



President's Message

Luis Padilla

I would like to begin this edition of the RopcordNews by expressing my gratitude to the Cordage Institute membership for giving me the honor to serve as President for the next two years. I am looking forward to working with all of you in the continued success of our organization. I would also like to thank Bill Pearson, our outgoing President, for his efforts and leadership during his tenure.

Our association continues its work to diversify our membership, while at the same time trying to bring more value to current members. I would like to take this opportunity to update the association on some key activities.

Our collaboration with EUROCORD continues with our last annual meeting being a joint conference hosted in Mallorca, Spain. I feel the conference was a great success with very good participation from both associations. We continue to look at ways where the associations can collaborate on issues important to our members. The primary outcome of this collaboration thus far is the formation of the CIRTS Committee which continues to do great work in developing and harmonizing industry standards.

The writing and maintaining of standards continues to be something that is very important to our membership. The board will continue to look at ways we can support the process by providing resources or direction. The new Technical Director will be tasked with directly supporting the Technical and Subcommittee Chairs in the creation of standards.

As our association grows and evolves, it is critical that we spend time ensuring our membership categories are aligned with the goals and value that the association brings to its members. The board has formed a committee that will be looking into membership categories, corresponding rights and fees in more detail.

Comments or suggestions on any of the initiatives we are undertaking, or should be, is always welcome. You can send feedback to Pete Lance or any of the board members.

Thank you for your continued support and participation.



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Cordage Institute Happenings



Update from the Technical Subcommittees

The Cordage Institute's Technical Committee had a well-attended and productive meeting, led by Keith Buzzell - Technical Committee Chair, on June 20, 2017 as part of the Institute's Joint Conference with EUROCORD in Mallorca, Spain.

Five Technical Subcommittees met throughout the morning, and the following reports were provided when the full Technical Committee convened in the afternoon.

3 and 8 Strand Ropes Subcommittee

- Stephen Parola, Chair

It was reported that CI 1302, Polyester/Polyolefin Fiber Rope 3-Strand Construction, will be submitted to the Board of Directors for approval.

Arborist Ropes Subcommittee

- Keith Buzzell, Chair

The Arborist Subcommittee did not have enough subcommittee members to discuss the comments for CI 2200, Standard: Performance and Test Methods for Arborist Climbing Ropes.



Recap of the Third Annual Joint Conference with EUROCORD

The Cordage Institute and EUROCORD recently held their third Joint Conference in Mallorca Island (Spain) at Be Live Collection Hotel. The conference spanned three beautiful days, in which attendees met to discuss standards, guidelines, and network with others in the industry. The meeting was a resounding success, and talks are already in place for the next Joint Conference in 2019. The Conference schedule included Technical Working Group meetings, a Technical Meeting, an Industry Seminar, a Business Meeting, a General Session and, of course, plenty of networking opportunities, including a Ryder Cup style golf outing.

From "Global Challenges to the Cord Industry" to "The Future of Synthetic Ropes", the conference provided learning opportunities to attendees of all position levels. In particular, keynote speaker, Dr. Marc Van Parijs, delivered an insightful presentation entitled, "Emerging Technologies for Tech Textiles," which addressed problems facing the textile industry (i.e. shortage of natural resources and

A conference call to review the comments will be planned.

ASME B30.9 Task Group

- Greg D'Elia, Chair

Greg D'Elia reported that ASME B30.9 will be balloted. After it is complete, the task group will be addressing high performance slings.

Boiler Plate Subcommittee

- Keith Buzzell, Chair

The boiler plate was approved by the board prior to the last technical meeting. Keith Buzzell reminded those in attendance that any document currently being developed or updated must be converted to the new template.

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labor) and possible ways of addressing them. Other presentations included:

- Twisttechnology by Jordi Pi Guerra
- Dupont : Alternative Method for Y-O-Y Abrasion by Simon Spence
- OCIMF by Joe Megeed
- MEG 4 by Amy Jenkins/Tim Hunter
- DSM Dyneema by Bill Fronzaglia/Marc Eijssen
- "Global Trends and challenges for the Cord Industry" by Thomas Dubois:
- "Future of Synthetic Fiber Ropes" by John Flory

All the presentations from the conference are now available in the members' only area of the Cordage Institute website.

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Member News and Press Releases



Jeb Head on Atkins & Pearce's 200 Years of Manufacturing in America!

As best that we can determine, we are one of perhaps 20 companies in the US that are 200 years or older. There are a couple dozen farms, and orchards and hotels that make the claim - but only about 20 that are businesses. And many on the list of 20 are large conglomerates and consist of many firms put together - like CitiBank and JP Morgan Chase - so they are not really the same firm throughout. Some - like DuPont and Colgate - have stayed as the same firm throughout, but they are now public companies. And there are others who exist in name but have been bought out - Baker's Chocolate, Harper Collins Publishing, and Ames Tools - but various large firms - Kraft, Newscorp, and Griffon Corp - have acquired them.

So there are very few that are like Atkins & Pearce. Jim Beam Distilleries was started in 1795 and is currently run by the seventh generation of the same family. Likewise, Crane and Co., which

makes stationary and paper products in Massachusetts, was started in 1799 and is still operated by the same family.

But this makes Atkins & Pearce one of maybe three or four companies that has survived for 200 years with a continuous, family-owned and independent history.

It's not surprising that we are so rare. Researchers estimate that only one in five companies make it to their 20th year, and currently the average lifespan of all companies is estimated to be a mere 15 years. My best estimate is that if you started a firm around 1817, there would be about a one in one million chance that it would still be here today - just like us!

It's amazing to think that in 1817, when this company started, James Monroe was only the fifth President of the United States. The United States was 41 years old, and there were only 19 states in the Union. Cincinnati, which was very much on the western frontier then, had a population of just 9,000 people.

As many of you know, our company started out making an adaptation of the cotton gin, the Spin-Ginner, which cleaned the seeds out of raw cotton, and spun it into a thread. The company prospered in its early years, but also faced much adversity. There were roughly seven recessions in the first 40 years, and two were so major they would likely be characterized as depressions today.

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NASA's Latest Parachute Cordage is Yale-Engineered

On June 8, NASA launched a spacecraft 180,000 feet over the Pacific Ocean to simulate the supersonic entry and descent speeds at which the craft would travel through the Martian atmosphere.

The testing will help produce a major breakthrough for future robotic and human missions to Mars. They tested several pieces of technology with the launch, but one of the most closely-watched components will be an innovative parachute system that uses Yale Cordage Rope. Per the NASA website, the Low-Density Supersonic Decelerator (LDSD) project is "designed to investigate and test breakthrough technologies for landing future robotic and human Mars missions, and for safely returning large payloads to Earth."

At a press conference from the launch site at the U.S. Navy's Pacific Missile Range Facility (PMRF) on Kauai, Hawaii, key members of the LDSD team gave an overview of what the test would entail, and also what it means in a broader context.

"Right now, we are kind of at the technological limits of what we can land on Mars in terms of size and weight," said Steve Jurczyk, Assoc. Admin of NASA's Space Technology Mission Directorate, which innovates, develops, tests and flies hardware for NASA's future missions. He

went on to explain that the Curiosity Rover, which landed in 2012 and is still in service, weighs about one metric ton (2,200 lbs.) at roughly the size of a Mini Cooper, represents about all we can do with the current technology, which was developed based on data from the 1960s and '70s.

Jurczyk went on to explain that the new technology is required to land 5 metric tons for human missions, maybe 30 or more metric tons to the surface, with a key component being a supersonic parachute 100 feet in diameter that can improve landed mass up to 200 percent. This would represent a crucial technological advancement as NASA moves toward its 2030s vision of human exploration on Mars.

NASA could be using this technology in robotic Mars missions as early as the 2020s.

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Pulling Together in the Ropes and Cables Market

Since being founded by O. Sherman Yale in 1950, the US-based company Yale Cordage has been a market leader for braided synthetic ropes and cables. In 1991, they started using Teijin Aramid's Technora for its high-performance applications, and since 1999, this has been its primary para-aramid fiber of choice. Now in 2017, Yale Cordage continues to pioneer the rope and cable industry by manufacturing industry-leading products, some of which are literally out of this world.

From fishing lines to the Mars Lander

Over the past seven decades, Yale Cordage has built its place in the rope and cable market by producing meaningful innovation that delivers a better end-user experience. In 1950, company founder O. Sherman Yale used new synthetic materials, such as Nylon, together with innovative braiding techniques to manufacture rope and twined fibers for the fishing industry. With Tom Yale becoming part of the company's management in the 1970s, Yale Cordage moved into the sailing rope industry, developing high-performance lines and rigging. In the 1990s, they began using Teijin Aramid's Technora fiber, which allowed Yale Cordage to produce stronger ropes at a lower weight. Now in the twenty-first century, Yale Cordage has two manufacturing plants (in Maine and North Carolina), over 120 employees, and global presence that spans all seven continents. In fact, Yale Cordage's presence is literally out of this world: in 2015, Yale Cordage was chosen as the company to manufacture the bridles for the parachute of NASA's LDSD Mars Lander.

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Preventing Snap-Back

When mooring a vessel, there is always the risk, however unlikely, that one of the mooring lines fails causing it to 'snap-back'. Once separated into two parts, the rope releases the energy stored while elongated and under tension. Snap-back results in the rope recoiling, often with high velocity, towards where it is secured. This poses a serious risk to anyone within or near the snap-back zone aboard the vessel or close to where the rope was secured.

The risk of snap-back can be greatly reduced by implementing mooring Best Practice. This includes using the most suitable mooring arrangement for the prevailing swell and tidal conditions, selecting the correct rope, maintaining deck machinery and ropes, as well as ensuring crew have the required knowledge and skills essential to mooring safely.

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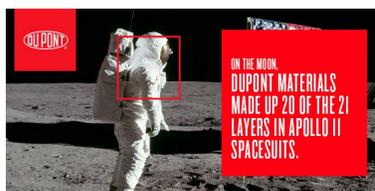
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Science Lessons from the Moon Landing

The Apollo 11 moon landing was one of the greatest scientific explorations in history, providing new insights into solar wind, Einstein's theory of special relativity and other discoveries that continued for



A Safe Descent: The Stratos III Recovery System

When flying to high altitudes, one needs a recovery system that can handle these altitudes and corresponding velocities. Not only does this system need to be able to withstand the high loads of the recovery,



Touch-Sensitive, Elastic Fibers Offer New Interface for Electronics

Researchers from North Carolina State University have created elastic, touch-sensitive fibers that can interface with electronic devices.

"Touch is a common way to

decades after the mission concluded. However, before astronauts Neil Armstrong, Buzz Aldrin and Michael Collins could spend 22 hours on the moon, countless hours were spent on earth preparing the astronauts and their equipment for their journey.

Nearly 50 years after that seminal event, the steps taken to protect the crew as they hurtled through space and stepped onto the lunar surface stand as a testament to how the scientific method of research, as well as the application of prior knowledge and innovation, can benefit humankind.

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it also has to withstand the high dynamic pressures and temperatures. These strict requirements lead to choosing Twaron® for the hemisflo drogue parachute that is used in the Stratos III Project. The materials used have to be of high quality in order to survive the descent and are sponsored by Teijin Aramid BV. The figure below shows a hemisflo ribbon parachute in the Open Jet Facility at Delft University of Technology. The parachute below has been made out of Nylon for the Aether mission and was also used as a prove of concept test for the Stratos III aramid drogue.

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interact with electronics using keyboards and touch screens," says Michael Dickey, a professor of chemical and biomolecular engineering at NC State and corresponding author of a paper describing the work. "We have created soft and stretchable fibers that can detect touch, as well as strain and twisting. These microscopic fibers may be useful for integrating electronics in new places, including wearable devices."

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Upcoming Industry Events

Event	Date	Location	Venue
Oceans '17 MTS/IEEE	September 18-21, 2017	Anchorage, AK	Dena'ina Convention Center
WSTDA 2017 Fall Meeting	October 16-19, 2017	San Diego, CA	Hotel Solamar
AWRF 2017 Fall General Meeting & PIE	October 22-25, 2017	Minneapolis, MN	Hilton Minneapolis
International WorkBoat Show	November 29-December 1, 2017	New Orleans, LA	Morial Convention Center
AWRF 2018 Spring General Meeting	April 22-25, 2018	Paradise Valley, AZ	Scottsdale Omni Resorts
WSTDA 2018 Annual Meeting	May 7-10, 2018	Naples, FL	Naples Grande Beach Resort
Cordage Institute Annual Conference 2018	May 21-23, 2018	San Diego, CA	Rancho Bernardo Inn



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Cordage Institute Headquarters:

Peter M. Lance, Executive Director
Tel: 610-971-4854 - Fax: 610-971-4859 - E-mail: info@cordageinstitute.com