

# Clingmakers

2016 ISSUE 148

ASSOCIATED WIRE ROPE FABRICATORS

“An Association Serving the Lifting, Rigging and Load Securement Industry”

P.O. BOX 748 • WALLED LAKE, MI 48390 • 1-800-444-2973

PHONE: 1-248-994-7753 • FAX: 1-800-666-2973 • [www.awrf.org](http://www.awrf.org) • [awrf@awrf.org](mailto:awrf@awrf.org)

## INSIDE

AWRF Calendar	3
On a Presidential Note	3
Stamperia Carcano S.p.A.	4
Government Affairs Committee	11
In Memory of Harry Labon Trufft	12
Cable Cars	13
QHSE Corner, Health & DVD Library	18
QHSE-Health	20
New Members	23
Profit Improvement Report	26
In Memory of Consul General Benedicto	29
Straightpoint	31, 55
Weisner Steel	33
Technical Committee	34
Why Choose New Orleans	35
General Session Speakers	38
AWRF Spring TOUR	41
Banquet Entertainment	45
Modulift	49, 77
D.C. Museum	52
Tandemloc	54
J.C. Renfro	56
Fulcrum Lifting	61
Talurit	65
Chant Engineering	66
Ulven Companies	72
Ad Index	78



# TIME TESTED

For 100 years plus, Crosby has been the market leader for innovation, selection, quality and value.



# DEMAND CROSBY

**Crosby**

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

For more information, scan the QR code.





# Message from the President

We have almost successfully made it through another winter. Spring is right around the corner!!!

In January, the AWRF Technical Committee and Board of Directors had back to back meetings in the same city and facility. This is the third year for this model and has led to greater representation by the board at the technical committee. There were seven board members present supporting the technical committee's efforts.

At the last Board of Directors meeting in New York, the board voted to assign the Quality Survey Self Audit to the technical committee to develop a documented best practices guideline for future surveys. The technical committee graciously accepted the assignment and immediately dug in on how to structure, develop and complete this daunting initiative. We want to thank Knut Buschmann for championing and coordinating this project.

Your technical committee is a very hard working group that is passionate about what they do, the industry and our association. It was clearly on display at the January meeting. The board would like to thank them for their immediate energy in taking this on.

Our next General Meeting is a PIE in New Orleans (nicknamed the Big Easy). There are several theories on where the nickname came from. But locals attribute the widespread use of the nickname The Big Easy to the late Betty Guillaud, a gossip columnist from the *Times-Picayune*. They say that Guillaud used the term first in the early 1970s to compare life in New York City—the Big Apple—to life in New Orleans—The Big Easy. Interestingly enough our meetings are taking us from New York last fall to the Big Easy this spring.

There is a lot to do in New Orleans from great music to Bourbon Street to the delectable beignets. However the big attraction will be our PIE. We will again have the Product Spotlight where companies will be able to feature new products as well as video interviews of exhibitors talking about their products. Don't miss out on the latest ideas and trends happening in our industry.

We hope to see you there!!!



## MAZZELLA Companies

**Bill Franz**

Mazzella Companies  
Cleveland, Ohio • 440-239-7000 x 280  
bfranz@mazzellacompanies.com



## AWRF CALENDAR

### 2016

April 17 - 20 AWRF General Meeting and P.I.E.  
Hyatt Regency New Orleans  
New Orleans, LA

October 23 - 26 AWRF General Meeting  
Westin Harbour Castle  
Toronto, Canada

### 2017

April 23 - 26 AWRF General Meeting  
Westin Savannah Harbor  
Savannah, GA

October 22 - 25 AWRF General Meeting and P.I.E.  
Hilton Minneapolis  
Minneapolis, MN

### 2018

April 22 - 25 AWRF General Meeting  
Scottsdale Omni Resorts Montelucia  
Scottsdale, AZ

October 14 - 17 AWRF General Meeting  
Hyatt Regency San Antonio  
San Antonio, TX

### 2019

April 7 - 10 AWRF General Meeting and P.I.E.  
Hilton Cleveland Downtown  
Cleveland, OH

Visit us on **LinkedIn**

**ALWAYS On The WEB**

Go Digital!

Slingmakers is available online at

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

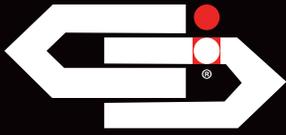


Barbara Gilbert  
Editor

[barbara@awrf.org](mailto:barbara@awrf.org)

800-444-2973 • 248-994-7753





The journey of Stamperia Carcano S.p.A. began during the 1950's when Giuseppe Carcano made the radical and brave decision to convert a mechanical workshop dedicated to production of mechanical equipment to a hot metal forging company of steel products thus opening the way for new markets, which at that time offered important development possibilities.

Group cohesion has always been a strong characteristic of Stamperia Carcano S.p.A. and decisions were always shared and supported by the family. Giuseppe Carcano, his wife Ebe and his sister Franca began the development process, which led the company to new sectors such as hardware, naval, telecommunication, electricity and railway, that were fundamental for a reality in rapid expansion.

In the 70's, the introduction of new technological innovations, as well as fast forging presses and specific equipment for mechanical works were essential for the quality leap.

Europe immediately showed great appreciation for the high quality and competitive products. At the end of the 70's, Stamperia Carcano S.p.A. was a well-established industrial reality.

The 80's witnessed an extraordinary growth of the turnover. Export increased significantly thanks to the expansion of the range of products and SCG trademark became a quality symbol attributed to the company.

During the 90's Stamperia Carcano S.p.A. was one of the most important European market players.

Since the very beginning, commitment and passion in manufacturing have been rewarded by the way customers value the high quality, resistance and duration of the "Made in Italy" products.

### THE PRESENT

Today, Stamperia Carcano S.p.A. is a leader in the production and distribution for ropes and chains accessories thanks to the respect for the company's policy, which has remained unchanged since the beginning:

- Loyalty to tradition and innovation skills
- Respect and passion for precision.

In the last years, certifications and homologations of products for railway, electricity and telephone lines have increased; this led Carcano brand enter in the exclusive market niches in Europe.

Eventually the new brand CARTEC (Carcano-Technology) was established; this brand brought Stamperia Carcano S.p.A. into the industrial lifting sector of hooks and accessories for high resistance chains. CARTEC brand opened the way for new international markets such as the USA, Japan, China, India and Brazil.

Today Stamperia Carcano S.p.A. is a modern and dynamic industrial reality with many operators and a selected supply chain for raw materials with certified quality and high tech manufacturing processes.

Simonetta and Luca Carcano have led the family company for a long time in the most authentic Made in Italy tradition and in the sign of technological innovation.

Together they aim to reach important targets following a production philosophy, whose strategic goal is

to increase the value of the products thanks to a continuous improvement of quality and competitiveness. The customs and their demands and expectations are the centre of the industrial project of Carcano.

### VISION OF THE FUTURE

The owners look at the future with optimism and passion for work. Thanks to their history and tradition made by ideas and people who left a sign, they are aware that Carcano can become a more and more influential company at the international level thanks to entrepreneurial spirit and technical innovation.

"Constantly Enhancing Product Value" this strategic objective, with the brand identity plays a fundamental role: from the choice of distinctive colours to the trademarks and logos used in product advertising.

Stamperia Carcano S.p.A. is the license holder of the CARTEC-Carcano trademark – which identifies high quality products in the lifting sector, and it is often associated with the "Made in Italy".

### PRODUCTION

Modern technology, together with highly qualified personnel create the perfect conditions to efficiently and rapidly satisfy the various requests which the management of Stamperia Carcano S.p.A. sends to its production department.

In this globalised environment where it is more and more difficult to distinguish producers from resellers, our unique qualities in planning and realizing moulds for our forging department, represents an advantage in terms of reliability unrivalled vis a vis our competitors.

One of Stamperia Carcano S.p.A.'s main production processes is hot pressing. Thanks to more than fifty years of experience,





the forging process has become the flagship with which Carcano promotes the real “Made in Italy”.

The process parameters are constantly monitored by testing equipment; modern testing software within the engineering department and planning department allow processing of data to ensure that the reached quality standards are maintained and even improved.

### QUALITY CONTROL

Our test laboratory equipped with the best and most innovative technologies proves that Stamperia Carcano S.p.A. aims to continue to improve and redesign a new concept of total quality. Tensile machines up to 250 tons, spectrometric and x-ray analysis, resistance tests at low temperatures, fatigue tests, magnetoscopic testing are some of the examples of tests carried out in our laboratories to certify our products.

### CERTIFICATION

Stamperia Carcano S.p.A. has been the first Italian company whose hot forging process was certified by the German certification authority DGUV. Such recognition certifies the reliability of the processes and of the products on an international level.

Stamperia Carcano Giuseppe S.p.A. quality Management System is qualified in accordance with requirements of **EN ISO 9001** referring rules since 1995 and since 2014 it is certified by DNV.

In 1997 Stamperia Carcano Giuseppe S.p.A. achieved the homologation of the German agency “Prüf- und Zertifizierungsstelle im BG-PRÜFZERT PZNM” with the accreditation of the «**H 92**» mark for the production of Grade 80/100 accessories in compliance with the reference norms EN 818 and EN 1677.

Our company is a member of:

- the Italian Chamber of Commerce, Industry, Crafts and Agriculture.
- the General Confederation of Italian Industry – District of Como
- the National Association of Electric Companies (ANIE).
- the AWRP (Associated Wire Rope Fabricators)

### WAREHOUSE AUTOMATION

Products are stored using a modern automated system.

The department is highly efficient, and makes optimal use of space and performance: IT program constantly monitors the products, while large lifts move horizontally and vertically all the items along the piles.

A “just in time” system allows us to save time in regrouping orders, and reduces error margins.

- More storage surface, high precision and higher efficiency
- 99% stock management accuracy

### ELECTRICITY

Stamperia Carcano S.p.A. produces all types of parts for Medium and High tension chains from 24 to 400 kv. All parts are certified by national entities such as TERNA and ENEL; these items are used by European and international electrical entities. These parts are



produced in steel, special steel, copper alloys and aluminium alloys.

High speed and high capacity railway sector: A particular development concerns protection and malfunction detection along high speed railways, particularly used in modern diagnostic systems both along the transmission line as well as the contact line. Stamperia Carcano spa produced all materials for TE certified by RFI.

There is a world of applications for lifting products in every sector: from heavy industry to oil and gas to land and sea transportation. Without proper instruments, these activities would not be possible. It is a challenge to be won against gravity.





## The Name Explains it...

# TERRIER LIFTING CLAMPS

- *Free Shipping with Faster Delivery Time*
- *5 Year Warranty*
- *Tested at 2X its Safety Work Load (SWL)*
- *Lighter more streamline design for easier handling*
- *Easy to Maintain*
- *Highest quality "Exotic" steel*
- *Meet all ASME B30.20-2010 standards*



Distributed by Pewag, USA

Terrier Lifting Clamps, Inc  
Louisville, Kentucky  
502.742.3595 • FAX 502.742.3791  
sales@pewagchain.com  
terrierclamps.com • pewagchain.com



P.I.E.

April 17-20

2016

Bourbon  
STREET

AWRF

General Meeting and P.I.E.

Hyatt Regency New Orleans

New Orleans, LA

For More Information:

248-994-7753



# Yarborough Cable Service

www.yarcable.com



In today's business climate, the importance of reliable, verifiable load testing cannot be overstated. When your lift weighs hundreds or thousands of tons and is worth millions of dollars, you need rigging you can depend on—rigging that you know will lift the load and lift it safely.

Each Yarborough Cable location is equipped with load test machines calibrated in accordance with ASTM E4 standards—with load accuracy of  $\pm 1\%$  up to 3,000,000 lbs—and traceable to the National Institute of Standards and Technology (NIST).

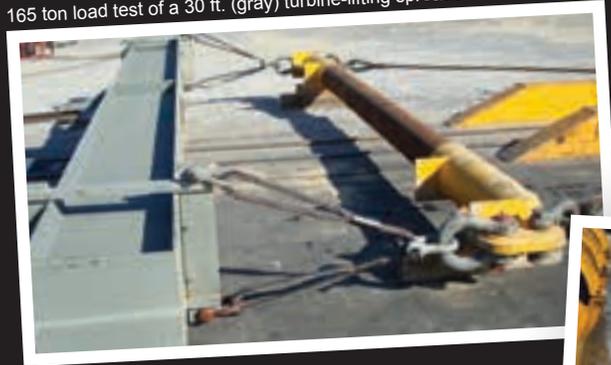
The computer-controlled, load test machine at Yarborough Memphis has a 1500 ton capacity up to 200 feet of length and a 500 ton capacity beyond 200 feet up to a maximum length of 450 feet. As seen in the photos here, the open body design of the machine facilitates rapid connect and disconnect of assemblies to be tested and provides easy access for testing tools and equipment. . . ensuring quick turnaround for customer tests. Smaller test machines of 175 tons and 36 tons are also available at our Memphis location. Branch locations in Little Rock, AR; Muscle Shoals, AL; and Pascagoula, MS have test machines of 100 metric tonnes capacity.

Yarborough can perform load testing of wire rope, chain, synthetic slings, hoists, rigging hardware, spreader beams, hooks, shackles, custom fabrications, and related components, as well as pre-stretching of wire rope. Yarborough also provides on-site rigging inspection and on-site load testing to 100,000 lbs., using E4 calibrated, portable load cells.

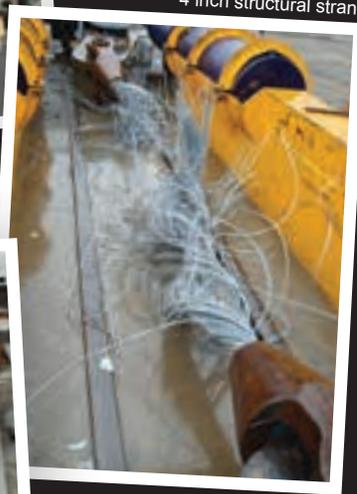
Our four full-service rigging shops in the Mid-South are ready to serve your testing needs. Contact a Yarborough rigging professional today to discuss testing for your next project.

*Study it forever and you'll always wonder...test it once and you'll know.*

165 ton load test of a 30 ft. (gray) turbine-lifting spreader beam



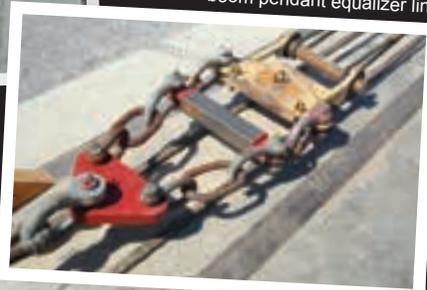
R&D break test of 4 inch structural strand



195 ton load test of a 150 ton ladle hook



247 tonne load test of a crane boom pendant equalizer link



150 ton load test of a custom-built anchor chain jack



**Memphis, TN - Head Office**  
950 Stage Road  
800.395.5438

**Little Rock, AR**  
3000 West 65th Street  
800.749.3690

**Pascagoula, MS**  
5615 Telephone Road  
228.712.2933

**Muscle Shoals, AL**  
1904 Webster Street  
256.383.3212



**MADE IN  
HOLLAND**

Van Beest B.V. is manufacturer and supplier of wire rope- and chain accessories with branches in The Netherlands, Germany, France and The USA.

We offer reliable and fast deliveries in North America directly from our warehouse in Houston, Texas.

Van Beest USA has the largest stock of quality lifting equipment in the area.

**Van Beest your reliable partner**

**STOCK IN THE**



[sales.us@vanbeest.com](mailto:sales.us@vanbeest.com)

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

Member of **Van Beest International**



**Knowledge + Skill = Success**

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

### Rigging Courses

Our tailored courses meet the training needs of all experience levels: beginner, intermediate, advanced and NCCCO prep training for Certified Rigger I & II. Hands on training is available for all rigging courses.



### Qualified & Certified Signalperson

We provide two Signalperson courses. Qualified Signalperson as required by 1926.1400 and Signalperson prep training and testing for NCCCO Signalperson Certification.

### Inspection Courses

These RI courses include inspection of slings and rigging hardware. We focus on three different types of personnel: pre-use inspectors, safety managers and qualified inspectors.



### Overhead Crane Operators

Enhance your knowledge and skill level in overhead crane operation. Our clients have reported increased productivity and improved safety awareness among their crane operators after they successfully completed this class.

### Periodic Manual Hoist Inspection

This three hour course of intense study covering periodic inspection criteria and techniques for manual lever and hand chain operated chain hoists as described in ASME B30.16, B30.21, OSHA, HMI and manufacturer standards. This course is divided equally between classroom and hands on activities.



**"Making Worksites Safer, One Rigger at a Time"**

6000 Industrial Heights Dr. • Knoxville, TN 37909 Phone: (888) • 416 • 1965 Fax: (865) • 584 • 9119



# THE GOVERNMENT AFFAIRS COMMITTEE

By: J. Barry Epperson  
General Counsel and  
Chairman of the Government  
Affairs Committee



## Information Exchange And The Antitrust Laws

*The following information is attributable to numerous general antitrust sources, "A Primer on The Law of Information Exchange" published by the American Bar Association and the Author's personal experience. The sharing of information among competitors, by means of surveys, benchmarking, dissemination of statistical data or direct discussions poses numerous antitrust risks. The modern use of electronic exchanges has exacerbated these risks.*

### Control

Many factors must be considered by courts of law in determining antitrust liability. While some factors are beyond control, those subject to control include the type of data exchanged, selection and identity of the parties to the exchange, the currentness of the information exchanged, the competitive purpose of the exchange and whether the exchange is direct or by way of a disinterested third party. The details exchanged are also subject to control by the parties.

### The Other Party

Data involving pricing, output, costs, marketing strategies and new product development is super sensitive. Conversely, safety, health and training are subjects with reasonably low risks of antitrust violation. Without a doubt, the most antitrust sensitive subjects are current pricing and future price intentions. Announcements of the latter may lead to allegations of tacit price fixing by way of "signaling."

### Currentness of Information

While exchanges of historical data are seldom dangerous, the exchange of current or future marketing plans can easily lead to unlawful market stabilization. When a trade association engages an outside party to compile and disseminate data, the identity of the contributing members should be concealed. Thus, benchmarking against industry standards can be accomplished with less antitrust risk than direct exchanges of information between members. Caveat: In highly concentrated markets, competitors may be able to guess the identities of others. Accordingly, the more participants involved in a data collection program, the less likely the occurrence of an antitrust violation.

### Competitive Purpose

Any information exchange that has primarily anticompetitive objectives, e.g. price stabilization, is dangerous. Therefore, data collection programs must be designed to promote competition and efficiency while avoiding anticompetitive effects.

### Guidelines for Information Exchange Risk Reduction

1. Meetings
  - a. Stick to a preapproved agenda.
  - b. Have association counsel present.
  - c. Follow the advice of company and association counsel.
  - d. Concentrate on data; avoid theorizing and analysis.
  - e. For your own protection, leave the meeting if improper discussion persists, stating why you are leaving.
2. Electronic Communication
  - a. Follow the AWRP Policy for electronic communication.
  - b. Seek advice of company counsel to establish limits on the type of information communicated.
  - c. Make information available on an equal basis.
  - d. To the extent possible, preserve the anonymity of competing buyers and/or sellers.
  - e. Create firewalls to insure simultaneous release of pricing data.
  - f. Limit sellers' ability to signal future pricing intentions to one another by restricting discussion to those issues relevant to the transaction.

### Topics for Periodic Company Seminars Narrated by Company Counsel

1. Contacts or relations with competitors
2. Relations with suppliers and customers
3. Participation in trade associations
4. Benchmarking pitfalls
5. Avoidance of knowledge concerning how competitors make core strategic decisions
6. Basic antitrust risks with respect to discussions of competitively sensitive information, such as pricing, costs, marketing strategies, production and capacity levels, and when, where and how competitors do business
7. Press releases
8. Speeches
9. Finding best practices
10. Participation in joint ventures
11. Patent, copyright and trademark licenses

### Conclusion

By remaining alert to prospective antitrust pitfalls and reliance upon the advice of legal counsel, AWRP members can establish beneficial information exchanges and benchmarking programs without breaching the antitrust laws.



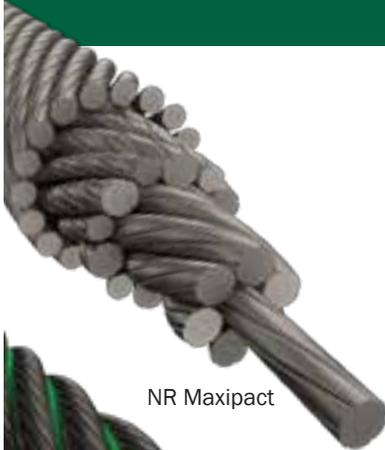
## In Memory of Harry Labon Truitt

Harry Labon Truitt, the founder of Western Sling Company, passed into eternal life on January 16, 2016.

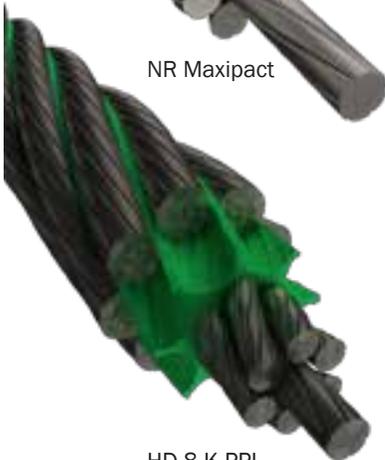
Harry was born in Tampa, FL on August 7th 1926. His parents were Harry L. and Amelie (Nores) Truitt. He proudly served our country in the Navy during WWII in the Pacific Theatre. After the war he attended the University of Tampa. Shortly after graduation he met his wife, Christine Stone. They moved to Atlanta for a short while then returned to Tampa when he became the youngest District Manager for John A. Roebling Company. After the Birth of Harry S. (Stan) and James L. (Jim) they moved back to Atlanta and Robert N. (Bob) was born. 11 years later he was transferred to Denver, Colorado. Exactly one year later he was asked to move to Trenton, NJ, he declined, resigned from CF&I Steel and subsequently started his own company which became Western Sling Company. In later years he became one of the founding fathers of the Associated Wire Rope Fabricators (AWRF). Upon his retirement around 1990, he and Chris moved part time to Florida. He loved Golf, particularly The Masters, and fishing. Harry's gentle spirit and love for his Family is what we remember most. If a Man's worth is judged by the love of his Family then Harry was wealthy indeed.

He is survived by his wife, Christine, sons and their wives, Harry S. Truitt (Kim), James L. Truitt (Wendy), Robert N. Truitt (Claudete), 10 grandchildren and 6 great grandchildren.

## Oliveira – WireCo's Crane Rope Advantage



NR Maxipact



HD 8 K PPI

- ▶ Galvanized
- ▶ Higher Breaking Strength
- ▶ Corrosion-Resistant
- ▶ Longer Service Life

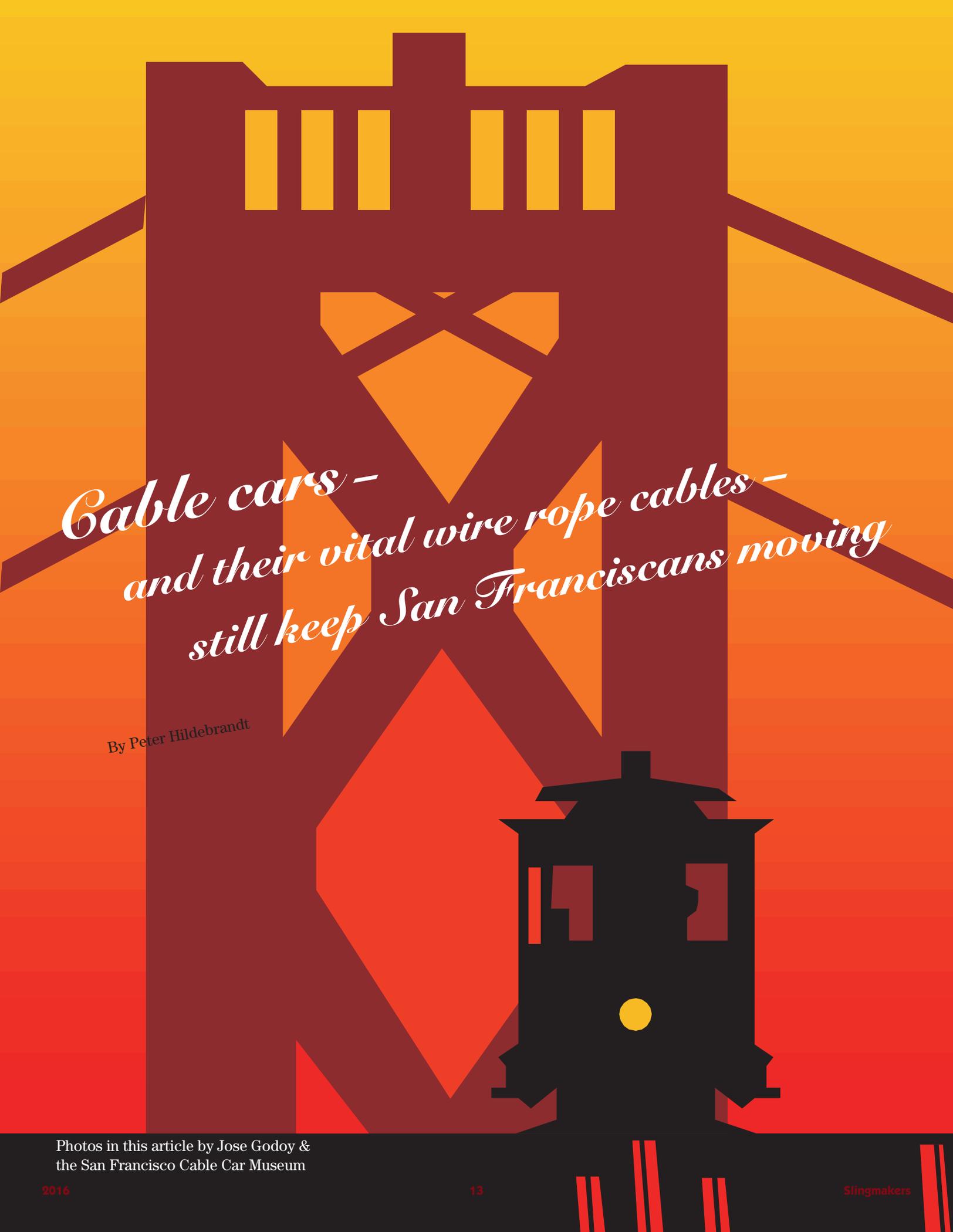
European manufactured and serviced by WireCo WorldGroup, our Oliveira crane ropes are kept in stock in the U.S. Galvanized, corrosion-resistant, longer lasting and a better value than the competition. WireCo has the best engineering, technical and sales support in the industry.

**Performance and Availability.** That's the advantage of Oliveira crane ropes. Contact your local distributor or call +1.816.270.4761 to learn more.



A WireCo® WorldGroup Brand

[www.oliveirasa.com](http://www.oliveirasa.com) • [info@wirecoworldgroup.com](mailto:info@wirecoworldgroup.com)

A stylized illustration of a cable car tower and a cable car. The tower is a dark red silhouette with a lattice-like structure, set against a background of a sunset with a gradient from yellow at the top to red at the bottom. A cable car is shown in silhouette at the bottom right, with a single yellow light on its front. The overall style is graphic and modern.

*Cable cars -  
and their vital wire rope cables -  
still keep San Franciscans moving*

By Peter Hildebrandt

Photos in this article by Jose Godoy &  
the San Francisco Cable Car Museum



A big part of the reason the San Francisco cable cars, and the technology enabling them, came about was a direct outcome of when someone noticed how cruel the older transport technology could be. The impulsive force behind the San Francisco cable car system resulted when someone witnessed a horrible accident on a typically damp summer day in 1869. Andrew Smith Hallidie saw how slippery grades could prove deadly, when a horse-drawn streetcar slid backwards under its heavy load.

The steep slope combined with wet cobblestones and a heavily weighted vehicle to drag five horses to their deaths. Although such a sight might stun most who accepted the

inevitability of such horror, Hallidie and his partners had the know-how to do something about the problem. Born in England, Hallidie moved to the U.S. in 1852. His father filed the first patent in Great Britain for the manufacture of wire rope.

As a young man, Hallidie found uses for this technology in California's Gold Country. He used the wire rope when designing and building a suspension bridge across Sacramento's American River. He also found another use for the wire rope when pulling heavy ore cars out of the underground mines on tracks. The technology was actually in place for use in the pulling of cable cars.

The next step bringing Hallidie closer to his fate was moving his wire rope manufacturing to San Francisco. All that was needed was seeing the accident for the idea to become full blown; a cable car railway system to deal with San Francisco's dreaded hills. In 1852, Andrew Hallidie arrived from Great Britain. It would be another 17 years until he witnessed the horse-car accident inspiring him on the need for a cable railway. But after that; within a quick four years, in August 1873, Hallidie would test the



first cable car system near the top of Nob Hill at Clay and Jones Streets.

The following September the Clay Street line started up public service, the construction of which cost some 85,000 dollars. Four years later, Sutter Street Railroad converted to cable power, from using animals, in a completely seamless transition. The cable cars, still in use to this day, have no engine or motor on the cars themselves.

The power source is centralized in the cable car barn and powerhouse at Washington and Mason Streets; home as well, to San Francisco's Cable Car Museum. There, powerful electric motors – originally a stationary steam-powered engine – drive giant winding wheels that pull cables through a trench beneath the street, centered under the cable car tracks. Observant tourists and commuters might have noticed that that's what's in the slot between the tracks.

There are actually four cables; one for the California line, one for Powell Street, and one each for the outer ends of the two Powell lines which consist of Mason and Hyde. Each cable has its own set of winding wheels. The rearmost winding wheel in each set is adjustable. When a cable is new, this rearmost wheel is close to the other winding wheels.

As the cable naturally stretches out with use, the wheel is gradually moved back by shop workers to keep constant tension on the cable. The cables are over an inch in diameter, with six steel strands of 19 wires each wrapped around a core of sisal rope. Each cable car has a mechanical grip, two on the double-end California cars, which latches onto the cable, much like a huge pair of pliers. The gripman or gripwoman, as two women in history have served in that position, can 'take' or 'drop' the 'rope', as the cable is called, as needed to start or stop the car.

The cables move at a constant 9.5 miles per hour. If a cable car is going faster than that, it's a sure thing that the car is going downhill and the grip is not holding the rope tightly. "Taking and Dropping" the 'Rope' is part of the process.

At some terminals, observant riders will notice the conductor pulling on a



automobiles from getting in his way, he will throw the grip lever forward with his other hand just in time, then coasts with a clatter across the California tracks.

At little tower on the southeast corner of California and Powell a signaler holds lights to

indicate to cable cars on both lines whose turn it is to crest the hill. This is designed to keep cable cars from hitting each other at the intersection.

After the Powell cable car crosses the California tracks, it reaches one of the dips in the pavement, allowing it to “take rope” (reattach to the cable). For Powell cars headed toward Market Street, this happens immediately, before they descend the steep hill to Pine Street.

For Wharf-bound Powell cars, however, the dip in the pavement doesn’t come for more than three blocks, where the two Powell lines split, and each gets its own cable. For those three blocks of comparatively gentle downgrade, the Powell cars “freewheel” (run without the cable). This often makes for the fastest part of the trip, since the car is limited to 9.5 miles an hour when it’s holding the cable firmly.

While being a gripman today is a very tough job; consider those on the last all-new cable car line to open, on O’Farrell, Jones and Hyde Streets in 1891. As the new kid on the block, its cable had to be “inferior” (lower) to older cable lines at

every crossing. This meant the gripman on that line (from which a cable car has been preserved and beautifully restored) had to drop the rope no less than 22 times on every round-trip!

Even though the cars never reach speeds that would make a moped rider envious, they still have brakes – three different types to be exact. Cable car brakes are all very simple and include wheel brakes, track brakes and an emergency brake. Each wheel has a soft steel shoe that can be pulled tight against the wheel to stop the car. These are crew-activated by foot pedals on both ends of the California cars, and on the front end of the Powell cars. A conductor’s lever on the rear platform activates rear track brakes on Powell cars.

Track brakes are simply pieces of wood located between the wheel sets on the cars. There are four for each car, two feet long each, made of soft Monterey Fir. When the gripman pulls back on the track-brake lever (next to the cable grip lever), the blocks press against the tracks to help stop the car.

The emergency brake is just that. If a cable car gets into a situation where the other brakes won’t stop the car (a very rare situation), the gripman pulls back

*Continued on page 69*

lever in the street. This lifts the cable upward so the grip can grasp it. At other terminals as well as at other locations on the system, those riders may spot a perceptible dip in the tracks. This lowers the car, and its grip, to the level of the cable underneath, allowing the grip to grasp the cable.

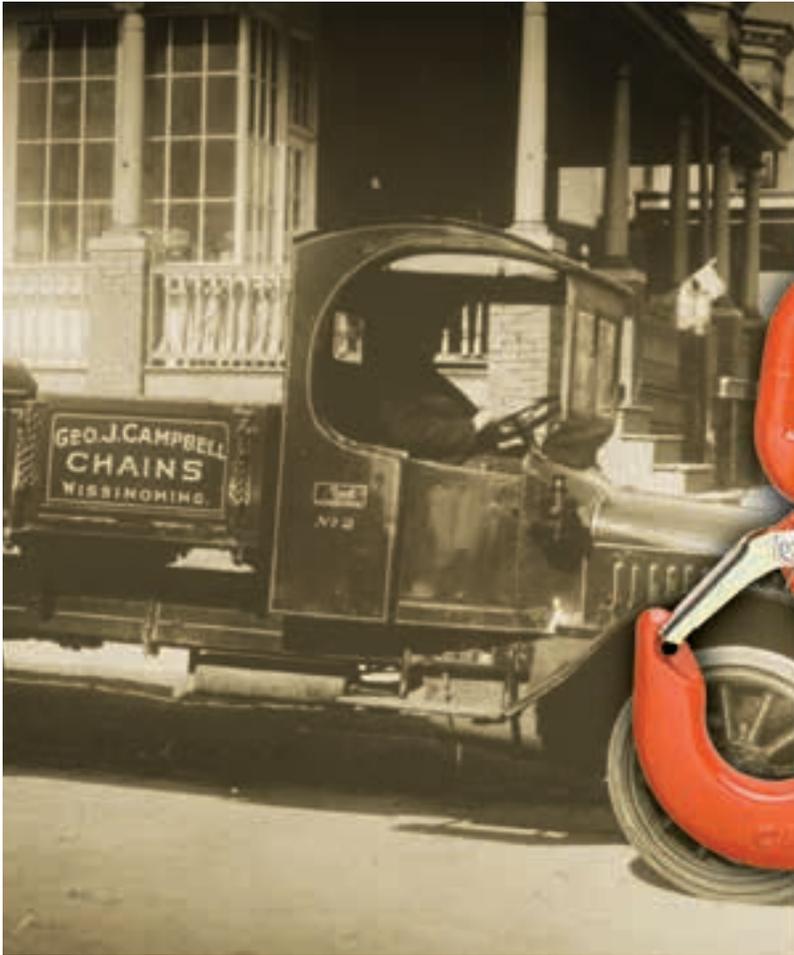
Among other locations, this happens in both directions where the Powell and California cable lines cross. Adhering to the original cable tradition, the California line, which was built first in 1878, is “entitled” to the upper cable, meaning that the California Street cable cars hold onto the “rope” cable as they cross Powell Street.

The Powell Street cable cars, by contrast, must drop the cable from the grip before they cross the California Street tracks. If there were no safeguards built into the system, a Powell cable car that held onto the cable too long at this point could pull the lower Powell cable up against the higher California cable and the Powell car’s grip could hit and possibly sever the California Street cable.

To forestall the existence of this happening, there is an alarm system and mechanism under Powell Street on either side of the California tracks to physically force the Powell cable from the grip if it is held too long. This can damage both the cable and the grip. Luckily, because of the skill of the gripmen this almost never happens.

If one were to observe a Powell gripman approaching this corner, in particular when headed north from Market Street, they would see the gripman has to crest the hill tightly gripping the cable. Then, with one hand clanging the bell to keep crossing





Today's rigging solutions built on over 90 years of experience.

You take choosing rigging components seriously. You want products engineered to be strong, yet lightweight. Products that incorporate the latest technological advances and are made to the highest standards of safety and performance. Products like the new line of Campbell hoist hooks. Quality made in the U.S.A. since 1919. [www.apexhandtools.com/campbell](http://www.apexhandtools.com/campbell)

**Campbell**<sup>®</sup>

©2011 Apex Tool Group, LLC

# STRIDER~RESOURCE

Lifting & Rigging Products for the 21st Century™

[www.strider-resource.com](http://www.strider-resource.com)

**Full range of: Modern Round Sling Machines**

Universal **Wire Rope Swagers**

**One Press®** Patented **Dies** and **Sleeves**

Wire Rope **Annealing Machines**

**Overload Guards** and Wireless **Load Cells**

**In stock** for Immediate Delivery.

[service@strider-resource.com](mailto:service@strider-resource.com) (905) 859.3901

# Health Performance Strategies

Your Partner in Organizational Health and Wellness



## Associated Wire Rope Fabricators

### 2016 SPRING GENERAL MEETING & PIE

We're excited to see you in New Orleans! Be sure to stop by the Florida Hospital booth during the P.I.E. on Monday, April 18<sup>th</sup>. Here is a sneak peak of what will be offered:

- **Biometrics Screenings** – We live in a world of numbers: phone numbers, PIN numbers, revenue numbers, stock market numbers. But do you know the heart health numbers that could literally save your life?
  - Your blood pressure
  - Your cholesterol levels
  - Your body mass index

Our team of clinicians will be on hand again this year to provide these important screenings. Take a few minutes out of your day to get this important screening done!

- **Did you say Cooking Demo?** That's right, Chef Edwin Cabrera will be on hand again this year to whip up some amazing and delicious healthy recipes that you can enjoy at the conference and make for your family.
- **Get your blood pumping** and join us for an early morning group fitness class on the 18th! Our *No Equipment Necessary* fitness class is designed to show you how to use your own body for resistance ~ and the best part – you can do these exercises anywhere. No gym required!



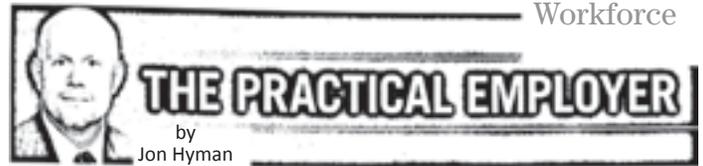
### OSHA Now Thinks It Can Cite Facilities It Hasn't Even Visited

If your business operates in more than one location, you cannot ignore this case or its implications. January 13, 2016

Jon Hyman

Related Topics: Legal Compliance, Staffing and the Law, Safety and Workplace Violence

KEYWORDS Central Transport / osha



Central Transport operates trucking terminals around the country. As a result of OSHA's investigation of one facility in Massachusetts, the agency fined the company \$330,800 for violations relating to powered industrial trucks. That, in and of itself, is not that remarkable. What OSHA did next, however, should cause your head to spin.

In addition to the citations and fines levied at the facility it actually inspected, an OSHA administrative law judge also ordered "enterprise-wide" abatement at the 170 nationwide facilities OSHA had not inspected. The ALJ relied on the "other appropriate relief" clause of section 10(c) of the Act to conclude that the agency has the authority to order such enterprise-wide abatement of hazards existing, "upon information and belief," at worksites other than the location where the inspection occurred.

This opinion, which you can read in its entirety here, is groundbreaking. Even though the judge downplayed the opinion's precedential impact, OSHA has very a different take:

"Judge Baumerich's order is significant and precedent-setting. This is the first decision by an OSHA Administrative Law Judge expressly finding that the U.S. Occupational Safety and Health Review Commission may have the authority under the OSH Act to order abatement measures beyond the specific violations identified in the citations. The department

is now authorized to proceed with discovery and to demonstrate, by presenting its evidence at trial, that enterprise-wide abatement is merited on the facts of this case," said Michael Felsen, the regional solicitor of labor for New England.

"When an employer has hazards occurring at multiple locations, common sense and reasonable worker protection law enforcement both dictate that the employer take corrective action to safeguard the health and well-being of employees at all its worksites," said Kim Stille, OSHA's regional administrator for New England.

If your business operates in more than one location, you cannot ignore this case or its implications. What steps can (should?) you take to minimize the risk of enterprise-wide abatement based on a one-site inspection? Think CAT — Communicate, Analyze, and Train.

**1. Communicate and Share safety issues among all locations.** It appears that conventional wisdom, which stated that OSHA inspections are limited to the actual facility being inspected, is out the window. As a result, if one facility is having a safety, you should be sharing that issue across all your facilities, so that if OSHA comes knocking you will limit your exposure company-wide.

**2. Analyze your safety low-hanging fruit.** You will find this low-hanging fruit in two places. First and foremost, if you are not using your OSHA 300 logs as a compliance tool, you are missing a great opportunity. By tracking employee injuries, those logs tell you how employees are becoming injured, and, in turn, which safety areas need to be addressed. Secondly, you should analyze national and local trends (such as here) for the areas most often cited by OSHA.

**3. Train, train, and train some more.** Your managers and supervisors are your best defense against an OSHA-related issue. They are your eyes and ears among your employees. If they don't know what OSHA requires and how those requirements must be executed in your business, then that line of defense is leaving you exposed. It sounds trite, but with workplace safety, the proverbial ounce of prevention is really worth the pound of cure.

*This case originally appeared at Meyers Roman's Ohio OSHA Law Blog .*

Jon Hyman is a partner in the Labor & Employment practice of Meyers, Roman, Friedberg & Lewis. He is a *Workforce* contributing editor. Comment below or email editors@workforce.com. For more information, contact Hyman at 216-831-0042, ext. 140, or jhyman@meyersroman.com. Follow Hyman on Twitter at @JonHyman. You can also follow him on Google Plus.



**Brett Woodland**  
Yarbrough Cable  
Service  
Memphis TN  
901.383.5383



**Nicole Parkerson**  
Certified Slings  
& Supply  
Cassberry, FL  
407-331-6677  
nicolep@certifiedslings.com



**Mike Cuccinello**  
Bilco Wire Rope  
and Supply  
Hillside, NJ  
908-351-7800  
www.bilcogroup.com



**Michelle Billows**  
Alloy Sling Chains LTD.  
East Hazelcrest, IL  
708.647.4900

# SAFETY VIDEO & DVD RENTAL LIBRARY & SIGN-OUT FORM

Email request to [caren@awrf.org](mailto:caren@awrf.org) or [barbara@awrf.org](mailto:barbara@awrf.org) or mail to AWRF; P.O.Box 748; Walled Lake, MI 48390-0748. Thank you

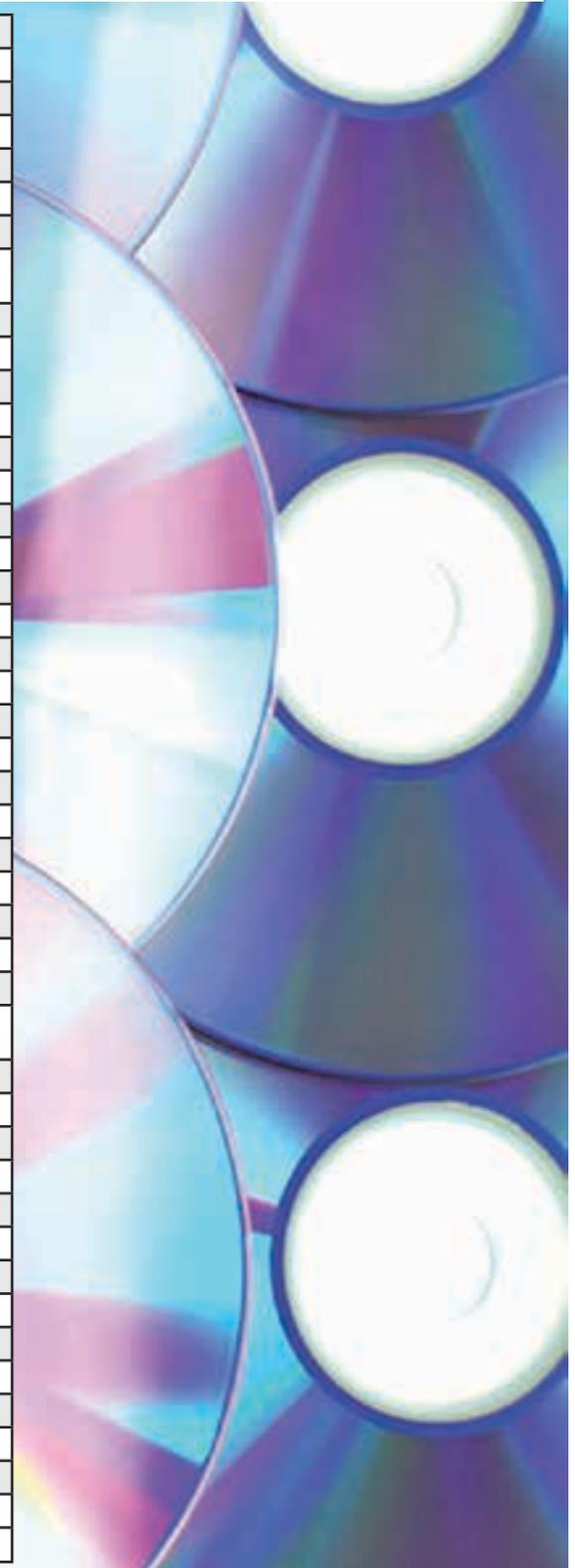
COMPANY NAME: \_\_\_\_\_ SIGN-OUT DATE: \_\_\_\_\_

COMPANY LOCATION: \_\_\_\_\_ RETURN DUE DATE: \_\_\_\_\_  
(within 2 weeks after receipt)

CONTACT NAME & PHONE #: \_\_\_\_\_

Notes: \_\_\_\_\_

25 Most Commonly Cited OSHA Violations	9 min dvd	DVD	
Accident Investigation	complete training program	DVD	
ANSI / MSDS	complete training program	DVD	
Back Injury Prevention	9 min dvd & leader's guide	DVD	
Compressed Gas Cylinders	complete training program	DVD	
Controlling Exposure to Bloodborne Pathogens (Mfg.)	17 min dvd	DVD	
Dealing with Drug & Alcohol Abuse..For Employees	complete training program	DVD	
Dealing with Drug & Alcohol Abuse.. For Managers & Supervisors	complete training program	DVD	
Driving Safety	complete training program	DVD	
Emergency Planning	complete training program	DVD	
Eye Safety	complete training program	DVD	
Fall Protection	complete training program	DVD	
Fire Protection / Electrical Safety	9 min dvd	DVD	
First Aid	complete training program	DVD	
Fitness & Wellness	complete training program	DVD	
Fit-Testing Respirators	12 min dvd	DVD	
Forklift Operator Training	16 min dvd	DVD	
Hand & Power Tool Safety	complete training program	DVD	
Hand, Wrist & Finger Safety	complete training program	DVD	
Hearing Conservation & Safety	complete training program	DVD	
Heat Stress	complete training program	DVD	
Housekeeping in Manufacturing	10 min dvd	DVD	
Industrial Ergonomics	complete training program	DVD	
Industrial Fire Prevention	complete training program	DVD	
Ladder Safety	complete training program	DVD	
Lock Out / Tag Out	complete training program	DVD	
Machine Guarding Safety	complete training program	DVD	
Office Safety	complete training program	DVD	
OSHA Log 300	13 min dvd	DVD	
OSHA Recordkeeping for Managers, Supervisors & other Employees	complete training program	DVD	
Personal Protective Equipment	complete training program	DVD	
Portable Grinders & Abrasive Wheels	12 min dvd & leadership guide	DVD	
Pre-Trip Inspection for Light Trucks	13 min dvd	DVD	
Reporting for Work, Your Safety Responsibilities	10 min dvd	DVD	
Respirators & How to Use Them	12 min dvd & leadership guide	DVD	
Safe Operation of Overhead Cranes	12 min dvd & leadership guide	DVD	
Safety Audits	complete training program	DVD	
Safety Showers & Eye Washes	complete training program	DVD	
Slips, Trips & Falls	complete training program	DVD	
Supervisor's Guide to Accident Investigation	12 min dvd	DVD	
Unsafe Acts; Human Behavior	11 min dvd & leadership guide	DVD	
Welding Safety	complete training program	DVD	
Winter Driving	12 min dvd & leadership guide	DVD	
Workplace Stress	complete training program	DVD	
<b>RETURN ADDRESS: 28175 Haggerty Rd. Novi, MI 48377</b>			



## Wellness in New Orleans



**Mark Hertling**, Senior Vice President, Health Performance Strategies, Global Strategy and Leadership & Talent Development

“Most organizations are concerned about the physical health and wellness of their employees, and that usually translates to exercising right and eating well. But the Health Performance Strategies team at Florida Hospital, a proud sponsor member and only healthcare member of AWRP, is geared to caring for the mind, the body and the spirit of each individual, using the CREATION Health model. We look forward to seeing everyone at the Spring Meeting & P.I.E. and I would encourage each of you to take advantage of the wellness programs and screenings. As your health and wellness partner, we would love to help you create a culture of health within your organization.”

We are excited to see you in New Orleans! Be sure to stop by the Florida Hospital booth during the P.I.E. on Monday, April 18th to learn more about The Stress Recovery Effect program that is available for your company. We'll also be offering the following health and wellness programs:

- **Biometrics Screenings** – We live in a world of numbers: phone numbers, PIN numbers, revenue numbers, and stock market numbers. But do you know the heart health numbers that could literally save your life?
  - Your blood pressure
  - Your cholesterol levels
  - Your body mass index

Our team of clinicians will be at the meeting again this year to provide these important screenings. Take a few minutes to stop by our booth and get this important screening done!



- **Did You Say Cooking Demo?** That's right, Chef Edwin Cabrera will be whipping up some delicious and healthy recipes that you can enjoy at the conference and later make for your family.



- **Get Your Blood Pumping!** Join us for an early morning group fitness class on the 18th! Our No Equipment Necessary fitness class is designed to show you how to use your own body for resistance, and the best part – you can do these exercises anywhere. No gym required!
- **Stress Recovery Game** – Feeling stressed? We've got a solution! Stop by the Florida Hospital booth to join us in a fun interactive game and learn more about The Stress Recovery Effect program.



## The Stress Recovery Effect ~ Transform Your Stress from Enemy to Ally!

### Feeling Stressed?

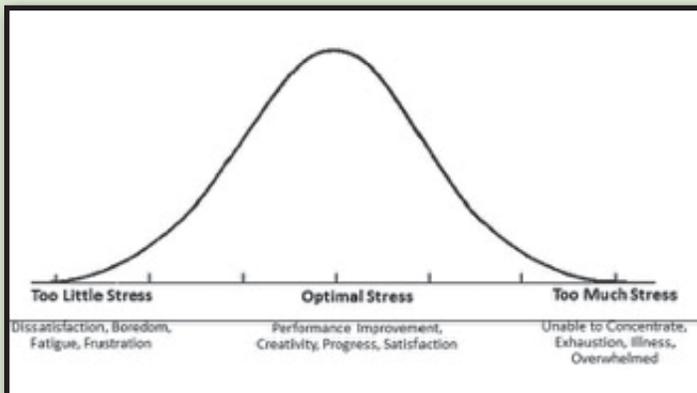
In The Stress Recovery Effect, researchers Nick Hall, PhD, and Dick Tibbits, DMin, introduce companies to their evidence-based solution for stress management in the workplace. Grounded in original research conducted at Florida Hospital—the largest admitting hospital in America—this transformative program empowers employees to do what elite athletes and high performance CEO’s do: Reframe stress from a negative to a positive, find their optimal stress zone, and use The Stress Recovery Effect to fuel future success.

### Stress is Not the Enemy

Stress is a part of life, and often times it seems like you can’t live with it, but as you will discover, you can’t live without it. Stress can be found everywhere you go; at work, at play and at home. In fact, stress-related ailments cost the nation \$300 Billion every year in medical bills and lost productivity.

In today’s fast-paced, digital world, learning how to effectively manage stress and quickly recover from the negative effects of stress is crucial to maintain a happy, healthy life. The Stress Recovery Effect program can help you increase personal vitality, enhanced health, and improved performance.

### Where are You on the Stress Bell Curve?



### Program Details

**The Stress Recovery Effect program is a six-week interactive course grounded in science that incorporates a whole-person approach to managing stress.**

This behavior-based program utilizes multiple theories of stress and stress management to provide your employees with the proper resources and tools to transform stress into positive energy. During this program, your employees will:

- Learn and identify their distinctive stress coping style
- Create a personalized stress profile
- Learn how to make stress work for you, not against you
- Explore options to improve their coping capabilities
- Experience greater focus, creativity, and joy in life
- Acquire the tools to recover and refocus
- Find out why avoidance of stress is not a long-term strategy

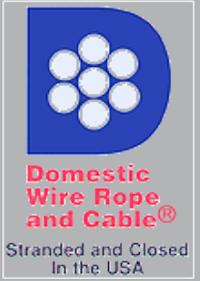
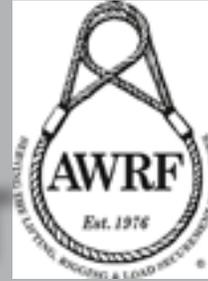
Managing stress from a whole-person approach equips you with strategies to decrease stress, and can give you the energy you need to optimize stress when it occurs.

**Stop by our booth to learn more about how you can bring The Stress Recovery Effect program to your workplace.**

FH.Health.Performance.  
Strategies@FLHosp.org | (407) 303-9910

FloridaHospital.com/  
HealthPerformanceStrategies

# WHAT YOU SPEC IS WHAT YOU GET



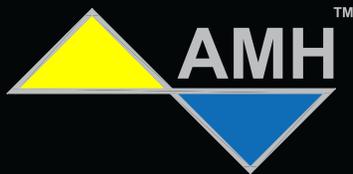
Loos and Company stocks stainless steel, galvanized, and specialty alloy wire rope in sizes from .006" to 1-1/4". With such a wide range of sizes available, we have a product for almost any application. Let us know what we can build for you, because with Loos and Company, what you spec is what you get.



(800) 533-5667

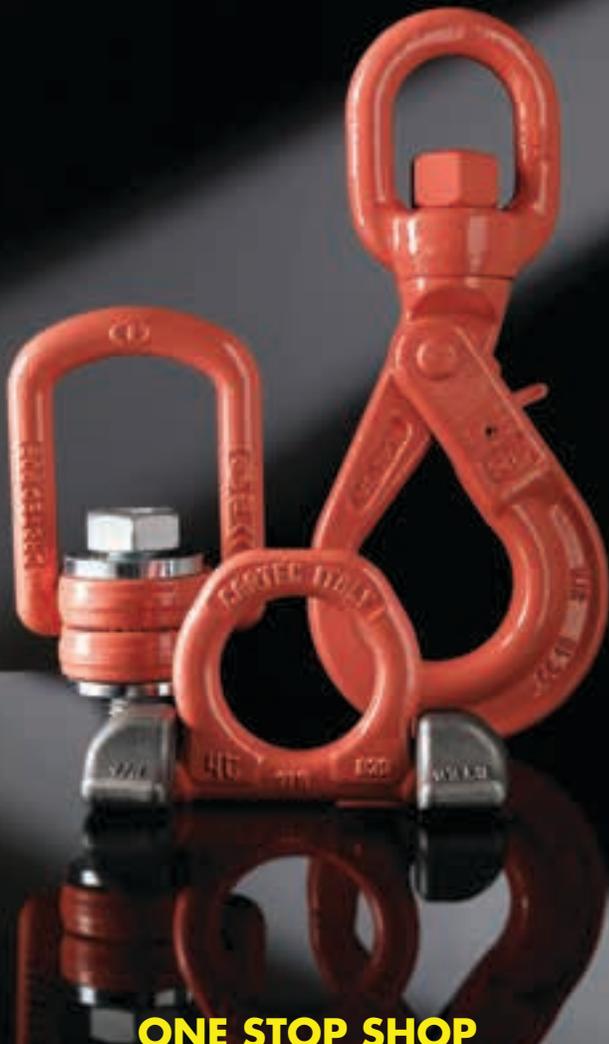
SALES@LOOSCO.COM

WWW.LOOSCO.COM



ALL MATERIAL HANDLING  
Lifting Equipment

**CARTEC**



**ONE STOP SHOP**

**HOISTS**

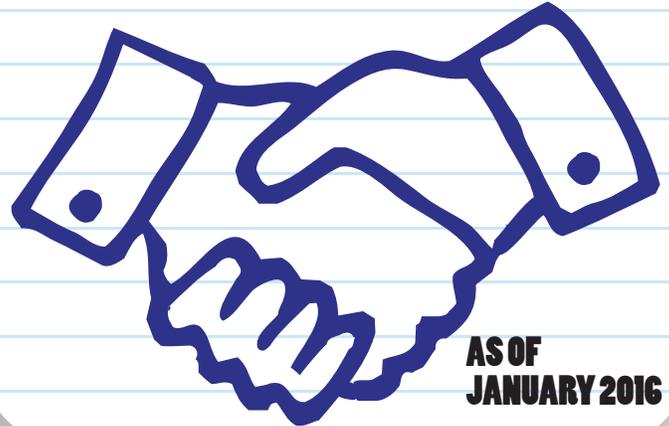
**RIGGING  
HARDWARE**

**SLINGS**

**877-LIFT AMH**

[allmaterialhandling.com](http://allmaterialhandling.com)

Welcome  
New Members!



**AS OF  
JANUARY 2016**

**Regular Member**

Canyon Rigging & Livestock Supplies, Inc.

Debbie Hampton; Owner

Website: [www.canyonrigging.com](http://www.canyonrigging.com)

Email: [canyonrigging@hotmail.com](mailto:canyonrigging@hotmail.com)

**Sponsor Member**

Certags LLC

Chris Collard; Managing Partner

Website: [www.certags.com](http://www.certags.com)

Email: [ccollard@certags.com](mailto:ccollard@certags.com)

**Manufacturing Member**

Modulift UK Limited

Sarah Spivey; Managing Director

Website: [www.modulift.com](http://www.modulift.com)

Email: [sarah@modulift.com](mailto:sarah@modulift.com)

**Manufacturing Member**

Texweb, Inc.

Hany Tadrus; Vice President

Website: [www.texweb.us](http://www.texweb.us)

Email: [hani.tadrus@petrolift.com](mailto:hani.tadrus@petrolift.com)

**CHICAGO**  
Since 1972  
chicagohardware.com

**Chicago Hardware & Fixture Co.**  
American Made    Family Owned    Superior Quality

QUALITY SYSTEM CERTIFICATION  
ISO 9001:2008  
DNV

RVA  
MGMT. SYS.  
RVA 0024

# SIZE matters

when lifting heavy workloads.

**1<sup>st</sup> Again!!** **pewag** has been at the core of chain innovation for over 500 years and is pleased to introduce the **First 1-1/4" Grade 100 Winner<sup>®</sup> Chain** and components that can handle the most demanding workloads (WLL 90,400 lbs @ 90°).

When your workload demands are pushed to the limit, **pewag** innovation provides superior strength and endurance when you need it the most!

**pewag**

**WORLD'S STRONGEST CHAIN**  
www.pewag.com

**DON'T SETTLE FOR LESS THAN THE BEST, CALL 800.526.3924**

© Pewag, 600 W. Crossroads Parkway, Bolingbrook, IL. All rights reserved. [pewag.com](http://pewag.com)

# CARCANO TECHNOLOGY

...And I will move the world



## CARTEC®

GRADE 80/100  
LIFTING SYSTEMS  
HOMOLOGATED  
H 92 BY GERMAN  
AGENCY DGUV.



WWW.CARCANO.IT



**STAMPERIA  
CARCANO  
GIUSEPPE spa**

Via per Alzate 31  
22032 Albese con Cassano (Co)  
ITALY  
Tel. +39 031 429611  
Fax +39 031 426151  
stamperia@carcano.it

# Profit Improvement Report



## Too Much of a Good Thing

Few distributors ever say no to additional sales. Not that sales solves all problems, but sales growth is a lot more fun than sales stagnation.

As it turns out, rapid growth creates as many problems as it solves. If the firm grows too fast it will face cash flow challenges. If it grows way too fast, it will probably die from a lack of cash. Those are ominous alternatives.

The idea that sales growth can be too fast is somewhat counterintuitive. Because of that it is necessary to understand exactly how sales growth impacts the firm's financial performance. The report will do so from two perspectives:

- **The Good and Bad of Sales Growth**—A discussion of how sales growth creates financial opportunities as well as financial challenges.
- **The Growth Potential Index**—An examination of a method to identify how fast the firm can afford to grow.

## The Good and Bad of Sales Growth

Exhibit 1 outlines the impact of a 15.0% sales increase for a typical AWRP member based upon the latest PROFIT Report. In the Current column, the firm has \$7,000,000 in sales and earns a profit of \$300,000. To generate this profit the firm must invest \$3,500,000 in total assets, much of it in accounts receivable and inventory. This is somewhat offset by \$700,000 of supplier financing.

The second column details what 15.0% sales growth does for the firm. Some of what happens is extremely positive. Other results are negative and need to be addressed.

The income results are all positive. The firm increased its sales by 15.0% while keeping the gross margin percentage the same. Payroll expenses were controlled so that they have only increased by 13.0%. In addition, the non-payroll expenses have only increased by 10.0%. The firm is leveraging its expenses. This would be outstanding performance based upon historical results.

The bottom of the income statement shows the payoff from this. Pre-tax profit goes from \$300,000 to \$428,700, an increase of 42.9%. After the obligatory income taxes (30%), the firm has \$300,090 to reinvest back in the business.

To review the balance sheet it is necessary to start at the bottom. All of the after-tax profit (\$300,090) has been reinvested in the business, so total assets are now \$3,800,090. Working up from the bottom of the balance sheet, the All Other Assets category did not increase.

However, both inventory and accounts receivable have increased by 15.0% to support the increase in sales. As far as inventory is concerned, this is what will happen inevitably, albeit slowly. For accounts receivable this increase happens automatically and instantly.

The final assets category, Cash, is what is left over after subtracting up from the bottom. In this scenario, cash falls to \$187,590. It is a sobering situation.

The situation is not completely dire. The firm can count on additional supplier financing because of increased purchasing to support the increased sales. This is shown at the bottom of the exhibit. The firm can also use its line of credit. The challenge is that with the deteriorating cash situation, it may be forced to do so rather than choosing to do so.

The necessity for distributors is to avoid the cash challenge in the first place. This requires understanding exactly how fast the company can grow and what it might do to overcome the potential cash predicament.

**Exhibit 1**  
The Impact of 15.0% Sales Growth  
Combined with a Profit Improvement Plan  
For a Typical AWRP Member

	Current Results	15.0% Growth	Percent Change
<b>Income Statement</b>			
Net Sales	\$7,000,000	\$8,050,000	15.0
Cost of Goods Sold	<u>4,270,000</u>	<u>4,910,500</u>	15.0
Gross Margin	2,730,000	3,139,500	15.0
<b>Expenses</b>			
Payroll and Fringe Benefits	1,260,000	1,423,800	13.0
All Other Expenses	<u>1,170,000</u>	<u>1,287,000</u>	10.0
Total Expenses	2,430,000	2,710,800	11.6
Profit Before Taxes	300,000	428,700	42.9
Income Taxes (30.0% of PBT)	<u>90,000</u>	<u>128,610</u>	42.9
Profit After Taxes	\$210,000	\$300,090	42.9
<b>Partial Balance Sheet</b>			
Cash	\$300,000	\$187,590	-37.5
Accounts Receivable	1,000,000	1,150,000	15.0
Inventory	1,750,000	2,012,500	15.0
All Other Assets	<u>450,000</u>	<u>450,000</u>	0.0
Total Assets	\$3,500,000	\$3,800,090	8.6
Accounts Payable	\$700,000	\$805,000	15.0



## The Growth Potential Index

Understanding how fast the firm can grow necessitates looking at a slightly complicated—but extremely important—formula called the Growth Potential Index (GPI). It provides an estimate of how fast the firm can grow without using up its precious cash reserves, which are currently \$300,000.

Profit After Taxes				
Accounts Receivable	+	Inventory	-	Accounts Payable
=				
\$210,000				
\$1,000,000	+	\$1,750,000	-	\$700,000
=				
10.2%				

The formula relates the cash coming into the business to the cash that will be needed to finance growth. In the numerator cash coming into the business is the profit the firm generates on an after-tax basis.

The denominator reflects what cash is needed for: the two investment categories that rise along with sales. Inventory will increase with sales over time. Accounts receivable will automatically increase with sales on a real-time basis. Balancing out these investment requirements is the fact that as the firm grows it will purchase more merchandise from suppliers and have more accounts payable which offsets the need for additional cash.

For the typical firm in the industry, the resulting GPI is 10.2%. The implications of this ratio are highly counterintuitive. If the firm grows faster than its GPI, it will generate more profit on the higher sales. However, as was seen in the exhibit, the amount of cash on hand will actually decline. Conversely, growing slower than the GPI reverses the outcome—profit is not as high, but cash rises.

In no way does the GPI indicate how fast the firm must grow. Firms should almost always grow fast enough to maintain their position in the market place and possibly increase their market share.

What the ratio indicates is that when the firm's sales growth projection is larger than the GPI it needs to have a specific cash-maintenance plan in place. That plan should have three components:

- **Increasing Profit**—The greater the profit, the higher the GPI for the firm. Enhancing profit should always be the first priority of the firm. This is true regardless of the opportunity for sales growth.
- **Controlling Investment Levels**—If sales can be increased without requiring a commensurate increase in inventory and accounts receivable, the GPI can also be increased. However, care must be taken as excessive controls on either inventory or accounts receivable almost always slow actual sales growth.
- **Securing Financing**—If the firm must grow beyond its capacity, it is absolutely essential to have adequate financing arranged before the funds are needed, not after.

## Moving Forward

Sales growth is essential for long-term success in distribution. Every firm must continue to grow. However, if that growth is unplanned, the firm may well end up worse off than it would be with no growth.

Every firm must know exactly how fast it can grow given its existing cash position. It should then work to improve its ability to grow, largely by enhancing its profit after taxes.

### About the Author:

Dr. Albert D. Bates is Director of Research at the Profit Planning Group. His recent book, *Breaking Down the Profit Barriers in Distribution* is the basis for this report. It is a book every manager and key operating employee should read. It is available in trade-paper format from Amazon and Barnes & Noble. ©2016 Profit Planning Group and the Distribution Performance Project. AWRF has unlimited duplication rights for this manuscript. Further, members may duplicate this report for their internal use in any way desired. Duplication by any other organization in any manner is strictly prohibited.



FORGED SINGLE & DOUBLE  
**HEAVY  
DUTY  
CRANE  
HOOKS**

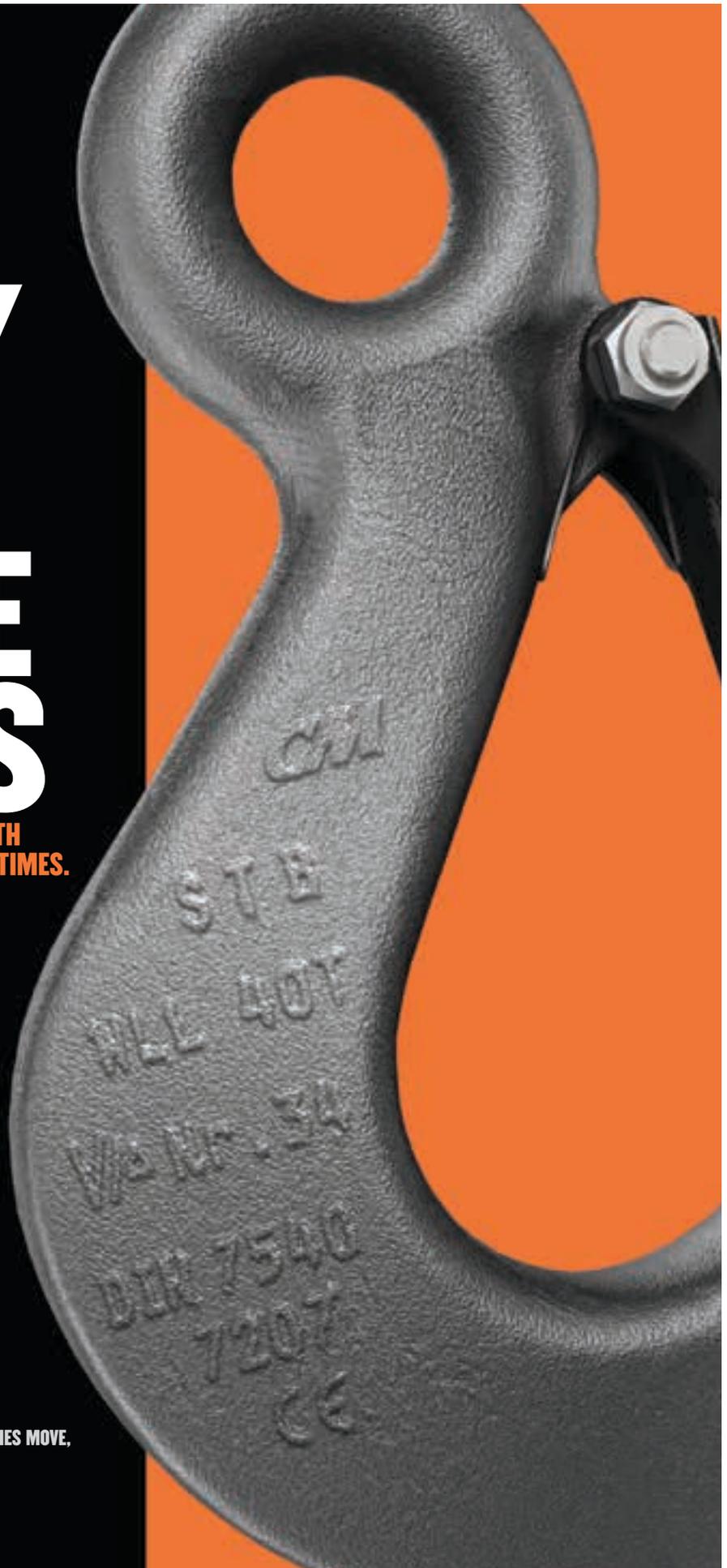
**BUILT TO THE HIGHEST STANDARDS WITH  
COMPETITIVE PRICING & SHORT LEAD TIMES.**

For high-quality crane hooks you can depend on for the toughest applications, turn to CM Heavy-Duty Crane Hooks. Relying on more than a century of manufacturing expertise, our crane hooks are designed to the most exacting quality, testing and material requirements to ensure we produce the best product on the market.

With capacities up to 1250 metric tons, our crane hooks are available in carbon, super alloy and extreme alloy materials and feature some of the industry's shortest lead times!

**800.888.0985  
CMWORKS.COM**

**COLUMBUS MCKINNON. 140 YEARS OF HELPING INDUSTRIES MOVE,  
LIFT, POSITION & SECURE MATERIALS EASILY & SAFELY.**





**Making the lifting industry a safer place**

[straightpoint.com](http://straightpoint.com)



**MEASURE TENSION IN MOTION**  
Wire Rope from ½ - 2 inch diameter.

Running Line Dynamometer TIMH for use in cable laying, mooring or winch applications. Suitable for various rope sizes up to 2" diameter. Constructed from stainless steel, extremely robust for use in the harshest of environments. 10T – 85T available from stock.

**LOADCELLS - IN STOCK  
READY TO SHIP**  
CALL ☎ (Toll free)  
**+1(844) 806-7665**



## *In Memory of Consul General Benedicto*



The Benedicto Steel Group, composed of the Benedicto Steel Corporation, CLB Engineering & Supply, Inc., and CLB Global Trading Corporation, mourns the passing of its founder, Chairman, President, CEO, Honorary Consul-General of the Republic of Albania Ceferino L. Benedicto, on January 24, 2016.

Consul-General Benedicto devoted his life in the establishment and development of the Benedicto Steel Group into a leader in the Philippine wire and wire rope manufacturing industry, and led in its retooling to adapt successfully to the changing circumstances of the times of economic blocks, free trade areas, liberalization of tariffs in accordance to trade agreements.

The value of friendship was never lost to him, and with his passion for the Philippine wire and wire rope manufacturing industry he joined the Associated Wire Rope Fabricators in 1982 where he consistently joined in all conferences. It was through his association with the AWRP that he made many valuable social and business friends that greatly enhanced the wire rope industry in the Philippines.

Aside from the AWRP, he consistently contributed his friendship, brotherhood, and support was the Chamber of Commerce of the Philippines (presently Chamber of Commerce of the Philippine Islands), the Philippine Chamber of Commerce and Industry, the Makati Business Club, the Management Association of the Philippines, the Rotary Club of Manila, the JCI Manila, and the JCI Senate, the Wire Rope Manufacturers Association, Chamber of International Trade, Manila Overseas Press Club, Wire Association International, Philippine Constitution Association.

Consul General Benedicto is survived by his wife, Juliana and his children Ceferino Jr., Sixto, Lynette Marie and Bernardo III.

# ELECTROLINE®



## END FITTINGS AND SWIVELS FOR WIRE AND SYNTHETIC ROPE

1406 Fifth St. SW • Canton, Ohio 44702 • [info@esmet.com](mailto:info@esmet.com) • [www.esmet.com](http://www.esmet.com) • 1-800-321-0870 • 330-452-9132 • Fax 330-452-2557

Slingmakers

30

2016



## New Load Cell Test Machines for Straightpoint in UK and US

Straightpoint has installed two new load cell test machines—a 100t unit at Hampshire, UK headquarters and a 55t system at the North American nerve centre in Camarillo, California.

The MTS universal test machine, which arrived in the UK from the US manufacturer at the turn of the year, can test in compression and tension, giving Straightpoint the ability to test its entire range of load cells up to 100t.



*The 100t MTS universal test machine was installed at Hampshire, UK headquarters in February 2016.*

The smaller 55t (or 120,000-lb.) tensile calibration machine completed a six-figure investment across both facilities in state-of-the-art equipment that can calibrate and re-calibrate load cells made by Straightpoint and other manufacturers.

Straightpoint director David Ayling said: “The MTS unit is the Rolls-Royce of calibration technology. It’s a universal testing machine combined with customised tooling, creating a top-of-the-range rig tailored to the specific requirements of force measurement, load monitoring and suspended weighing load cell equipment.”

The new MTS universal test machine joins a 10-year-old, manually operated, 350t test machine—the largest of its type known anywhere in Europe, Ayling claimed—on the workshop floor. Engineers, who previously applied loads and controlled the machine manually, now have access to closed-loop, servo-controlled testing ability. An additional investment in hydraulic drive systems and computer controls means the technological benefits of the new test rig can be applied to the older one.

Ayling said: “We can programme test routines, which means for instance when we need to proof test a load cell and take the force to 50t three

times, our engineers don’t have to apply, un-apply and reapply the load manually. Our throughput is going to be dramatically increased as a result.”

In addition to calibration, the new machine will serve as a valuable tool as Roshan Divakaran, design engineer and Sarath Chandran, project engineer, lead ongoing research and development. ATEX and IECEx versions of Straightpoint’s most popular product, the Radiolink Plus wireless load cell, are now rolling off the production line and Ayling anticipates development of further enhancements to the range to be greatly aided by the new machine.

“The addition of the test machine in Camarillo is equally significant,” said John Molidor, general manager, Straightpoint Inc. “To give our customers, and the load cell user community beyond that, an in-house calibration service further expands our multifaceted offering to the myriad of marketplaces that are embracing such equipment.”

The MTS unit provides testing capability verified by a third-party UKAS laboratory, while its North American counterpart will test load cells calibrated and retraceable to ASTM E4.

*The 55t (or 120,000-lb.) tensile calibration machine at the Camarillo, California facility.*



# Quality



THE MOST COMPACT LARGE RANGE RIGGING SWAGERS IN THE WORLD!



- COMPACT
- LOW WEIGHT
- SMALL FOOTPRINT
- TURNBACK/FLEMISH EYE
- TOUCH PANEL CONTROL
- OPTIONAL RIGGING ARM DEVICE



Chant Engineering is the North American Representative for TALURIT™

## CHANT Chant Engineering Co. Inc.

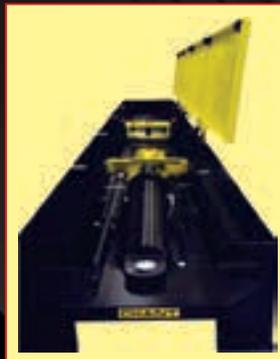
**PROOFTEST MACHINES  
REELING MACHINES  
WIRE ROPE GRIPS  
CALIBRATION**



**Offering Affordable,  
Cost-Effective Options  
& Custom Solutions!**



## RELIABLE MACHINERY FOR THE WIRE ROPE INDUSTRY



■ Horizontal

**TESTING  
MACHINES**



Vertical ■

**WORLDWIDE  
CALIBRATION**

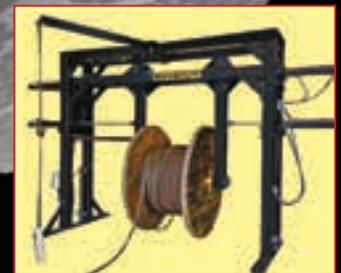
■ ISO/IEC 17025:2005  
Accredited



**REELING**



**GRIPS**



☎ 215.345.4260

✉ sales@chantengineering.com

🏠 www.chantengineering.com



## PRESS RELEASE



Address: 4728 Distribution Dr. Tampa, FL 33605  
Phone: 813-242-0600 • 800-535-0347  
www.weisnersteel.com

### Weisner Steel becomes a distributor for Yoke products

Weisner Steel has announced that it has become a distributor for Yoke products. Yoke has long been acknowledged as an innovative, premier manufacturer of lifting and fall protection equipment. Among their products are grade 80 and grade 100 hooks and lifting chain fittings, steel and aluminum carabiners and snatch blocks. "The inclusion of Yoke into the Weisner Steel product line is significant" states Andy Banks, General Manager of Weisner Steel. Andy goes on to say "Through our distribution centers in St. Louis, Pittsburgh and Tampa, we are able to overnight and second day a great number of Yoke products to customers throughout most of the country." The Yoke product line complements the broad line of products that Weisner currently stocks for the marine, construction, cargo and wrecker industries.

### Wellness Tip

#### Happy New Year!

Did you know that the surgeon general's report on nutrition reported that 8 out of 10 leading causes of death in the United States have a nutritional or alcohol-related component? And science is constantly confirming this. Research now finds that eating certain foods—fruits and vegetables, whole grains, and plant proteins—can add quality years to your life.

Here are three practical steps to ensure your Nutrition success:

**Maximize**—Plant foods by choosing whole grains, fruits, vegetables, legumes, and nuts. Don't constantly eat the same things. Maximize variety, color and taste by experimenting with different cooking styles and flavors so you don't get burnt out. Enjoy your food—without this, the changes won't last.

**Moderate**—The amount of food you eat. Eat until you feel comfortably full and not until you are stuffed. Pay attention to your serving sizes and consider smaller, more frequent meals. Could you have five smaller meals a day instead of three larger ones? It might be worth a try. Using the food pyramid as a guide is helpful. And moderate any stress when eating—eating should be a blessing and a pleasure.

**Minimize**—Minimize refined sugars, starchy carbohydrates, sugar substitutes, and processed and fast foods. All of these foods are saturated fats. Also, minimize the amount of salt you use. Taste your food before you shake the salt to see if it really needs any.

# YOKE<sup>®</sup> has a new partner!

*Safety is our first priority™*

Weisner Steel is proud to announce that we are now a worldwide distribution center for YOKE. YOKE products are available through Weisner's warehouses in St. Louis, Pittsburgh and Tampa.

**Weisner - Your Number One Source for wire rope and rigging products.**



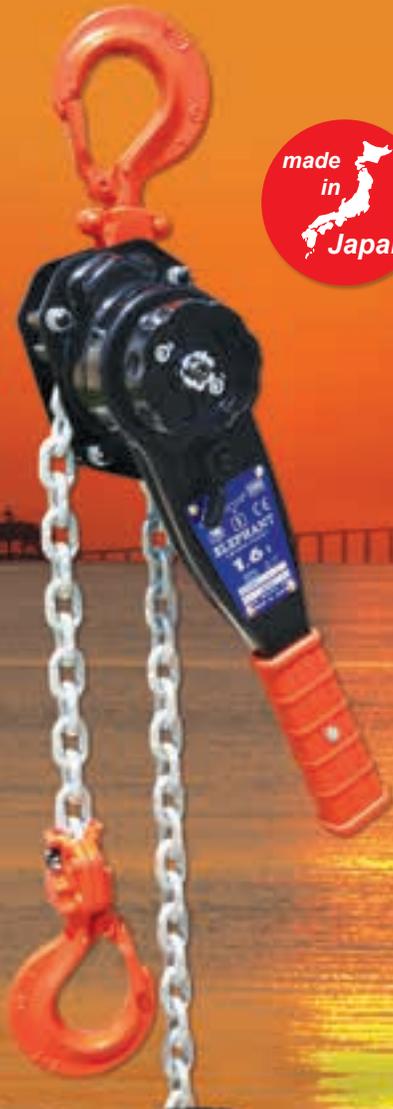
SINCE 1966



Visit Weisner online at [www.weisnersteel.com](http://www.weisnersteel.com)  
or call (800) 535-0347



# SIMPLY THE BEST



## ELEPHANT LIFTING PRODUCTS™

The World's Best Quality  
Manual Chain Hoists · Lever Hoists  
Electric Hoists · Applied Products  
Pneumatic Chain Hoists

Gonzales, Louisiana | 888.844.6113

## Technical Committee



**Don Pellow**  
12615 Briar Drive • Leawood, Kansas 66209  
Phone / FAX: 913.663.0133  
dpellow@aol.com • www.donpellow.com

### Information Resources Sub Committee

The AWRF Technical Committee's Information Resources Sub Committee (IRSC) provides timely information to members of the AWRF. The work of this sub committee will be valuable to those interested in technical matters, industry standards, recommended practices and guidelines, as well as professional training. The IRSC collects, organizes, and publishes relative information on organizations, associations, and standards writing bodies involved with the lifting, rigging, and load securement industry.

This information includes the purpose, activities, organizational structure and contact information for each group, including the names of key people, their respective positions and affiliations. The information will broaden to include standing committees, their members and affiliations. The focus is on the technical aspects of each group and their respective publications, standards, and activities such as exhibitions, training programs and seminars.

The IRSC database makes reference to sources for rated load tables of various types of slings in light of ASME B30.9 removing the tables. This database has been added to the AWRF's website in the Member's Only section. The IRSC continues to input information and update the growing database. It is a living document and will expand with input from related sources.

The current membership of the Information Resources Sub Committee includes:

<b>Chair: Timothy O'Rourke</b>	AWRF Technical Committee
<b>Alternate: Eric Parkerson</b>	AWRF Technical Committee
<b>Mr. Geoff Holden</b>	Chief Executive of LEEA
<b>Mr. Jeff Gilbert</b>	Chief Executive of AWRF & ACRP
<b>Mr. Donald Sayenga</b>	Chief Executive of NACM
<b>Mrs. Mary Brett</b>	AWRF Past President & Technical Committee
<b>Mr. Bob Jasany</b>	Technical Coordinator of WSTDA
<b>Mr. John Dodd</b>	Secretary of OIPEEC
<b>Mr. Patrick Hughes</b>	ASME B30.9 & B30.10
<b>Mr. Brian Todd</b>	ASTM A01.27, ASME B30.9 & B30.26, NACM, AWRF Technical Committee

The AWRF membership is encouraged to visit the site frequently and explore the database. User names and passwords for the 'members only' section can be obtained from AWRF headquarters.

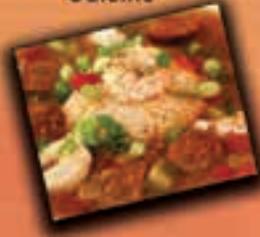
The committee is open to questions, comments and suggestions.



Most Sincerely,  
Timothy R. O'Rourke  
Strider-Resource  
Division of The O'Rourke Marketing Corporation Ltd.  
email: tim@strider-resource.com  
Visit our Website: www.strider-resource.com

# Why Choose New Orleans

## Cuisine



Time here isn't kept in hours or days, but in meals. When dining in New Orleans, experience a culinary adventure that spans a wide array of cuisines. From Cajun and Creole to Soul and Contemporary French, award-winning chefs create food and nourishment for your soul.

## Music

Music is how New Orleans' first settlers found common ground, and no other city loves music more.



Jazz, America's only original art form, was born here, while Rhythm and Blues, Gospel, Cajun and Zydeco all express the rich melting pot of our heritage.

## Art & Architecture

Countless architectural gems await you in New Orleans – the city is home to more National Historic Landmarks than any other city in the US. Venture to the Arts District and experience why it has been called the SoHo of the South. Then visit one of the oldest and most diverse districts in the city, Magazine



Street, an area filled with art, restaurants, shops and more. Finally, submerge yourself in the historic French Quarter by strolling down Royal and other famous French Quarter streets.



## Distinctly Different Neighborhoods

New Orleans boasts over 22,000 sleeping rooms within one mile of the Convention Center. Immerse yourself in the eclectic culture of the Arts District, experience the historic architecture of the French Quarter, or enjoy the modern luxury and convenience of the Central Business District.



## Award Winning Destination

America's most authentic city has hosted events such as Mardi Gras, Essence Music Festival, Jazz Fest, and BCS National Championship Games as well as hundreds of prominent conventions.



**YOKE INDUSTRIAL CORP.**  
T:+886-4-2350-8088 | F:+886-4-2350-1001



DISCOVERY CHANNEL'S  
TAIWAN MADE for YOKE HOOK



[www.yoke.net](http://www.yoke.net)  
[info@mail.yoke.net](mailto:info@mail.yoke.net)

# LEAVE THE HEAVY LIFTING TO US...

## LARGEST SELECTION OF READY-TO-SHIP LIFT MAGNETS

Industrial Magnetics, Inc. offers the widest variety of ready-to-ship lift magnets based on type and price point.

## CUSTOM MAGNETIC LIFTING SPECIALISTS

Our factory experts will develop a unique magnetic lifting device if a standard magnetic lift doesn't work for your application. We will be there every step of the way from field sales support to design, manufacturing and final testing.



**MAG-MATE®**



PowerLift®



DynamicLift™



BasicLift™



Creative Lift®



VersaLift™



**Making Things Better®**

**Industrial Magnetics, Inc.**

Call: 888.582.0822  
www.magnetics.com

PURE MICHIGAN®



Scan QR code with your smart device

# General Session Speakers



## Jon E. Khachaturian

President and CEO,  
Versabar, Inc.,  
Belle Chasse, Louisiana



After graduating from the University of Illinois in 1978, Jon began his career in Gretna, Louisiana, with PetroMarine. For four years he participated in the design and construction of platforms noticing the expensive and cumbersome custom rigging packages that were built then discarded after heavy lifts were performed. This led to the invention which would become the cornerstone of a growing business, the patented reusable spreader bar

With his rigging inventory, Jon was able to steadily grow his business by leasing to his customers a safe, reliable and more affordable alternative to conventional rigging systems. Today, with headquarters in Belle Chasse, Louisiana and Houston, Texas and numbering over 700 employees Versabar has a worldwide reach, having performed over 100,000 lifts on six continents since its inception over 30 years ago.

Over the years operators have continued to bring lifting challenges to Khachaturian which has led to additional patented innovative lift solutions; Versabuild - land based lift system, Versatruss - shallow water heavy lift system and the Deck Raising system - used to add additional air gap to offshore platforms. The most current engineered lift solutions are the "Bottom Feeder" salvage system and the heavy-lift system the VB 10,000.

Jon holds over 60 international and domestic patents and his technical innovations have received numerous engineering awards. In 2010 Jon was elected to the prestigious National Academy of Engineering.

Jon and his wife Bobbi have three children, and three granddaughters. Son Matthew has followed his father and his late grandfather, Professor Emeritus Narbey Khachaturian, as a third generation civil engineering graduate of the University of Illinois.



## Jim Blasingame

Jim Blasingame is one of the world's leading experts on small business and entrepreneurship.

He is the creator and award-winning host of the syndicated weekday radio program, The Small Business Advocate Show, since 1997.

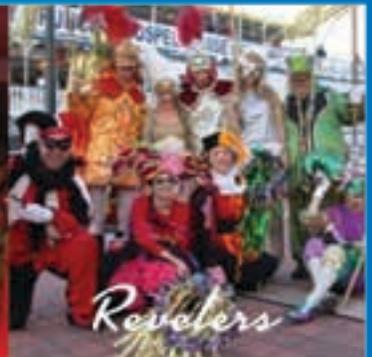
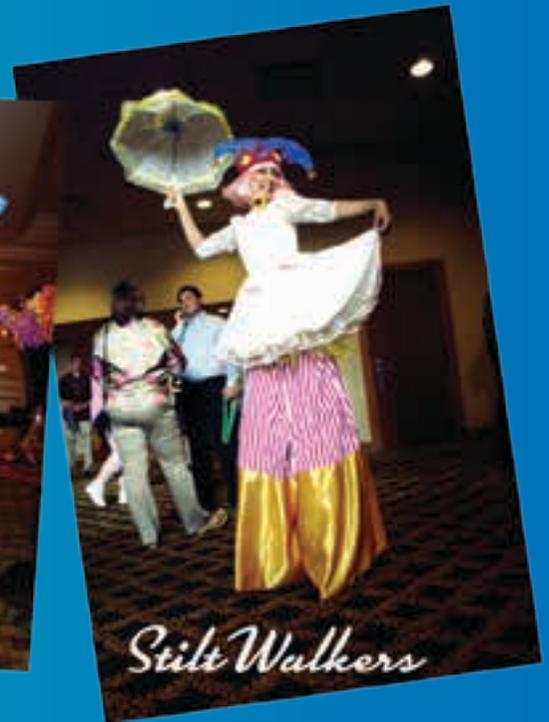
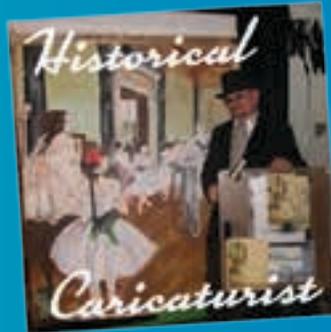
Author of three books, including his multiple award-winning new book, The Age of the Customer: Prepare for the Moment of Relevance, which has sold over 60,000 copies.

Jim has been a syndicated columnist since 1999, contributing weekly to newspapers and online publications, including FoxBusiness.com, Forbes.com, Nasdaq.com, and American City Business Journals.

For his thought-leadership as a champion of Main Street businesses, Jim has been recognized by numerous national organizations.

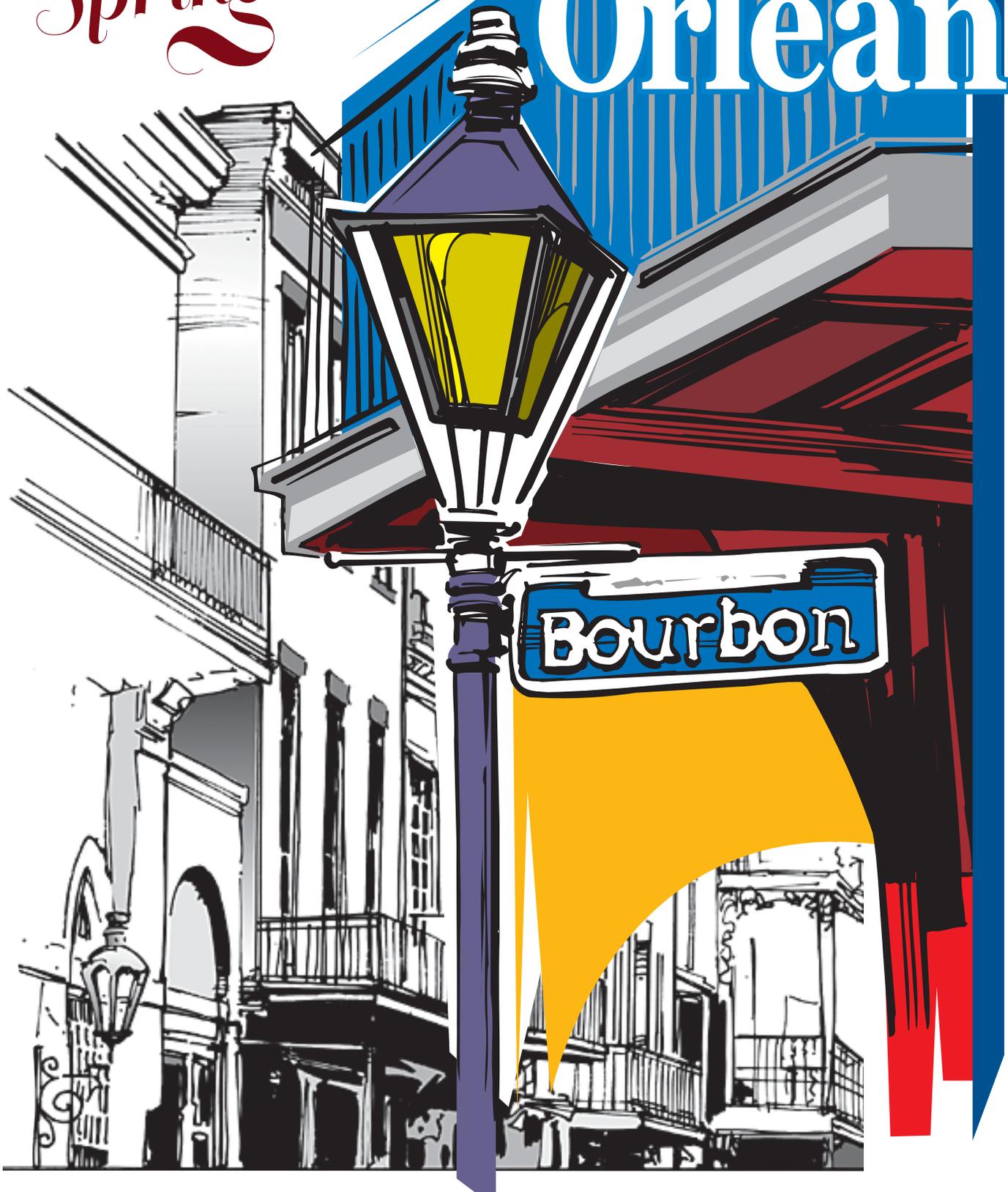
Jim teaches businesses – small and large – how to achieve relevance in the Age of the Customer.

# P.A.E. Entertainment New Orleans Style



*Tour  
Spring 2016*

# New Orleans



# Forever New Orleans with Lunch

Our story begins in the area where the French founded New Orleans almost 300 years ago: the historic and charming French Quarter. Originally an Indian trading post located on the banks of the Mississippi, the French sought to establish a port on high grounds near this trading post. Thus was the foundation of this quaint and lovely European city.

At Jackson Square in the heart of French Quarter, site of St. Louis Cathedral, you will see famous landmarks and learn the fascinating history behind our unique city. Next the tour will proceed to City Park and Bayou St. John; you will visit historic St. Louis No. 3 Cemetery, where your escort will explain our unique above-ground burial system. As the tour continues through City Park toward Lake Pontchartrain, the guide will discuss remnants of damage caused by Hurricane Katrina in 2005.

Heading uptown, you will travel along picturesque St. Charles Avenue, lined with rows of magnificent mansions and historical oak trees. You will see lavish Garden District homes built by wealthy Americans following the Louisiana Purchase. You will also pass our old Warehouse District, a revitalized area that is home to our Convention Center.

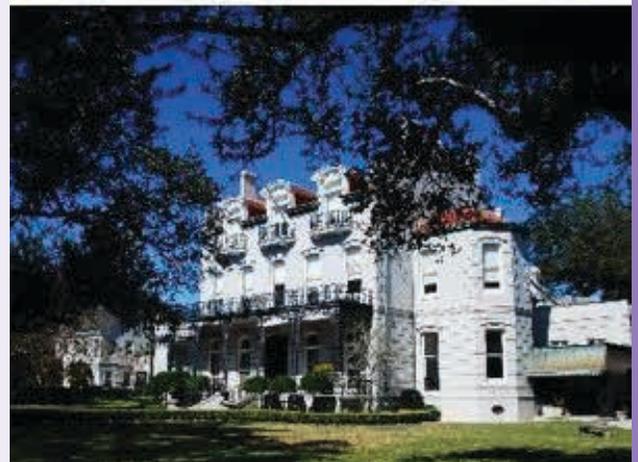
Following the tour will be lunch at Crescent City Brewhouse, a delicious French Quarter restaurant and brewery.

## INCLUSIONS

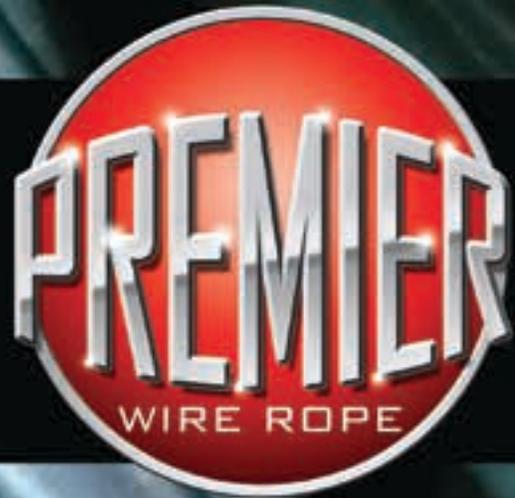
- Deluxe transportation for your exclusive use
- City tour encompassing the French Quarter, Lakeview, and Uptown neighborhoods
- A stop or pause at an above-ground cemetery
- Lunch at Crescent City Brewhouse

## NOTES

Comfortable walking shoes and sunglasses are highly recommended



"Quality. Strength. Focus."



Premier Distributor of High Performance Steel Wire Rope



Exclusive stocking distributor of  
Teufelberger On-Shore products in the USA.

PREMIER WIRE ROPE

5048 Timber Creek Dr. • Houston, Texas 77017 • Ph: 713.979.5300 • Fax: 713.979.5304 • sbrewer@premierwirerope.com • www.premierwirerope.com



It's engineered to move hundreds of thousands of pounds.  
It's designed to be the toughest equipment in the field.

We're not talking about the bulldozer. We're talking about the sling.

**The Fortis<sup>2</sup> Sling\* from Yale Cordage. Lighter and stronger means faster install time and greater ROI.**

Now you can manage your heaviest payloads safely and effectively with a lightweight, durable synthetic sling. It's made with Unitrex XS™ Max Wear, which has a core of Honeywell Spectra® fiber. This sling is as strong as steel cable, but it's much easier to handle and won't corrode, rotate or kink. Lift more efficiently and safely with the Fortis<sup>2</sup> Sling. Only from Yale Cordage.

For more information, visit [www.yalecordage.com/fortis2sling](http://www.yalecordage.com/fortis2sling)

**YALE CORDAGE**

*Performance. Passion. Possibilities.*

77 Industrial Park Road | Saco, ME 04072 | p 207-282-3396, f 207-282-4620

\*U.S. patent #9,145,280



# Power Up...

*with Rare Earth Magnets!*

## Eriez' SafeHold® Lift Magnets

Eriez' offers the widest selection of compact permanent lift magnets. **SafeHold®** is available in four different styles to meet any price or performance requirement with capacities up to 10,000 lbs.



**SafeHold  
Selection  
Guide!**

Call **888-300-3743** or visit **www.eriez.com**



# BANQUET ENTERTAINMENT

Can he truly read your mind? How does he know so much about your past...things even you have forgotten? Is this real or is it magic? You don't want to miss witnessing Oz Pearlman, the mentalist, in action!



Oz Pearlman is one of the busiest performing mentalists in the country. He developed an interest in magic at a young age and what started as a hobby ended up becoming a lifelong passion. After a couple of years spent working on Wall Street, Oz decided to pursue his dream and become a full time entertainer. He has now been dazzling audiences with his world-class sleight of hand and mind reading ability for over a decade.

Oz amazed the country on TV's #1 rated show, America's Got Talent. Week after week, he performed mind-blowing mentalism routines never seen before and quickly became a fan favorite, finishing in third place out of thousands of acts. His client list reads like a who's who of politicians, professional athletes, A-list celebrities and Fortune 500 companies. Oz's other television appearances have aired on both national and international networks, including a recent appearance on NBC's Late Night with Jimmy Fallon & TODAY Show; his radio appearance on the top-rated Elvis Duran show in the morning was heard by millions across the nation.

Oz's unique blend of magic and mentalism create an interactive experience that is redefining the very nature of a magic show...one that truly needs to be seen to be believed.



# For the Toughest Conditions



## Safety Hook BK and BCLK with Double Latch

### Recessed Trigger

To avoid the trigger from being hit or damaged it has been recessed into the hook. This prevents the latch further from accidentally opening.

### Double Latch

Should the hook latch accidentally open, either through direct impact or excessive wear on the trigger, the extra latch is there to retain the load safely. The latch does not cause inconvenience for the operator and may save their lives if something goes wrong

# SPREADER BEAM END CAPS

- **Capacity Range**  
100 lbs. - 3 million lbs.
- **Length**  
3 ft. - 100 ft.
- **Transportable Components**  
Quickly assemble your lifter on-site
- **Flexibility**  
Add different pipe lengths to  
create custom length lifting solutions
- **In-Stock Inventory**
- **Convenient End Cap App**  
Helping you configure and specify your  
End Cap Spreader Beam lifting system



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

Toll-Free Tel: 1-800-258-7324

International Tel: (252) 447-7155

[info@tandemloc.com](mailto:info@tandemloc.com)



Etiflex Custom Manufactures a full line of tags for The Sling Industry



High Definition Molded Sling Tags with New Marking System!

**TAGS FOR:**

- Inspections - All Types
- Wire Rope Slings
- Synthetic Rope Assemblies
- Synthetic Web Slings
- Roundslings
- Chain Slings
- Fabrication Date
- In Service Date
- Fall Safety Lanyards
- Fall Safety Harnesses



**SUPER TOUGH SLING TAG HAS AN EMBEDDED REINFORCED FABRIC FOR EXTRA STRENGTH**

**1-866-ETIFLEX**  
www.etiflex.com  
info@etiflex.com

**ETIFLEX CORP** 2500 E. Hallandale Beach Blvd Suite 612 Hallandale Beach, FL, 33009



MOBILE LOAD TESTING | INSPECTION | MECHANICAL INTEGRITY | RIGGING



**WHERE INTEGRITY IS STANDARD**

INTEGRICERT IS AN APPROVED TESTING COMPANY FOR SOME OF THE LARGEST OIL AND OILFIELD SERVICE COMPANIES IN THE INDUSTRY – focusing and specializing on compliance regulations, mobile load testing, inspection and rigging equipment.

NEW IBERIA, LA | HOUMA, LA | HOUSTON, TX

337-365-1022 985-868-6355 832-243-5838

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



# Custom Modulift Subsea Spreaders for Major North Sea Oil Project



11 New Field Business Park, Stinsford Road, Poole, Dorset, BH17 0NF, United Kingdom +44 (0) 1202 621511

Modulift has manufactured two custom subsea spreader beams for one of the world’s leading subsea construction companies, which is currently conducting a large-scale engineering, procurement, installation and construction contract for EnQuest’s Kraken development. Kraken is one of the largest subsea heavy-oil field projects under development in the UK sector of the North Sea.

The below-the-hook equipment manufacturer delivered the 303t capacity, 6.8m span spreaders to its customer on site, where the scope of work includes template and manifold installation at three drill centres.

Modulift’s spreaders will be used to lift the manifolds into position on stage one of the project, before going into storage for six to 12 months prior to reuse on later stages.

Liam Botting, new business development manager at Modulift, said: “This is a landmark project on which to showcase the engineering behind our new range of spreaders for subsea use. The range incorporates

our drop link design to ensure the beam doesn’t have any bending force through it—other than due to self-weight—thus reducing the overall size and weight of the beam, creating a more efficient design.”

Botting added that the design features an open section to ensure that there are no issues with pressure equalisation, and that all surfaces can be covered with a high build epoxy paint suitable for subsea environments.

Before delivery, each item of equipment used on the Kraken development was required to be sent to DNV GL AS, formerly known as Det Norske Veritas AS, a global provider of knowledge for managing risk, for inspection.

Modulift timed the launch of its new subsea modular spreader beams to follow publication of a revised offshore standard from DNV—titled DNV-OS-H206—that references the use of spreader bars. The manufacturer took the concept behind the unique modular elements of its standard and heavy spreader beam ranges to product a versatile and efficient collection for deep water lifting, features demonstrated in the custom subsea spreader beams for the Kraken development.

**Huskie JAMESON TOOLS**

800-860-6170  
HUSKIETOOLS.COM

**TIRED OF WEARING OUT DRILL BITS AND YOUR BACK?**

The **35 TON Punch Kit** complete with punch, pump, hose & dies. We have everything you need to get the job done quickly and professionally.

CALL US TODAY 800-860-6170

JOIN THE REVOLUTION



# Reaching New Heights With Harrington



Harrington's CF hand chain hoists are the most reliable yet economical hand chain hoists on the market today. These hoists are used in thousands of applications in commercial, industrial, maintenance and construction industries.

Whether you are building a bridge or a ship, planning a power plant outage or pulling a generator for maintenance and repair, these hoists have the portability and ease-of-rigging needed to efficiently get the job done.

- CF Model capacities 1/2 Ton through 5 Ton
- Rugged die-cast aluminum body provides exceptional strength
- Pre-lubricated sealed ball bearings for long life and low maintenance
- Weston-style load brakes for positive braking action
- Designed with fewer parts to simplify maintenance

Join the Revolution and visit us at [www.harringtonhoists.com](http://www.harringtonhoists.com)



Manheim, PA/800-233-3010  
Corona, CA/800-317-7111

A Kito Group Company

WIROP Industrial supplies the highest quality, low maintenance hydraulic swage machine in the industry today. WIROP swage machines offer features designed to be more efficient and require less maintenance than the competition. With machines ranging from 15 - 4000 tons of pressure, you can be confident that WIROP has you covered.



For more information  
<http://www.wirop.com.tw>



All of the bodies are made of one piece casting alloy steel.



Pressure Control Knob allows the operator to select the correct pressure to swag the sleeve and eliminates the possibility of over or under swaging.



Industry Exclusive 3 Modes of Operation  
 "MANU" or Manual  
 "AUTO" or Automatic  
 "A.R." or Auto Return



Pillar Die Holder Guides allow for a stress free range of motion and eliminates the possibility of die and dieholder rotation.



Die alignment rods easy to use die alignment rods keep dies in place during the swaging process.



Durable Spring Pins lock the dies in place and allow for easy installation.



Return Line Filter with Status Indicator makes knowing when to clean the filter as easy as possible.

# HYDRAULIC SWAGING MACHINES (15MT~4000MT)



WP-600C



WP-300C

WP-1000

WP-1300C

WP-1500

WP-3000

WP-4000



Horizontal Tension Testing Benches (50MT~300MT)



Hydraulic Winding Machines



Wire Rope Curling Machines (Up to 4")



Annealing and Tapering Machines



Zero defects. Striving to be the best.

WIROP INDUSTRIAL CO., LTD. NO. 806, FENG-PIN 1ST ROAD, DALIAO DIST., KAOHSIUNG CITY 83141, TAIWAN  
[www.wirop.com.tw](http://www.wirop.com.tw) TEL : +886-7-7019369 FAX : +886-7-7019623 E-MAIL : [wirop@wirop.com.tw](mailto:wirop@wirop.com.tw)



# D.C. MUSEUM LONG DREAMED OF, LONG DESERVED, TO OPEN SOON – THANKS TO WIRE ROPE

by Peter Hildebrandt

When the doors to the National Museum of African American History and Culture open at last, it will be an institution with one of the most baffling and twisted of histories on the National Mall. A decade ago, the museum had just two people on its staff. At the time, a definite site for the museum had not even been established, nor had any designs for the building – not to mention that there were no historical or cultural items to place in the museum.

“We knew we were going to have to raise millions of dollars, but we didn’t have a penny to our name,” explains Lonnie G. Bunch III, the museum’s director since 2005, “But unlike most other museums, we did not have a single artifact in our collection.”

A big part of this museum is creating a program around the country and telling people to bring out their stuff. For example, a segregated railroad car was found in Chattanooga, Tennessee. But this item had to first be transported to Washington DC and then be lifted using two cranes in sync as the heavy piece of history was lowered into the lower level of the yet-to-be-built museum. Synthetic slings wrapped around the body of the car and wire rope cable was of course used in the cranes. Since the building was not yet constructed, the railroad car was wrapped up to protect it from the elements. The museum in turn was built around this multi-ton piece of history.

The second item was a prison guard tower from the Angola Prison in Louisiana. This concrete box was lifted up when it reached the museum site on a square platform; while overhead, synthetic slings and wire rope on the cranes high above did their job. Another object, that was nowhere near the weight of those mentioned above, was a trainer plane used by the Tuskegee Airmen. As Bunch puts it, the plane symbolizes the idea that many felt we

couldn’t be fighting for democracy unless we were living it at home as well.

Other objects include an amulet that Africans would wear in their homeland to try to avoid capture by the slavers. The item is a miniature pair of leg shackles, perhaps passed down through generations. On a brighter note, Louis Armstrong’s trumpet will be among the collections, as will Harriet Tubman’s shawl – the one she died in – and her cherished hymn book.

“Some did not want the story of slavery included in the museum,” adds Bunch. “Some other people wanted it to be a holocaust museum of how things were overcome.”

Others involved in the project made the point that perhaps a simple item such as a shoeshine stand could bring to life the struggles of what it was like for individual people. In the end the museum seems to be all of that and more. The museum brings to life, and wrestles with, the issues we have all dealt with and still deal with as Americans, a people and a nation slavery still casts a shadow upon.

In 1913, upon the 50th anniversary of the Battle of Gettysburg, some of those survivors who fought on the Pennsylvania farmlands reminisced on past glories and sorrows, comrades lost as well as what it was all for. Two years later African-American war veterans met for a reunion and parade in Washington. The discrimination they witnessed inspired them to form a committee to build a memorial to African-American achievements.

Their efforts eventually spurred a later president, Herbert Hoover in 1929, to appoint Mary Church Terrell, Mary McLeod Bethune and another 10 individuals to be part of a commission charged with building a “National Memorial Building” showcasing African-American

achievements in the arts and sciences.

But Congress did not back the project and private fund raising also failed. Although proposals for an African-American history and culture museum would be floated in Congress for the next 40 years, none gained more than minimal support. In the following decades the Great Depression hit, followed by World War II, the Cold War and Vietnam.

By the late 1990s after numerous attempts; individuals with quite diverse backgrounds, Sam Brownback and John Lewis in particular, came together with others to sign the legislation in 2003. This, in turn, got the project back on track. The work of organizing and planning out just what the museum would be, commenced. From a staff of two to one of 160, and \$450 million dollars raised; as Bunch described the endeavor at that point as the equivalent of building the ship and crossing the ocean at the same time. In speaking with people, those involved in the work have emphasized the value of history. First, they decided on the story in all its intricacies and then looked for artifacts for the collections. These objects came from the 18th, 19th, and 20th century. They came from out of trunks in attics and basements with the collection, as it grew, telling much more extensive stories.

Not too long ago, massive 500-ton cranes gently lifted the Jim Crow-era rail car high into the air.

The event seemed to fascinate all in the area, whether tourists, history buffs or those simply passing by. Pictures were snapped of the steel, of the machinery and the cable as well as the wrapping protecting the huge new addition. This 44-seat Southern Railway car, back in its day would not have been especially interesting; in fact it simply reflected the decades-old federal laws legalizing separation of the races.

Even in something as ordinary as a simple rail car moving people from city to city; yet one which still required its black passengers traveling into the pre-civil rights south to contort physically and psychically in order to conform to the smallness of their second-class citizenship. Many lining the site were also there to see the platform and legs of a 1930s guard tower, previously mentioned, lowered into the pit, followed by its concrete tower with a corrugated steel roof.

They were there as the museum, scheduled to open in late 2015, completed the first of perhaps 10,000 artifact installations. The nearly 80-ton rail car and the concrete guard tower — too big to be installed into a completed museum — are the only two artifacts to be put into place during construction. They'll be part of "Defending Freedom, Defining Freedom: Era of Segregation 1876-1978," one of 11 inaugural exhibitions. Both had been restored in Stearns, Ky. They arrived at the Udvar-Hazy Center of the National Air and Space Museum and were escorted down 14th Street by police at daybreak. The viewing crowd was young, old and racially diverse.

In 2001, Representatives J.C. Watts and John Lewis re-introduced legislation for a museum. In June 2001, under new Secretary, Lawrence Small; the Smithsonian Board of Regents reaffirmed its support for a National Museum of African American History and Culture. The regents also demanded that Congress give the Smithsonian control over the museum and fully fund it. The following December, the president signed legislation establishing a 23-member commission to study the need for a museum, how to raise the funds to build and support it, and where it should be located. The president felt the museum should be located on the National Mall.

The presidential commission took almost two years, not the nine months, as had been predicted. In November 2002, AFLAC gave \$1 million to help build the museum. Finally, on April 3, 2003, the presidential commission released its final report. As expected, the commission said a museum was needed. More importantly, however, was the site it chose for the

museum: A plot of land adjacent to the Capitol Reflecting Pool, bounded by Pennsylvania and Constitution Avenues NW and 1st and 3rd Streets NW.

Ruled out was Smithsonian's Arts and Industries Building as too costly to renovate. Two other sites—just west of the National Museum of American History and a site on the southwest Washington waterfront were considered, then rejected. The commission also rejected an independent board of trustees for the proposed museum, an independent board with a large minority appointed by the Smithsonian or an independent board with a majority appointed by the Smithsonian.

The commission proposed a 350,000 square-foot museum that would cost \$360 million to build. Half the construction funds would come from private money, half from the federal government. Legislation to implement the presidential commission's report was sponsored in the Senate by Sam Brownback and in the house by John R. Lewis.

As Congress considered the legislation, the museum's location became the major sticking point. Among other sites now proposed was the "Liberty Loan" site, at the northern foot of the 14th Street Bridge, and Benjamin Banneker Park, located at the end of L'Enfant Promenade.

But with the bill in danger of dying, backers of the museum said in mid-November 2003 that they had agreed to discard their push for a site near the Capitol in favor of other locations. Compromise saved the legislation: The House passed the "National Museum of African American History and Culture Act" on November 19, and the Senate followed suit two days later.

This legislation appropriated \$17 million to plan the museum (which included finding a location for it), and \$15 million for "educational programs." These programs included grants to African-American museums to help them improve their operations and collections; grants to African-American museums for internships and fellowships; scholarships for individuals pursuing careers African-American studies; grants to promote the study of modern-day slavery throughout the world;

and grants to help African-American museums build their endowments.

The legislation set up a committee to select a site within 12 months. The legislation required the committee to pick from four sites: a site just west of the National Museum of American History, the "Liberty Loan" site, Banneker Park and the Arts and Industries Building.

On February 9, 2005, with the site committee still deliberating, the president again endorsed placing the museum on the National Mall. The committee did not select a site until January 31, 2006 — a full 13 months late. The site chosen was just west of the National Museum of American History. The site was part of the Washington Monument grounds. This site had had a number of other building and monument plans over the years.

On March 15, 2005, the Smithsonian named Dr. Lonnie G. Bunch III to be Director of the National African American Museum of History and Culture. The National Museum of African American History and Culture Council (as the museum's board of directors is known) sponsored a design competition in 2008. The winning architect or firm would build the museum. The competition required a 350,000 square-foot building, with three stories below ground and five stories above ground.

The building: was limited to the five-acre site chosen by the presidential site selection committee, must be LEED Gold certified and meet stringent security standards. The cost was limited to \$500 million. The winning design had to respect the history and visage of the Washington Monument as well as demonstrate an understanding of the African American experience. It should reflect optimism, spirituality, and joy, but also acknowledge and incorporate "the dark corners" of that experience. It must, most of all, function as a museum; but it must also be able to host cultural events of various kinds. Hundreds of architects and firms were invited to participate in the design competition. Six firms were chosen as finalists. Freelon Group/Adjaye Associates/ Davis Brody Bond (Smith Group) won the design competition. The upper floors feature a crown motif from Yoruban sculpture.

*Continued from page 62*

# Holland knows Lifting and Rigging



## Sling and Chain Tags



Stainless steel and aluminum Sling Tags, Chain Tags, Data Plates and Inspection Tags

Many standard options available as well as customized options to meet your requirements

5 Day Standard Lead Time

On-time percentage over 99%



## Gravograph Tag Engravers

Holland Nameplate is now a distributor for Gravograph Engraving Systems



## Synthetic Sling Tag Printer

Print your own vinyl tags in house with the flexibility to print as many or as few as you want, including the ability to print serialized numbers.

[www.holland1916.com](http://www.holland1916.com)  
(816) 421-4553



## PRESS RELEASE



824 Highway 101 • Havelock, NC 28532  
252-447-7155 • [info@tandemloc.com](mailto:info@tandemloc.com)

## Tandemloc was officially designated ISO 9001:2008 certified

On February 29, 2016 Tandemloc was officially designated ISO 9001:2008 certified in the “Design, Development, Manufacture, Inspection, Testing and Distribution of Below-the-Hook Lifting and Rigging Devices; Tie-Down Assemblies; ISO Shipping Container Connectors, ISO Shipping Container Construction Components, and ISO Shipping Container Mobilizing Equipment” (ISO 9001:2008 Certificate). Since safety and quality products have always been Tandemloc’s top priority, the company’s Quality Management System has always mirrored ISO 9001 requirements and standards. As a result, the certification process was easy to implement and the designation was received quickly. “The decision to move forward and get officially certified was a natural progression to better serve our customers and attract new ones”, Kyle Klicker, Tandemloc Quality Assurance Manager. For more information about Tandemloc, Inc. and its products, please visit [www.Tandemloc.com](http://www.Tandemloc.com).



*Pictured: Dan Pratt, Project Manager and Kyle Klicker, Quality Assurance Manager (Both co-managed the effort to get certified.)*

## Straightpoint Increases Range of Wireless Products to 700m / 2,300ft

Safety and productivity when monitoring loads during heavy, critical and multi-point lifting applications will be greatly enhanced as Straightpoint extends the range of its wireless products to 700m (nearly 2,300ft).

The force measurement, load monitoring and suspended weighing load cell manufacturer launched the enhanced technology as standard at the turn of the year, covering all wireless products including the Radiolink Plus, Wireless Shackle Load Cell, Wireless Compression Load Cell and the wireless version of the new Running Line Dynamometer (or TIMH).

The wireless portfolio will be available with almost triple the range of the current line, which is already at 250m (820ft), and boasts 1,200-hour battery life as another standard feature. Straightpoint continues to pioneer development of load monitoring technology having previously increased the wireless range from 150m (492ft).

Straightpoint director David Ayling said: “Much will be made in industry, understandably, about the extent of the increase and the phenomenal range in terms of distance, but our distribution partners have lauded the all-round, practical advantages of the enhanced product offering. The 700m line-of-sight range gives those planning or supervising multi-point and critical lifts trust in a 360-degree signal at each pick-point on a monopile or hulking oil and gas component, for example.”

Ayling, who reiterated the wireless range’s suitability for monitoring multi-point, dynamic lifts, added: “Few applications will demand such a range in terms of distance but it provides trust in solid communication



when a number of load cells are rigged onto a series of cranes positioned over, say, 300m from either end of a long, heavy load.”

Further aligning the range with lifting professionals in the offshore and other industries where heavy and critical lifts are commonplace, the products remain extremely weather proof and boast the Straightpoint hallmark in the absence of an antenna, which can be vulnerable to damage, further enhancing durability.

Ayling said: “Key to product development throughout was commitment to the reliability, durability and weatherability for which our brand is associated, typified by the internal antenna which remains a cornerstone of design, despite such an increase in range. With the internal antenna, battery life and 700m-range combined, lifting professionals have faith that the load cells will remain efficient and operational even during tough conditions on the most critical and complex of lifts.”

Straightpoint’s leading wireless product, the Radiolink Plus, offers unrivalled strength-to-weight ratio plus a sealed enclosure giving electronic components IP67 environmental protection even with the battery cover plate missing.



Jacksonville, Florida  
Telephone: 904-356-4181 • Toll Free: 1-800-874-8454  
Fax: 904-354-7865 • www.jcrenfroe.com

## Independent Testing Shows J.C. Renfroe Top Manufacturer Of Steel Plate Clamps

Jacksonville, Fla; January 11, 2016 -- In an independent test of the three leading manufacturers of industrial lifting clamps, J.C. Renfroe proved to be the most durable in the category of horizontal lifting.

Rexnord Innovation Center (RIC) is an independent, accredited laboratory that has provided confidential testing, analysis and engineering services for over 30 years. The company performed fatigue testing on three manufacturers' vertical, 180 degree turn + side pull clamps in the horizontal orientation. The tests were conducted from July to August of 2015.

The horizontal test was performed at the +100/+1, 102-pound load level and run one million cycles or until sample failure. Company Number One completed 159,672 cycles before experiencing a crack at the bail pin. Company Number Two completed 79,352 cycles before experiencing a crack at the bail pin. Renfroe's clamp completed 1,664,928 cycles before a crack appeared at the bail pin.

"This latest test just reconfirms that Renfroe is maintaining its level of durable, reliable clamps," reports Darrin Noe, Renfroe's Division Sales Manager. "The company has been producing clamps for over 70 years, and evidently, we haven't had a slack in quality yet!"

The Renfroe clamp that was tested was one of the new L series clamps, the LPA model, used for vertical lifts. Renfroe offers several clamps designed for vertical 180 degree turn and 90 degree turn.

J.C. Renfroe & Sons, a division of The Caldwell Group, is based in Jacksonville, Florida and is a leading international manufacturer and marketer of industrial lifting products. Additional product information is available at [www.jcrenfroe.com](http://www.jcrenfroe.com).



*The Renfroe vertical clamp that was test is one of the new L series clamp, the LPA model.*

## J.C. Renfroe Acquires Warehouse Facilities In Toronto To Speed Delivery Of Lifting Products To Canadian Market

Jacksonville, Fla; February 1, 2016 – As a part of its new aggressive customer service policy, J.C. Renfroe, a leading manufacturer of industrial lifting products, has acquired a warehousing facility in Toronto to speed delivery of products to the Canadian market.

This facility will be the fourth warehouse location for Renfroe to expedite time-sensitive delivery throughout North America. Other locations include Los Angeles, California, Columbus, Ohio and Jacksonville, Florida.

Renfroe will house its clamps and bent bar products in addition to repair kits in the Canadian location. This move will help reduce any down time for customers, particularly in the Ontario area.

"We want to make the purchase and delivery of products as smooth as possible for our Canadian customers as well as customers all over North America," reported Darrin Noe, Renfroe's Division Sales Manager. "We have developed two delivery systems – our Instock program, which has designated products shipped within 48 hours and our Quickship program, where designated products are shipped within 10 business days. The warehousing locations are a key to the success of these programs."

J.C. Renfroe & Sons, a division of The Caldwell Group, is based in Jacksonville, Florida and is a leading international manufacturer and marketer of industrial lifting products. Additional product information is available



Hoisting | Pulling | Jacking | Rigging | Material Handling | Safety

# rent safety.

LIFTING EQUIPMENT RENTAL SPECIALISTS



### Stop leaving things to chance:

Start renting your tools from the single largest organization devoted exclusively to the rental of hoisting and lifting equipment – LGH.

### At LGH, we promise to provide:

- ✓ Safe & Ready-to-Use Equipment
- ✓ A Fully Stocked Warehouse Near Your Job-Site
- ✓ Local Rental Representatives To Guide You
- ✓ A Variety of Equipment With Over 50,000 Pieces Available

**You can rent safety:** Limit your liability and reduce worries about costly equipment failure...because at LGH, we put safety first.

**For a FREE quote, call us at (800) 878-7305.**



### Lifting Gear Hire

Lifting Equipment Rental Specialists

(800) 878-7305 | [www.lgh-usa.com/awrf-rentals@lgh-usa.com](http://www.lgh-usa.com/awrf-rentals@lgh-usa.com)



# SC SAFETY CLAMPS, INC.

The MODEL VL is the core of our vertical locking clamps.

## ONE CLAMP DOES IT ALL

With its long list of standard features this one lifting clamp can do the job of many different model clamps combined.



Made in the USA  
for over 50 years.



3 Point Grip System  
Remote Release Lock Handle  
High Strength Shock Resistant Steel  
Customizable Options Are Available

[WWW.SAFETYCLAMPS.COM](http://WWW.SAFETYCLAMPS.COM)

800.456.2809

# Modulift®

working between the hook and the load

## Experts in the design and manufacture of standard and custom designed lifting equipment

- Modular Spreader Beams up to 400t in stock and available worldwide for distribution
- Modular Spreader Beams for 2–5000t and spans up to 100m/330ft
- Reduce your rigging weight and health and safety concerns by using the shackle-free Trunnion Spreader Beam system
- Experts in custom lifting solutions and projects requiring high QA standards
- All products fully tested and certified with DNV Type approval as standard

For details of your local distributors in North America please visit our website



### Spreader Beams



### Trunnion Spreader Beams



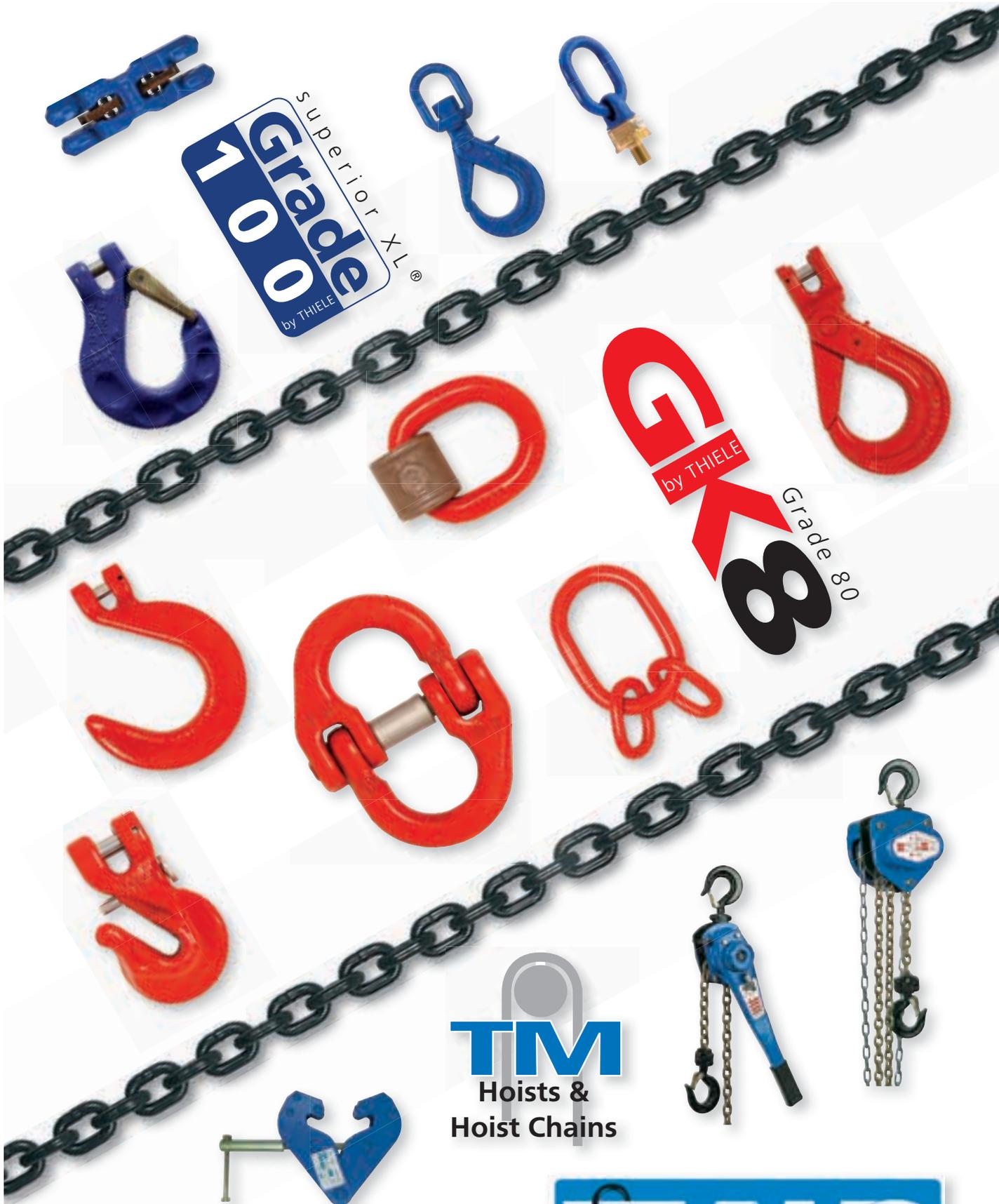
### Spreader & Lifting Frames



### Lifting Beams



For more information contact  
**Head Office:** +44 (0) 1202 621511  
**Email:** [sales@modulift.com](mailto:sales@modulift.com)  
**[www.modulift.com](http://www.modulift.com)**



100 Grade Superior XL<sup>®</sup>  
by THIELE

80 Grade  
by THIELE

**TM**  
Hoists &  
Hoist Chains

P.O. Box 470487  
Tulsa, OK 74147 [www.kwschain.com](http://www.kwschain.com)  
1-800-872-9313 [sales@kwschain.com](mailto:sales@kwschain.com)

**KWS**  
INC.  
*A member of the THIELE-Group*



Are Your Tags As **TOUGH**  
As Your Slings?

**SYNTHETIC SLING IDENTIFICATION SYSTEM**

**High Performance ID Tags**



THE MOST EFFICIENT.

THE MOST DURABLE.

THE MOST PROFESSIONAL.



**THE TAG**  
**YOU'VE BEEN LOOKING FOR.**

405-324-1777 TOLL FREE US 877-453-4778 (3-4778) info@firstsling.com

For more information visit us at [www.firstsling.com](http://www.firstsling.com)



**SUCCESS is**   
*SUCCESS Integrated Solutions for your Industry!*

The Master Link  
in your chain...  
Between You & Your Vendors,  
Your Vendors & Your Inventory,  
Your Inventory & Your Sales,  
Your Sales & Your Customers,  
Your Customers & Your Receivables,  
Your Receivables & Your Cash!

**Lifting** your software **Load** so that you can **Secure** More Money!  
We bring it all together into one software Package designed for your industry!

**Distributor Computer Systems Inc.**  
Phone: (856) 298-4810  
Fax : (877) 830-0793  
Email: Sales@dcs-success.com  
Www.Dcs-successis.com



**NEW** **BOB'S RIGGING & CRANE HANDBOOKS & REFERENCE CARDS**

**ALSO IN SPANISH!**

**NEW 8th EDITION**

- TRAINING - RIGGING & CRANES
- RIGGING & CRANE SAFETY RULWS
- WIRE ROPE TABLES
- WORKING LOAD LIMITS - SLNGS & HARDWARE
- ASME SAFETY STANDARDS
- OSHA REGULATIONS

**PELLLOW ENGINEERING SERVICES, INC.**  
Crane & Rigging Industry Forensics & Publications  
877 • 473 • 5569 (4PELLLOW)  
DPELLOW@AOL.COM

**WWW.DONPELLOW.COM**



**DON PELLOW**



5246 Wooster Road • Cincinnati, OH 45226  
Phone 513-871-8656 • Fax 513-871-8623  
Email service@tswr.com • fulcrumlifting.com

## Kentuckiana Wire Rope & Tri-State Wire Brought Together under Fulcrum Lifting

Fulcrum Lifting has been *recently* introduced as the new parent company for Kentuckiana Wire Rope & Supply (KWR) and Tri-State Wire Rope Supply (TSWR). Fulcrum Lifting was formed to support the future growth, improve shared resource opportunities and to enhance the identity and platform for the organization going forward.

“In 1981 my father, Mel Fireovid, and his partner Ed Elliot founded KWR. And nine years later Mel formed Tri-State Wire Rope. The dedication and hard work of these two companies over that past 35 years has laid the foundation for a stronger future, under the new Fulcrum Lifting banner.” says John Fireovid, President and CEO of Fulcrum Lifting.

KWR and TSWR remain operational companies as part of Fulcrum Lifting. The same teams will continue to work with supply partners and customers.



Kentuckiana Wire Rope & Supply, located in Jeffersonville, Indiana and Tri-State Wire Rope Supply in Cincinnati and Dayton, Ohio are leading distributors, fabricators and service providers of lifting and rigging equipment servicing mainly Kentucky, Indiana & Ohio. Providing quality products, maintaining integrity and a commitment to customer service and knowledge have been the key to the organization’s success in the past and are keystones going forward.



## D.C. Museum long dreamed of, long deserved, to open soon – thanks to Wire Rope

*Continued from page 53*

The building was eventually moved toward the southern boundary of its plot of land, to give a better view of the Washington Monument from Constitution Avenue. The size of the upper floors was shrunk by 17 percent. Although three upper floors were permitted (instead of just two), the ceiling height of each floor was lowered so that the overall height of the building was lessened. The large, box-like first floor was largely eliminated. Added to the entrance on Constitution Avenue are a pond, garden and bridge. Visitors will have to “cross over the water” — just like slaves did when they came to America.

The design of the architectural scrim which surrounds the building was changed in September 2012. The building itself is a box-like structure. The three-part corona of the building’s design is created by a structure only minimally attached to the building. The exterior of this structure, whose frames lean outward to create the coronas, consisted of a thin screen or “scrim” perforated by geometrical patterns based on historic iron grilles found in African American communities in Charleston, South Carolina and New Orleans, Louisiana.

The scrim was originally made of bronze, which would have made the museum the only one on the National Mall whose exterior was not made of limestone or marble. But the architects changed this to bronze-painted aluminum in September 2012. The change was approved, but strongly critiqued by the Commission of Fine Arts for lacking the warm, reflective qualities of bronze.

Construction of the museum is being done by Clark Construction Group, Smoot Construction and H.J. Russell & Company. The architectural firm of McKissack and McKissack (which was the first African American-owned architectural firm in the United States) provides project management services on behalf of the Smithsonian, and acts as a liaison between the Smithsonian and public utilities and D.C. government agencies.

The NMAAHC will be the deepest museum on the National Mall. Excavators dug 80 feet (24 m) below grade to lay the foundations, although the building itself will be only 70 feet (21 m) deep. The museum is located at a low point on the Mall, and groundwater puts 27.78 pounds per square inch (191.5 kPa) on the walls. To compensate, 85 US gallons (320 L) per minute of water were pumped out every day during construction of the foundation and below-grade walls, and a slurry of cement and sand injected into forms to stabilize the site. Lasers continue to monitor the walls for signs of any bulging or movement.

By late December 2013, construction was just weeks from finishing the five basement levels. Above-ground work was scheduled to begin in late January 2014. When complete, the 350,000 square feet (33,000 m<sup>2</sup>) building will have 10 stories (five above and five below ground).

In October 2014, the Smithsonian announced that the National Museum of African American History and Culture had received \$162 million in donations toward the \$250 million cost of constructing its building. To bolster the fundraising, the Smithsonian said it would contribute a portion of its \$1.5 billion capital campaign to help complete the structure.

The museum “is something that’s way overdue,” adds Henrietta Smith, human-resources consultant from Northeast Washington. “You don’t usually see artifacts being placed; and to see it, bit by bit, it’s historic.”

Kicking off the countdown to its grand opening next fall, the Smithsonian’s National Museum of African American History and Culture came alive for three nights as the façade of the building was illuminated with moving images in a spectacular display. The event, “Commemorate and Celebrate Freedom,” took place November 16–18, 2015.

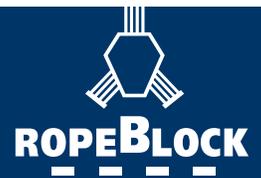
On Monday evening, Nov. 16, the display was preceded by music, performance and poetry and brief remarks by District of Columbia Mayor Muriel Bowser, Congressional Delegate to Congress Eleanor Holmes Norton and Museum Director Lonnie Bunch III. The event paid tribute to three important milestones in African American history: ratification of the 13th Amendment, which officially ended the institution of slavery (1865), passage of the Voting Rights Act (Aug. 6, 1965) and the end of the Civil War (surrender at Appomattox, Va., April 8, 1865).

A chief challenge up front involved the museum’s mission, according to Bunch. “We didn’t want simply a holocaust museum. Instead, we felt the positive influences of the African-American experience needed to be top priority as did the richness of the story. The pain, joy, and wrestling with our tortured past are all part of the narrative.”

But also, just remembering doesn’t take advantage of what a 21st century museum can be. This is all of our stories, reminds Bunch. “This unique museum is also one to challenge as well as commemorate. We are asked as a nation to live up to our ideals through this amazing collection. This is about today, tomorrow and yesterday; supplying the tools for people to live their lives. This is what a 21st century museum should be all about.”



# INNOVATIVE ENGINEERING SUPERIOR QUALITY & VALUE



**OVERHAUL BALLS**  
Regular & special application designs  
Capacities up to 350 tons

**SNATCH & TILT-UP BLOCKS**  
Capacities from 22-350 tons

**SWIVELS**  
Capacities up to 800 tons

**CRANE (HOOK) BLOCKS**  
Fast and standard reeve models  
Capacities from 5-3,500 tons

**TWIN SYSTEMS - CUSTOM DESIGNS**  
Capacities up to 3,500 tons

IMMEDIATE DELIVERY | PROOF TESTED | WITH FACTORY CERTIFICATE

AVAILABLE THROUGH ROPEBLOCK DISTRIBUTORS



800.901.1135  
310.448.5444  
sales@awrrinc.com



800.322.3131  
310.522.9698  
sales@watermansupply.com

\*\*\* SPECIAL ORDERS AND INQUIRIES ARE WELCOME \*\*\*

## Sea-Link Quality Blocks *Construction – Marine – Wood Shell – Cargo Hoist - Specials*

**Manila Rope Models:**

Wood Shell:  
Regular and Extra Heavy  
Steel Shell:  
Regular and Malleable Style  
Snatch Blocks:  
Wood and Steel Shell  
(up to 24")

**Wire Rope Models:**

Regular:  
Oval and Diamond Pattern  
Construction:  
Medium and Extra Heavy  
Cargo Hoist and Fishing  
Snatch Blocks:  
3 Ton to 12 Ton Capacity

**Available:**

US Government Spec., ABS,  
Germanischer Lloyd



**Associated Wire Rope & Rigging, Inc.**

8125 Saran Dr., Playa del Rey, CA 90293  
Ph: 800.901.1135 Fax: 310.448.5446  
Email: sales@awrrinc.com

**Waterman Supply Co.**

910 Mahar Ave., Wilmington, CA 90748  
Ph: 800.322.3131 Fax: 310.522.1043  
Email: sales@watermansupply.com



29 · 421 31 Västra Frölunda · Sweden  
VAT SE556343720001  
Phone +46 31 709 30 80 • Fax +46 31 47 10 71  
info@talurit.se · www.talurit.com

## LKA 28-PS Automatic wire rope cutting machine

The LKA 28-PS is an automatic wire rope cutting machine with a very accurate measuring for wire ropes with a diameter of 5-28 mm. It is operator and environment friendly with a touch screen and low noise level.

By adding an uncoiling unit, AVL-5000B, with brake you only need to keep an eye on the machine. Once it is started it runs automatically until desired quantity is reached and works as many hours that is preferred, with a great cutting quality.

It is highly efficient with easy maintenance. The shears, which also can be grinded, has a long life time which makes the LKA 28-PS a quick return of investment.

A 3 meter tube length is included as standard. Option is to add sections of 3 meter tubes, with a maximum tube length of 21 meters.

Optional wire rope guide can be added for cut-ting Ø 3-4 mm wire ropes.

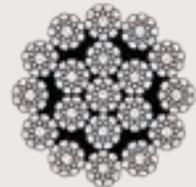
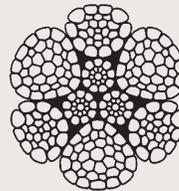
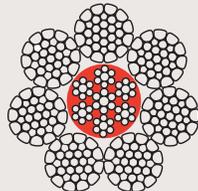
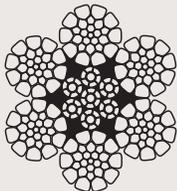


# FLEX-X<sup>®</sup>

## CRANE ROPES

- ▶ **Compacted Construction**
- ▶ **Increased Rope Stability**
- ▶ **Higher Strength**
- ▶ **Longer Service Life**
- ▶ **Fatigue and Abrasion Resistance**
- ▶ **Spools and Operates Smoothly**

**MADE IN USA**



A WireCo® WorldGroup Brand

www.Unionrope.com • +1.816.270.4761

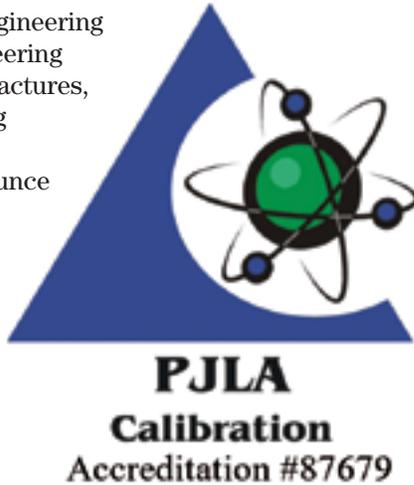


59 Industrial Dr, New Britain, PA 18901  
Phone: (215) 230-4260 • www.chantengineering.com

## Chant Engineering Receives PJLA Accreditation

New Britain, PA - Chant Engineering Co. Inc. is a diversified engineering company that designs, manufactures, services and calibrates testing machines and systems. Chant Engineering is proud to announce we have received a new *Certificate of Accreditation*, in accordance with the recognized International Standard: **ISO/IEC 17025:2005**, from Perry Johnson Laboratory Accreditation, Inc.

**ISO/IEC 17025:2005** is an International Standard designed for the accreditation of Testing and Calibration



Laboratories. It includes quality management system requirements along with technical requirements to ensure that each laboratory is equipped to perform particular tests and calibration activities. This accreditation confirms that Chant Engineering Co. Inc. demonstrates technical competence for a defined testing scope and the operation of a laboratory quality management system, in respect to **Force Calibration**.

Chant Engineering is an internationally recognized calibration facility with precision equipment traceable back to National Institute of Standards and Technology (NIST). The Calibration Department includes five technicians, who are on-call 24/7 for customer service calls. Utilizing seven sets of calibration gear, the technicians regulate all makes and models of machines, calibrating from 1,000 to 1.5 million lbs. in tension, and up to 3.3 million lbs. in compression.

As a result of the **ISO/IEC 17025:2005** accreditation,



Chant Engineering Co. Inc. is now able to offer worldwide testing and/or calibration services to both public and private organizations that require calibration from accredited laboratories. It provides such businesses with the benefit of receiving an "Accredited Calibration Certificate", which documents measurement traceability and measurement uncertainty.

The achievement of this new accreditation illustrates Chant Engineering's commitment to providing and maintaining extraordinary calibration services, in addition to continually improving our instrumentation, data quality, and laboratory effectiveness for our worldwide customers.

*"It's simple. We wanted to save time and save money. That's why we switched to the MIS system by Accu-Tech."*

- Kevin Page, Page Wire Rope and Slings



Let us help untie the knots in your business.

CALL 800.334.1987 FOR A FREE DEMO CD

MIS by Accu-Tech

Windows based inventory, purchasing, sales, certification, and financial management solutions for the Rigging Industry since 1979

accutech-mis.com



Innovative Leader for Roundslings Core Yarns

filtec precise inc.

engineered yarns



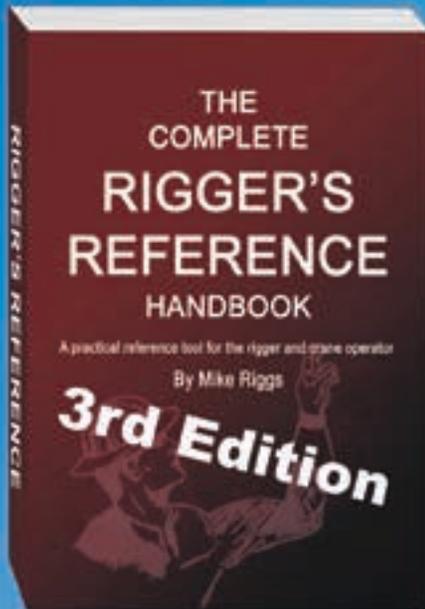
EPP® Engineered Polyester Power BIG Yarn for BIG capacity poly slings



EHP® Engineered Hybrid Power for high performance roundslings

218 US Hwy 701 North By-Pass  
Tabor City, NC 28463  
(p) 910-653-5200  
www.filtec-precise.com

## 3rd Edition & The Riggers Calculator are Now Available!



### What's NEW?

- Horizontal Load (Compression) Multipliers
- Updated Overhead Power Line Information
- Heavy Lift Instruction for Shackles/Hooks
- Swivel Eyebolt & Swivel Shackle Added
- Twin-Path Sling Usage Instructions
- Hardware Reorganized for Training
- Bearing Pressure for Roundslings
- Suspended Personnel Platforms
- Weight Displacement in Water
- List of Reference Standard
- D/d Ratios for Alloy Chain
- 4-Leg Rigging Options
- More Definitions
- Harley's Corner

### Riggers Calculator



The Riggers Calculator App is the most advanced rigging calculator available today. A single investment

downloads the app on your Android or iPhone and iPad or Tablet. All updates are automatic and free. The app is loaded with rated capacities: Wire rope sling through 4", synthetic web slings, poly roundslings, High Performance roundslings, alloy chain, and rigging hardware. Easy to use formulas for D/d ratios, sling tension calculation for symmetric and non-symmetric loads, center of gravity, weight and pulling and friction coefficient calculations



www.riggsafe.com 1-888-315-1325

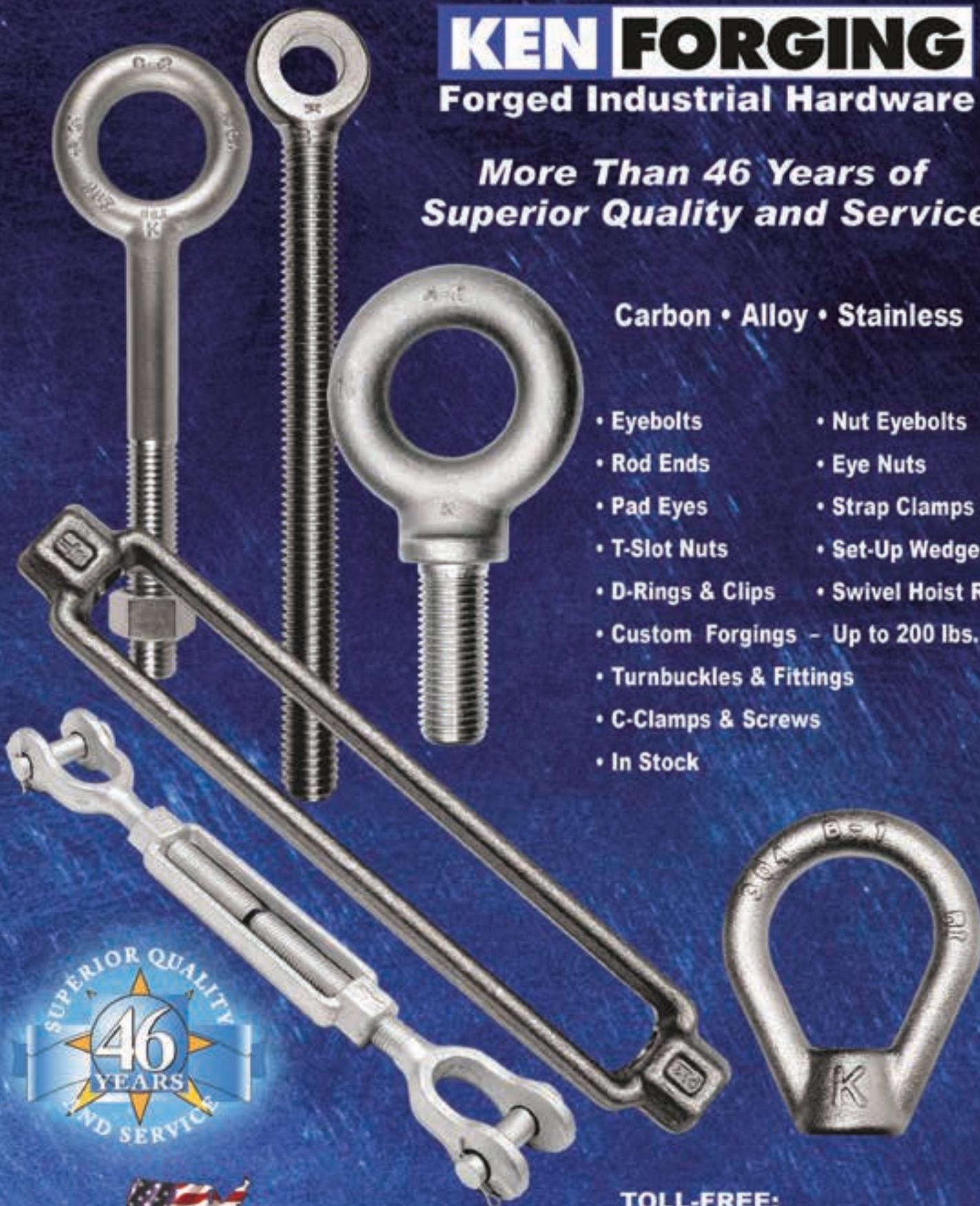
# KEN FORGING

Forged Industrial Hardware

*More Than 46 Years of  
Superior Quality and Service*

Carbon • Alloy • Stainless

- Eyebolts
- Rod Ends
- Pad Eyes
- T-Slot Nuts
- D-Rings & Clips
- Custom Forgings – Up to 200 lbs.
- Turnbuckles & Fittings
- C-Clamps & Screws
- In Stock
- Nut Eyebolts
- Eye Nuts
- Strap Clamps
- Set-Up Wedges
- Swivel Hoist Rings



All Products Proudly  
Made in the USA  
Since 1970

**TOLL-FREE:**

888-KEN-FORGING (536-3674)

Phone: 440-993-8091 Fax: 440-992-0360

[www.KenForging.com](http://www.KenForging.com) E-mail: [sales@kenforging.com](mailto:sales@kenforging.com)

## *Cable cars – and their vital wire rope cables – still keep San Franciscans moving*

*Continued from page 15*

on the red emergency brake lever. This forces an 18-inch steel wedge into the steel slot between the tracks, stopping the car immediately. (The force is so great that sometimes it takes a cutting torch to get the wedge out of the slot.)

When the time comes to turn a cable car around; the best demonstration of such a maneuver may be seen at the Powell Street turntable. When single-end Powell Street cable cars reach the ends of the line they are turned around on giant turntables. These are completely mechanical, relying on ball bearings and rollers to move. The cables under the street reverse individually, away from the turntable, wrapping around a large wheel in a subsurface bunker called a “sheave pit.”

The turntable areas are engineered so that gripmen can simply release the brake and coast onto the turntables (they have already released the cable at this point). Once on the turntable; the brakes are set on the car, the grippers then climb off and together, with the conductor, reverse the car by either grabbing a stanchion on each end and walking the car around or using the pipework mounted on all turntables in the past couple of decades to turn the table without touching the cable car itself.

Until the 1970s, passengers were allowed to help the crews turn the cable cars, but this is no longer permitted, possibly due to liability issues involved with the equipment and worries by the city. Also until that time, passengers could jump onto the cable car as soon as the gripman began coasting toward the turntable, getting a free spin on the turntable as well as guaranteeing the seat of their choice for the upcoming ride. This, too, is now forbidden for safety reasons; with boarding is strictly controlled by a queue.

The California Street cars were built with grips and brakes at each end precisely so turntables would not be necessary. The gripman operates the car through a switch at the end of the line. After applying the brakes, the gripman and conductor switch places, and the cable car goes in the other direction. The switch at the terminal has a spring on it to keep it aligned with the departure track, thus preventing possible derailments.

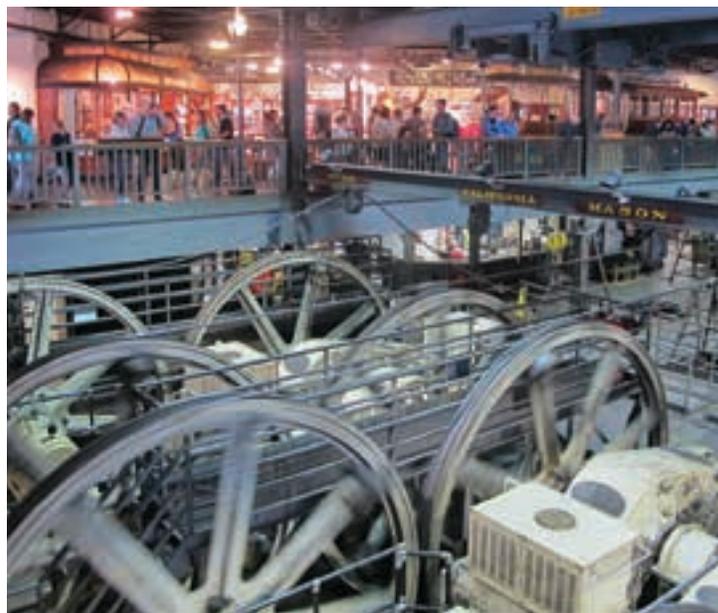
The cable cars were invented here in 1873, dominated the city’s transit scene for more than 30 years, were almost extinguished by the 1906 Earthquake and Fire, soldiered on through two World Wars as a quaint relic (even then), survived an assassination attempt by misguided, or malicious, politicians in the late 1940s, were wounded in a follow-up assault in the 1950s but survived it all to become a worldwide symbol of San Francisco.

In 1964, they were named the first moving National Historic Landmark. Today, both their continued operation and minimum level of service are locked into San Francisco’s City Charter. Their history is a fascinating amalgam of technology, politics and passion. Here, we concentrate on the basics of the current system.

Finally, in just two years will be the 20th anniversary of the hiring of the first female grip operator. In 1998, January 15th to be exact, Fannie Mae Barnes, operated a cable car after developing the great upper body strength needed for the grip and brakes.

Two types of cable cars now grace the streets of the city. Though they differ in appearance, their operation is almost identical. The California Street cable car line uses twelve larger, maroon cable cars which have an open seating section at each end and a closed section in the middle. These cars can be operated from either end, and turn around by means of a simple switch at the end of the line. The two Powell Street lines – Powell-Hyde & Powell-Mason – use smaller cable cars, operable from only one end. They thus require turntables to reverse direction at the ends of the line.

There are 28 Powell cars kept on the roster at any given time. Several sport historic liveries recapturing the look of the cars at various points in the twelve-decade history of the service. Additionally, there are unique cable cars from now-vanished lines which Market Street Railway and the Cable Car Museum are working to return to service in the future.





**SAHM SPLICE**

**SAHM**

# Think BIGGER 4400 US Tons!

Down stroke ram for easy access and stable workpiece position.  
Choose proven German technology.



Image courtesy of the Usha Martin Group

**FERRULES**

**SWAGING MACHINES**

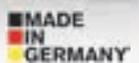
**ANNEALING MACHINES**

**TEST BEDS**



SAHM SPLICING INTERNATIONAL GmbH  
Bremerhaven  
Germany

info@sahm-splice.com  
www.sahm-splice.com  
Telephone: +49 471 - 931 590





## When you need a lift. We have you covered.

Protecting the load is just as important as lifting it. That's where Southern Weaving sling web products come in. With the perfect combination of strength, durability, and safety, Southern Weaving sling web offers the best of both worlds: maximum lifting muscle with unmatched load protection.



**Southern Weaving**

1005 W. Bramlett Road | Greenville, SC 29611 | Toll Free (800) 849-8962 | [www.southernweaving.com](http://www.southernweaving.com)





The latest great Value by  
**ALL MATERIAL HANDLING**  
Lifting Equipment

### **Universal Plate Lifting Clamps**



### **ONE STOP SHOP**

**HOISTS**

**RIGGING  
HARDWARE**

**SLINGS**

**877-LIFT AMH**

**allmaterialhandling.com**



### **PRESS RELEASE**



Toll Free: 888-558-9779  
Phone: (503) 982-9779  
Fax: (503) 982-9744  
ulven@ulvencompanies.com

### **The Ulven Companies are pleased to announce Brian Young**

The Ulven Companies are pleased to announce Brian Young as the General Manager of their Skookum and Houston Structures business units. In this position, Brian is responsible for the overall performance and results of each Business, development of sales channels, new products, and manufacturing competitiveness.



Tammy Sievers, Director of Human Resources at Ulven said, “Brian joined our team in November; in a privately held business setting it is vitally important to not only have the skills required for the position but to also be a great cultural fit and we feel Brian is that person.” With the large number of infrastructure projects Houston Structures is currently active within, and Skookum’s expanding market presence, Brian will be leading the project prioritization for each Business.

Brian began his career working in his family’s machine shop in the Midwest and prior to joining Skookum held a senior management position in a Fortune 100 company in the Northwest. Skookum is evolving and Brian’s vast background in leadership and management will help guide the process as the company continues to modernize and moves into new markets.

The Ulven Companies have been in the forging industry for over 40 years – starting with the creation of Ulven Forging, Inc. in 1971. The Ulven Companies now comprise a group of four different American companies and are privately held. Each company has its unique set of process capabilities in different areas of the industry and is known for bringing high quality, cost-effective products to its customers with reliability and integrity.

# Caldwell Innovation

Dura-Lite™ Composite Lifting Beam



Dura-Lite™ Composite Spreader Beam



Caldwell's Dura-Lite™ Technology supports U.S. Navy's Triton Drone Testing

**NEW**



Pipe Flange Lifter

**NEW**



Dura-Lite™ Composite 4 Point Lifting Beam

Excavator Hook Clevis

**NEW**



Adjustable Lifting Grab



On the job at Florida's Orlando International Airport  
[www.facebook.com/Caldwellinc](http://www.facebook.com/Caldwellinc)

## Lifting Solutions

Since 1954, Caldwell has been providing industry leading below-the-hook lifting solutions. With over 200 design styles and thousands of standard models available, we have the largest product line in the industry.

In our commitment to developing innovative and industry leading lifting solutions, Caldwell has recently released over a dozen new products, several of which are patented or patent pending. And with experienced application specialists and design engineering looking at new applications everyday, Caldwell is the place to find the Lifting Solution you need!

[www.caldwellinc.com](http://www.caldwellinc.com) or 815-229-5667



The Caldwell Group • 5025 26th Ave. Rockford, IL 61109 • 815.229.5667 • [caldwellinc.com](http://caldwellinc.com)



THE INDUSTRY LEADER IN

# WELDED CHAIN SLINGS

Welded Chain Slings are fabricated to meet your specific lifting needs.

**Options include:**

- Sling Type – Single, Double, Triple, Quad or Adjustable.
- Chain Grade & Size – 100 (9/32" – 1"), 80 (9/32" – 2"), 63 (9/32" – 1"), Normalized Proof Coil (for acid dip pickling applications), Inconel, Nitronic 50, Monel 400, Carpenter 20/Alloy 20 and Stainless steels: 316, 304, 308.
- Attachments\*

Every welded chain sling is registered and documented for inspection. Mechanical chain slings available on request with similar options. All chain slings are proof tested, tagged and test cert provided. Inspection and repair service also available.

**Common Attachments\* may include:**

Standard sling, grab and foundry hooks, foundry sorting hooks or other custom bent attachments.



Peerless Industrial Group | 1416 East Sanborn Street | Winona, MN 55987 | (800) 873-1916 | [peerlesschain.com](http://peerlesschain.com)

# RIGGING FOR THE 21<sup>ST</sup> CENTURY

The Slingmax<sup>®</sup> line of advanced rigging products features the high performance synthetic Twin-Path<sup>®</sup> slings with Check-Fast<sup>®</sup> inspection. We also supply Cornermax<sup>®</sup> cut protection for synthetic slings. Our built-in sling inspection features are not available anywhere else and are backed up by the most extensive testing program in the sling industry.

## Important features of our products:

- K-Spec<sup>®</sup> fiber, the longest lasting composite fiber for roundslings
- Rifled cover<sup>™</sup> technology for consistently strong slings
- Cycle tests to 50,000 cycles with no strength loss
- Covermax<sup>®</sup> cover for abrasion and UV resistance
- Proof of concept testing to 600 tons
- Check-Fast<sup>®</sup> inspection technology

**SLINGMAX**   
RIGGING SOLUTIONS

205 Bridgewater Road, Aston, PA 19014-2423 USA

+1(610) 485-8500 • (800) 874-3539

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



RED MEANS NO / BLACK MEANS GO



Jergens LIFT-CHECK HOIST RINGS

Lift-Check™ with Visual Tension Indication System

Jergens Lift-Check™ hoist rings quickly assure that an application is secure and ready to lift. Lift-Check™ uses a patent-pending bolt that clearly shows whether the bolted joint is loose or tight, providing fast and hands-free inspection for reduced installation time. No torque wrench or calibration required. Proof tested to 200% of rated load capacity.



15700 S. WATERLOO ROAD. CLEVELAND, OH 44110-3898

877.440.LIFT (5438) | JERGENSINC.COM/LIFTING | LIFTING@JERGENSINC.COM



# Modulift Below-the-Hook Equipment for Bern Bridge Project



11 New Field Business Park, Stinsford Road, Poole, Dorset, BH17 0NF, United Kingdom +44 (0) 1202 621511



Senn chose Liebherr models LTM 1130-5.1 and LTM 1160-5.2.

Two 70t Modulift spreader beams were integral to the reinstallation of a bridge, lowered back into position by two mobile cranes lifting in tandem.

Swiss crane rental company Senn AG used two Liebherrs, each rigged with below-the-hook equipment, to return the refurbished bridge across the Aare river in Bern, Switzerland's capital.

Oftringen, Switzerland-based Senn is a multifaceted business, which is also a specialist in the provision of steel construction and infrastructure projects. Its scope of work for installation of the bridge in Aarwangen in the north of the city included manufacture and transportation of the steel structure.

Jörg Senn, CEO, Senn AG, explained that the expansive job specification actually simplified selection of the lifting and rigging equipment from the business's crane and transport department, eliminating the requirement for specifications to be sent to another party, as would typically be the case.

Two big problems remained, however. First, Senn AG had only six weeks to remove the bridge, renew the

foundations and replace it; and, second, once the bridge was returned to the site it had to create a stable lift using both the cranes' outriggers and below-the-hook equipment.

It took four nights to remove the old bridge and four nights to put the new bridge in place. Three Senn AG professionals communicated via radio throughout the project but, Jörg Senn, who expects to complete 20 similar tandem lifts this year, said a comprehensive lift plan was key to safe completion of the job.

Senn chose Liebherr models LTM 1130-5.1 and LTM 1160-5.2, both with capacity in reserve and each equipped with the manufacturer's VarioBase system, a variable supporting base introduced to the market at the Bauma trade show in 2013. Liebherr developed the system with which every individual crane support can be extended to any length and the crane operation is then made safe by a load moment limiter.



Both cranes were equipped with Liebherr's VarioBase system, a variable supporting base.

The extension length and support force of every support is measured and the maximum lifting capacities for a situation calculated.

Jörg Senn said: "The VarioBase system added safety to the lift as incorrect operation can be avoided both during the setup process and when handling loads. Combined with the below-the-hook equipment from Modulift, we successfully completed reinstallation of the bridge during overnight shifts to the strict time schedule."

Senn employed two 70t Modulift spreaders from its rigging stock, which also includes a 110t and two 24t beams. Jörg Senn explained that, again, sourcing equipment and expertise from within the company enabled swift selection of the right rigging gear with precisely positioned lashing points.

He concluded: "We are battling in a tough economic climate here in Switzerland so the Aarwangen bridge lift was rewarding. We have been engaged in several bridge manufacturing projects recently but, in the main, general construction work is keeping us busy."



Senn employed two 70t Modulift spreaders from its rigging stock.

# – Ad Index –

## A

Accu-tech ..... 66  
 All Material Handling ..... 23, 72  
 Apex Tool  
 Group-Campbell Chain ..... 16  
 Associated Wire Rope & Rigging .... 64

## C

Caldwell Group ..... 73  
 Chant ..... 32  
 Chicago Hardware & Fixture Co. ... 24  
 Columbus McKinnon ..... 28  
 Crosby Group ..... 2

## D

Distributor Computer Systems, Inc. . 60

## E

Elephant Lifting Products ..... 34  
 Eriez ..... 44  
 Esmet-Electroline ..... 30  
 Etiflex ..... 48

## F

Filtec ..... 67  
 FIRST® Sling Technology ..... 60

## G

Gunnebo Johnson Corporation ..... 46

## H

Harrington Hoist ..... 50  
 Holland 1916 ..... 54  
 Huskie Tool ..... 49

## I

Industrial Magnetics ..... 37  
 IntegriCert ..... 48

## J

Jergens ..... 76

## K

Ken Forging ..... 68  
 KWS ..... 59

## L

Lifting Gear Hire Corp. .... 57  
 Loos and Company ..... 22

## M

Modulift ..... 58

## P

Peerless ..... 74  
 Pellow ..... 60  
 Pewag Chain ..... 24  
 Premier Wire Rope ..... 42

## R

J.C. Renfroe and Sons ..... 79  
 Rigging Institute ..... 10  
 RiggSafe ..... 67

## S

Safety Clamps, Inc. .... 58  
 Sahn Splicing ..... 70  
 Slingmax ..... 75  
 Southern Weaving ..... 71  
 Stamperia Carcano  
 Giuseppe S.p.a. .... 25  
 Straightpoint ..... 29  
 Strider~Resource ..... 16

## T

Tandemloc ..... 47  
 Terrier ..... 6

## V

Van Beest International ..... 9

## W

WireCo WorldGroup ..... 12, 65  
 Wirop Industrial ..... 51  
 Weisner Steel ..... 33

## Y

Yale Cordage ..... 43  
 Yarbrough ..... 8  
 Yoke ..... 36

# RENFROE EXCELS ON CLAMP ENDURANCE TEST



In an independent test of the three leading manufacturers of industrial lifting clamps, J.C. Renfroe proved to be the most durable in the category of horizontal lifting. Rexnord Innovation Center (RIC) an independent, accredited laboratory, performed fatigue testing on three manufacturers' vertical, 180 degree turn + side pull clamps in the horizontal orientation. Results show

Renfroe's new LPA model, completed 1,664,928 cycles while competitor Company A completed only 159,672 cycles before experiencing a crack at the bail pin and Company B only completed 79,352 cycles.

For over 70 years, Renfroe has produced the most reliable, durable clamps in the industry. And that tradition has continued with the L series clamps.

For the actual test results or for more information on the new lightweight L series of clamps, call 1-800-874-8454.

 **RENFROE**

IT'LL TAKE A LOAD OFF YOUR MIND

J.C. Renfroe & Sons, Jacksonville, Florida 32206 USA • Toll Free 800.874.8454 • Fax 904.354.7865 • [www.jcrenfroe.com](http://www.jcrenfroe.com)

