Island in the first three weeks the new rules were in effect following the shooting.

Under the new rules, nobody with a felony in the past 10 years or a misdemeanor in the past five years for certain crimes can get onto base with a TWIC card.

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## Kirby: Bulk Carrier's Speed 'Excessive' Before Barge Collision

*Houston Chronicle*

Kirby Inland Marine, the owner of a barge that spilled 168,000 gallons of oil into Galveston Bay after being struck by a Liberian bulk carrier earlier this year, alleges in a court filing that the bulker was speeding despite heavy fog and did not take evasive action, the Houston Chronicle reported. Kirby conceded no fault on the part of the captain of the towboat guiding the barge and is seeking more than \$10 million in compensation from Sea Galaxy Marine, the owner of the bulk carrier Summer Wind.

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## Opinion: U.S. Coast Guard Needs a Reinvention

*By: Jim Howe, Workboat.com*

Today, America's Coast Guard is in drastic need of reinvention.

For generations, the service has struggled to field adequate manpower and the cutters, boats, and aircraft needed to perform all of its mandated missions, all while wrestling with increasing responsibilities.

As detailed in the August edition of the U.S. Naval Institute's Proceedings, the Coast Guard must have more funding, a stronger focus on operations over bureaucracy, and better alignment with the rest of government. In today's constrained budget environment, such a reinvention will only come through innovative policy choices and political leadership willing to make support of a fully capable Coast Guard a national priority.

Reinvention starts at home. Chronically undermanned, the service maintains an arcane, 19th-century organizational structure, with five layers of command between smaller front-line units and top leadership.

A Coast Guard response boat patrolling off Coronado works for Station San Diego, which reports to Sector San Diego, which reports to the 11th District (Alameda), which reports to Pacific Area (also Alameda), which reports to Headquarters (Washington, D.C.).

Streamlining this bulky command structure would put more personnel on the front lines and allow greater focus on the commandant's top priority of operational proficiency, a need acutely felt in the wake of the tragic 2009 boat collision in San Diego Bay.

Reinvention must continue between the Coast Guard and its federal partners.

There is much duplication of effort within the Department of Homeland Security: the Coast Guard, Customs and Border Protection, and the Border Patrol all fulfill similar patrol functions.

One framework would be for the Coast Guard to serve as force provider for all such maritime resources, with assets assigned to CBP and the Border Patrol for agency-specific missions.

The cost savings, operational improvements, and value to the nation produced by such a merger could be significant.

Similarly, the Coast Guard has much to offer the U.S. Navy and more interoperability between the two services would benefit our nation's defense.

There could not be a mission better aligned with Coast Guard competencies, for example, than the multinational effort against Somali pirates, yet the service has had only a limited role in those operations.

Instead, the Navy burns holes in the ocean with its most expensive warships, searching for skiffs and dories, while the Coast Guard's expertise, sharpened through decades in the drug war, goes essentially unused.

A Navy-sponsored squadron of Sentinel-class cutters would be far more operationally effective and cost-efficient for the nation than the current paradigm of employing cruisers and destroyers to do a patrol boat's job.

Reinvention ends at the top. The biggest problem facing the Coast Guard, year after year, is chronic under funding.

In 2004, the service found that for patrol boats, fixed-wing, and rotary-wing aircraft, it had only half the hours available to meet its statutory requirements.

Nothing has changed. Today, the Coast Guard needs to dramatically expand the size of its aviation and cutter fleets just to break even.

As for personnel, the service has a superb cadre of officer, enlisted, and civilian members. There just are not enough of them.

By conservative estimates, another 10,000 to 15,000 active-duty personnel are needed for the Coast Guard to get a real handle on its mission set. These upgrades will take billions of dollars.

Funding levels for federal agencies are the result of policy decisions made within the executive branch.

It is inconceivable that federal dollars would not flow freely if a study showed the nation had half as many airport screeners, meat inspectors, or air traffic controllers needed to protect the public.

Yet, for the Coast Guard, the administration has proposed for 2014 a budget that downsizes the service and shrinks its desperately needed recapitalization funding by 37%.

It is the responsibility of the nation's civilian leaders, as a constitutional duty, to provide for the nation's defense. They do so by fielding a fully manned, well-trained and properly equipped military, including the U.S. Coast Guard. The service's thin bench strength and antiquated assets are especially relevant in San Diego, where increased land border security efforts are driving more drug and migrant smuggling operations to sea.

This is the time to build the Coast Guard to at least a minimum standard of capability. Doing otherwise increases risk for the nation and potentially invites disaster. The Coast Guard needs to be reinvented, and reinvigorated to face the multitude of threats of an increasingly complex world.

So far in the 21st century, no national leaders have made the Coast Guard a priority. It is to be hoped, then, that the current administration will become the first.

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## Important Events

### **OCEANS 2014 MTS/IEEE**

September 14 - 19, 2014

Delta St. John's Hotel

Newfoundland and Labrador, Canada

[www.oceans14mtsieeeestjohns.org](http://www.oceans14mtsieeeestjohns.org)

### **Web Sling and Tie Down 2014 Fall Meeting**

October 13 - 16, 2014

Intercontinental Kansas City at the Plaza

Kansas City, MO

[www.wstda.com](http://www.wstda.com)

### **Cordage Institute Technical Meeting**

September 17 -18, 2014

Embassy Suites - Philadelphia Airport

Philadelphia, PA

[www.cordageinstitute.com/new/events.asp](http://www.cordageinstitute.com/new/events.asp)

### **Associated Wire Rope Fabricators Fall 2014 General Meeting**

October 26 - 29, 2014

Hyatt Regency

St. Louis, MO

[www.awrf.org](http://www.awrf.org)

### **International Workboat Show**

December 3 - 5, 2014

Morial Convention Center

New Orleans, Louisiana

[www.workboatshow.com](http://www.workboatshow.com)

### **Cordage Institute Joint Conference with EUROCORD**

May 31 - June 3, 2015

Atlanta, GA

[www.cordageinstitute.com/new/events.asp](http://www.cordageinstitute.com/new/events.asp)

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## **ropecordNEWS**

Editor: Dave Richards, Technical Director

The ropecordNEWS is published by the Cordage Institute. The Cordage Institute is an international association of rope, twine, and related manufacturers, their suppliers, and affiliated industries. Articles appearing in ropecordNEWS are the views of the authors and not necessarily those of the Cordage Institute.

Members are encouraged to contribute articles and items of interest by emailing them to [info@cordageinstitute.com](mailto:info@cordageinstitute.com). Rates for advertising are available from the Institute.

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## Photos from the 2014 Annual Conference



Andy Barker, President of the Cordage Institute, addresses the crowd during the Business & Industry Meeting



Dr. Donald McNeeley with the Chicago Tube and Iron Company presenting at the Business & Industry Meeting



Panelists from the Discussion on the Continuous Improvement of the Cordage Institute (left to right): Loui McCurley with Pigeon Mountain Industries, Bill Putnam with Yale Cordage, George Reekie with Teufelberger Fiber Rope Corp., Amy Jenkins with Teijin Aramid, Guido Grave with Herzog, Brent Gerdes with Honeywell, Laura Murphy with Nexis Fibers, and facilitators, Beth Huntley with Whitehill Mfg. Corp. and Koen Van Goethem with I-Coats NV



Dave Richards, Technical Director of the Cordage Institute, addresses the crowd during the Technical Seminar



Professor Karl-Heinz Wehking presenting during the Technical Seminar



First Time Attendees (left to right): John Ketchum with I&I Slingmax, Karl-Heinz Wehking with the University of Stuttgart, Thomas Schlätzer with Geo. Gleistein & Sohn GmbH, Kirk Smith with Universal Fibers, George Reekie with Teufelberger Fiber Rope Corp., Ashley Goldman with INVISTA, and Wes Conger with Cortland

## Photos from the 2014 Annual Conference Continued



Tennis Tournament Participants (left to right): Keith Buzzell with Yale Cordage, Inc., Florian Teufelberger with Teufelberger Holding AG, Ashley Goldman with INVISTA, and Forrest Sloan with Kuraray



Golf Captain, Koen Van Goethem (left) with the Golf Tournament Champions (left to right): Deborah Grant, Randy Wise with Fi-Tech, Jay Anand with INVISTA, and Gary O'Rourke with Strider-Resource



The Golf Tournament Runner-Ups (left to right): Koen Van Goethem with I-Coats NV, Tom and Debrah Yale with Yale Cordage, and Thomas Schlätzer with Geo. Gleistein & Sohn GmbH



Debrah Yale and Sparky Christakos in the famous putting competition



2014 Annual Conference Attendees enjoying the President's Dinner



Randy Wise, Jay Anand, and Ashley Goldman enjoying the President's Dinner