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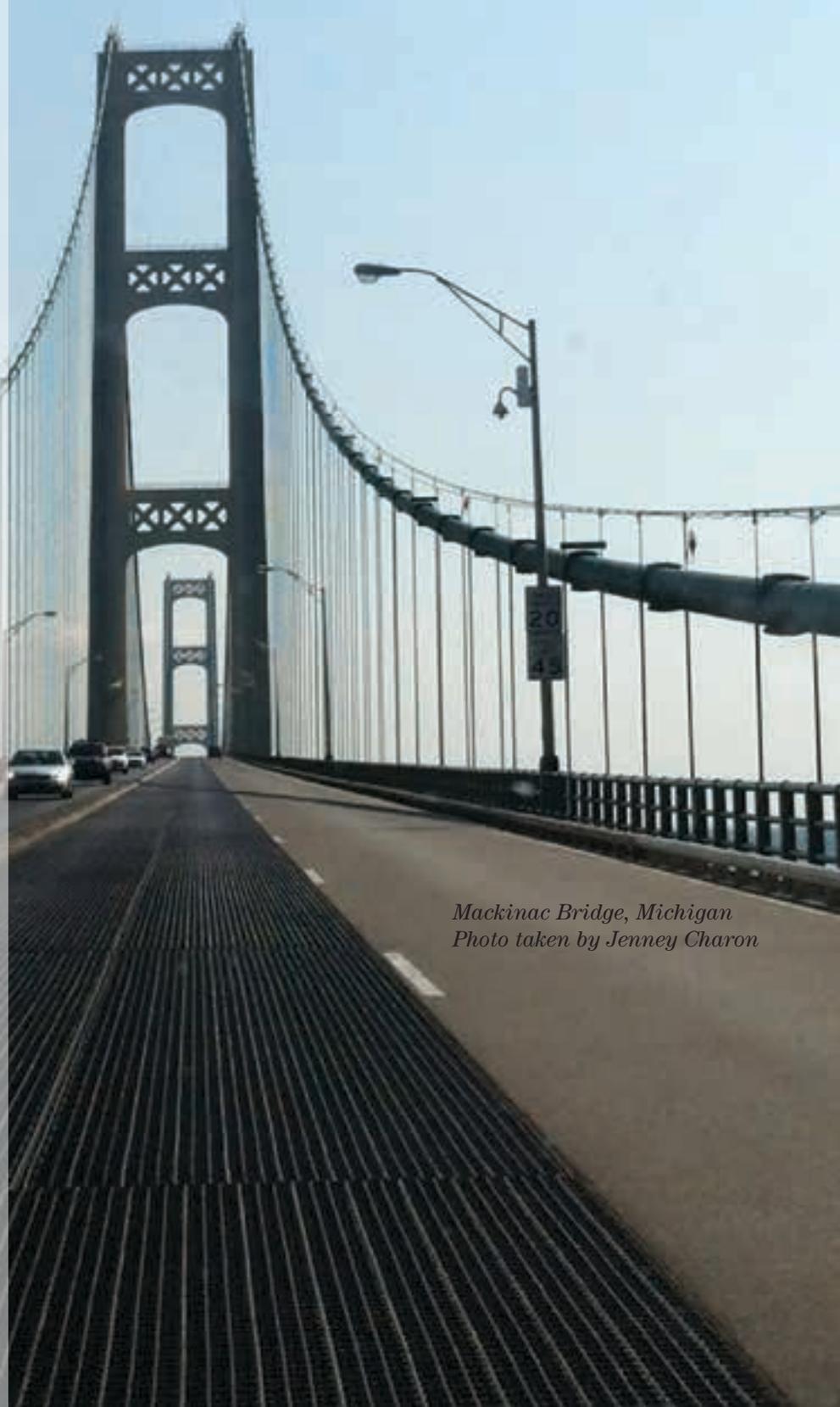


2014

Issue 140

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*Mackinac Bridge, Michigan
Photo taken by Jenney Charon*

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AWRF President Says...



AWRF CALENDAR

2014

April 27 - 30

AWRF General Meeting
Marriott Waterfront
Baltimore, MD

July 18-19

AWRF Board Meeting
Omni Hotel at Independence Park
Philadelphia, PA

October 26 - 29

AWRF General Meeting & P.I.E.
Hyatt Regency St. Louis
at the Arch, St. Louis, MO

2015

April 12-15

AWRF General Meeting
Hyatt Regency
Indian Wells, CA

October 18-21

AWRF General Meeting
Marriott at the Brooklyn Bridge, NY

2016

April 17-20

AWRF General Meeting and P.I.E.
Hyatt Regency New Orleans, LA

Baby, it's cold outside! For many of us, this winter has been the harshest in a lifetime. February saw warmer temperatures in Texas and Georgia than in Sochi, Russia and two-third's of the United States is not supposed to be snow covered. The good news is, two-third's of AWRF members have a valid excuse for a 5% weight gain. Survival instinct right? Now, good luck explaining the other 5%.

Don't fret, we can look forward to walking it off during the spring meeting (April 27-30) in beautiful Inner Harbor, Baltimore where the afternoon temperatures will be in the upper 70's. If you've never been to Inner Harbor, it's a must visit destination. If you have, you know to bring your spouse for the romantic strolls and picturesque outdoor atmosphere. Hey sports fans, the Baltimore Orioles play 5 home games from April 25th to April 30th, so bring your kids to famous Camden Yards. Everything is walking distance, so leave the rental car behind.

AWRF has ramped up the quality of our Key-Note speakers and Baltimore will be a real treat. Former Director of the CIA, R. James Woolsey is gracious enough to present to our group. Thank you Barry Epperson! If you are wondering who the smartest guy in the room will be, Mr. Woolsey graduated from Stanford University, Oxford University, (Rhodes Scholar) and Yale Law School. He can provide insight on various subjects including energy, foreign affairs, defense and intelligence.

Also speaking will be Dr. J.D. Foster, deputy chief economist at the US Chamber of Commerce. In addition to our usual technical presentations, we will be updated on the captive health insurance program including a testimonial from one of our members who has found great success in its implementation. Be sure to bring your questions about US healthcare; they will be answered.

One final note, congratulations to our Canadian members for winning both gold medals in Olympic hockey. My wife is half Canadian, we are both hockey fans and we've never seen the game played better.

Be healthy and I look forward to seeing you all next month in Baltimore.

Scott St. Germain
President, CEO



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STARTING OUT ON THE WELL-TRAVELED ROAD **- BEFORE BRANCHING OFF INTO SPECIALTIES**

by Peter Hildebrandt

In 1958, Gus Loos and his wife Joan placed a sign over their garage in Pomfret, Connecticut. That year the young couple founded Loos & Co., Inc., and would quickly grow the company to become the successful New England Wire, wire rope and cable assembly manufacturer it is today.

Loos & Company started operations as an importer and broker, buying and reselling aircraft cables and wire rope. The firm quickly moved to begin manufacturing its own products, with its first full product catalog published in 1965.

“In the mid-1960s to the late 60s we began to manufacture our own

wire rope,” explains Robert Davis, Loos & Company sales and marketing manager. “Then by the early 1970s we were on the qualified producers list for military specifications. Those first two decades saw Loos & Co., Inc. grow from being a broker and a reseller to a manufacturer, then ultimately to a military specification manufacturer.”

Applications that Loos & Co., Inc. targeted in the early days were very similar to those that exist in the market today. These uses include aircraft cable for actual aircraft, rigging applications, automotive applications, towing, cranes and structural work. At that time there were a great many more domestic manufacturers, leading to a great deal of

competition. Loos & Co., Inc. countered this competition by continuing to expand its capabilities. They added equipment to extrude jackets over cables, manufacture terminals and fittings, and manufacture finished cable assemblies and slings.

In the early 1980s Loos & Co., Inc. brought on their ability to create their own wire in their own wire mill. In the firm’s first 25 years they went from a small garage to a facility with an excess of 100,000 square feet of manufacturing space, still all in Pomfret Connecticut. “It was a tough journey and we faced a lot of tough competition,” says Davis, “But we continued to invest, diversify, and look for new markets.”

This diversification ironically led them to be much more of a niche manufacturer; those first 25 years culminated into near full integration as well as a move into niche status, according to Davis. “Coming out of that first quarter century we moved from working in materials which were very competitive into positioning ourselves in specialty markets, including aerospace and, at the time, automotive,” adds Davis. “Loos and Co., Inc. today is a much more specialized manufacturer than when it was founded in the late 1950’s, although it hasn’t lost sight of its roots.”

The firm likes to highlight the wide range of capabilities they possess, which still includes the commercial cable and wire rope products that got the business started. “Our capabilities range from micro cables of .009 – 1/32 of an inch, to seizing strands, woven wire products, and single end exotic high nickel alloy wire,” says Davis.

“We offer aircraft flight controls or small commercial assemblies and manufacture and stock stainless wire ropes from 3/8” to one and ¼ inch. All of this is in addition to our commercial





and military specification galvanized and stainless aircraft cables, both bare and jacketed.”

Davis finds that customers tend to be focused on their daily operation, ¾ inch rope up to two inch rope for making slings and they support these rigging operations. Loos wants to get the word out that they have some sizes, materials, and constructions that may not always come to mind when users think of them, so it never hurts to call and ask.

“We look at our customers as each being unique and will be upfront in telling them if we think that can get a better deal on wire rope at another company and are not afraid to tell them about the other company,” adds Davis. “But we will then tell them to call us when they need stainless steel wire or 5,000 feet of domestic galvanized cable.”

Loos still does all of their manufacturing right here in Pomfret, Connecticut, even though the vast majority of the wire rope used today is imported. They have grown their facility to over 210,000 square feet of manufacturing space. As they’ve added capacity and the capability to make higher and higher specialty products, they have also diversified into more specialty metals.

Instead of just offering rope in bright or galvanized, they have the capability of making bright rope, galvanized rope and all kinds of stainless steel and nickel alloy rope,

depending on the requirements of the application. Loos also has the capability of doing what others may not, that is draw specialty wire, strand and close ropes in Connecticut as well as keep them in stock for when users around the country have those special requirements.

And they keep their advantage by not competing directly with the importers and the big rope manufacturers. “We’re able to supply those specialty rope products – all the way up to inch and a quarter in diameter – precisely because we are the domestic source for when you need a quick turn or smaller quantity. There are many places you can go out and find five thousand feet of one half inch rope. But what if you need only 200 feet? We can do that. Specialty certifications for a domestic manufacture requirement on a military or state government contract? That’s where we come into play. They can turn to us when a contractor wants a domestic rope; we have it in stock.”

Stiff foreign competition is still a challenge, given the great deal of imported product being used today. They’re striving to maintain efficiencies and utilize the latest technologies. Yet with all its success, Loos & Co., Inc. finds its biggest challenge is in maintaining their connection with the next generation of wire rope users, despite all the recent advances in communication. All the noise that is now out there makes this a tough job, trying to get a little more of everyone’s fractured attention.

“Wire rope technology is mature, but there is a need for it. In my lifetime there will be a need for wire

aircraft cable and wire rope. It’s a tried and true product, engineers trust it and we as people trust it. We design applications for it. That will always be there. Can we continue to improve our technology and our manufacturing capabilities to stay ahead of other people that try to do that? Also, can we continue to build relationships with people in the industry given the amount of information clutter out there? These remain our challenges for the future.”



LINCOLN
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Lincoln Hoist Stays True to its Namesake and gets those Jobs Done



By Peter Hildebrandt

Roland “Roy” Hallen, founder of the New England tool manufacturer, Lincoln Precision Machine Company, spent a good portion of his life constructing his famous hoists. Within the past few years the firm made the decision to shorten the name to Lincoln Hoist, reflecting their most well-known and distinctive product of the same name.

Roy’s son Dave Hallen now serves and the head of Lincoln Hoist, carrying on the hard work and traditions of his father while at the same time making sure people are aware of their new name. The name change and the original decision to use Lincoln in the firm’s title was wise; Lincoln is one of the most well-known, recognizable and American names any company could choose.

Roy Hallen came to the United States from Sweden, starting his own business here in 1945. The enterprise consisted of a general machine shop, where he made tools and dies. Hallen’s grounding in tool making made this a perfect fit for him. His next step was to move into the area of general machining. Due to the “feast or famine” nature of that type of work, within a year he started to develop his own products. Early on, these included an improvement for a grinding spindle, specialty hardware and fishing reels.

A number of longtime individuals in the wire rope industry recall their days of visiting Hallen’s original building. This structure had been an old mill and still used water power when it was first purchased. Back in the 1800s the building had been a shoelace factory.

For the first two years of Lincoln’s operation it was located in that old building in Worcester, Massachusetts in the central part of the state about 40 miles west of Boston. At that time the region was a critical manufacturing center for the country.



Origins of a Long-lived Firm

Lincoln Hoist is currently making sure that any prospective customers know that they are both a domestically-made product and a firm with a longtime, proven track record. The company has a rich history of people working hard to come up with something that would both work well and have staying power as a viable product. They are working hard to get the Lincoln Hoist name established.

“We are still overcoming the way the company was structured back in its early years,” explains David Hallen. “This remains a challenge and we are overcoming difficulties with that; things are coming along quite nicely. It is a

was fully controlled and a person no longer had to take the risk of sticking their fingers into the mechanism. This is a great device for portable power that over the years found a lot of acceptance in the utility industry. Though nowadays everyone goes up in a bucket for the most part, years ago workers went up poles on spikes. The come-along was a great tool for such work with their first tool for this industry being built in 1966. They were even used for lifting transformers up on the poles. “The heavy work of bringing equipment up from the ground has largely gone away, but they still use many of them for pole maintenance,” adds Hallen. “It is a great way to take strain off the arms.”



different business climate nowadays compared to years ago when my father started things up.”

The hoist which eventually was developed was an improvement on two alternative designs at that time. The lever chain hoist and the fence tensioner or a simple ratchet and pawl tension device were the original tools, around for over 100 years. Chain hoists used what is called a load brake, a complicated, expensive to produce and high-maintenance device prone to slippage.

Ratchet and pawl hoists had no mechanism to back off the tension. Individuals would be able to pull up on a fence but then the handle had to be held while the pawl was freed by hand. The original lugger developed was the first to integrate the lifting and lowering actions using springs so that the motion

Overcoming a Challenges and Obstacles

Roy Hallen died in 1983 and his wife Doris took over the company during a transition period. Dave Hallen and his older brother Richard were already working at the company.

Dave Hallen had started with Lincoln when he was eight years old. “My father was too smart to let me have a paper route. He didn’t want to have to go out and deliver them whenever it snowed. I would come to the plant on Saturdays and apply instruction decals on the handles of the tools, earning a penny a piece for that work. The decal had to be soaked and then placed on the steel tube and when it dried lacquer had to be applied for protection. I never did get that paper route and over the years whenever I needed spare money there was some job I could do in the factory.”



Aside from the loss of his father, Hallen has had a few other challenges with his business over the years. He is quite familiar with the ups and downs and challenges his company has faced over the many decades of its existence.

For example, in 1951 a quota was placed on aluminum because of the Korean War bringing some hardship to their company and others. In the mid-1970s there was a crunch on the small diameter wire rope. Lead times went up to about a year causing a lot of trouble for their company.

Legal Landmines prove daunting but not Insurmountable

Hallen feels that most of the challenges Lincoln faced were really as a result of the business model that they worked under. “The three friends starting the partnership to make hoists would have remained a better structure



Continued on page 76

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Shown in the large photo at left, the final step in construction of New York's Freedom Tower was the installation of a 408 ft. antenna mast, anchored by four guy assemblies, each consisting of two 90 ft. long x 5 in. diameter synthetic cables.

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Andy Burns
– Edwards Moving and Rigging –
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Yannick Morin – Kraning
“Interactive Lift Design”

Mike Riggs – Rigging Institute
“It’s Not That Bad (Overlooked Rigging Inspection Points)”

Jeremy Welch – TVA
“Safely Operating Cranes Around Power Lines”

Bill Cox – Tadano Mantis
“Telescopic Crawler Cranes”

Breakout Sessions:

Chris Zgoda – Columbus McKinnon
“Plate Clamp Inspection, Disassembly & Assembly”

Becky Darsch – Information Mapping
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Sam Smith – NACB
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* Although not expected, presentations are subject to change

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AWRF General Meeting
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Baltimore Marriott Waterfront

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Hotel phone #: 1.800.228.9290 or 410.385.3000

Room Rate: \$209/night + taxes

Cut-off Date: Friday, April 4, 2014

Code: AWRF or Associated Wire Rope Fabricators

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THE GOVERNMENT AFFAIRS COMMITTEE

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



Predictive Coding For E-Discovery

Can computers replace humans in electronic document searches?

Although predictive coding (PC) will probably never completely replace lawyers during the discovery phase of litigation, this system is proving to be a worthy and efficient substitute for manual examination of documents in many cases.

According to author Lisa C. Wood, Associate Editor of Antitrust, PC is a form of computer-assisted e-review whereby lawyers teach computers how to identify and retrieve relevant documents. Once properly programmed, this system is able to categorize and prioritize data much faster than lawyers or paralegals. Having achieved its place in e-history, PC is now recognized by the Federal Trade Commission and the Department of Justice as an important tool in antitrust cases where document review is usually a monumental process.

As part of its coming of age as an investigative phenomenon, PC goes well beyond mere keyword searches by infusing into the programming process such factors as content, type of documents, dates, senders and receivers, etc. To achieve the proper level of thoroughness as a search engine, PC begins with “seed documents” which formulate the recipe for ascertaining document relevance. Each set of seed documents is coded, and then programmed. Programmers use trial and error to test and fine tune the system until an acceptable level of accuracy is achieved. Precision and recall are also tested to insure accuracy

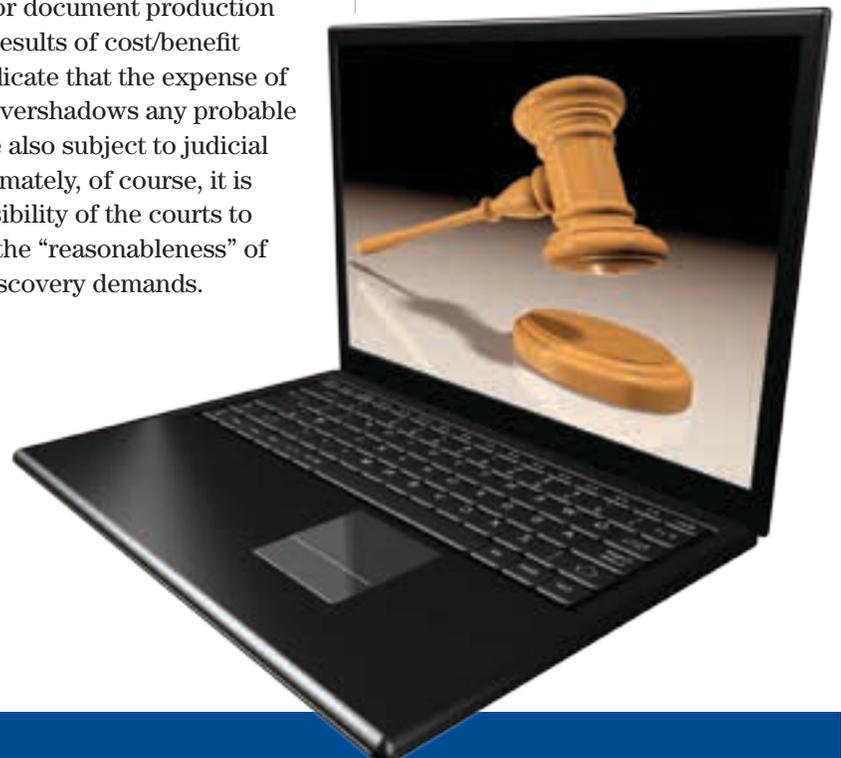
and inclusiveness. Although a basic program may only distinguish relevant from irrelevant documents, a more sophisticated version can provide a relativity rating (on a scale of one to ten for example). Moreover, the system may even be equipped for “iterative learning” i.e., the cognitive capacity to learn and improve as it works.

Judicial Acceptance

The Federal Rules of Civil Procedure require that attorneys responding to document production requests need only attest that to the best of their knowledge and belief, their disclosures are complete and correct at the time. The relevancy standard is obviously somewhat subjective. The Federal Rules also direct the courts to deny unreasonable burdensome or cumulative discovery requests. Demands for document production where the results of cost/benefit analysis indicate that the expense of discovery overshadows any probable benefits are also subject to judicial review. Ultimately, of course, it is the responsibility of the courts to adjudicate the “reasonableness” of disputed discovery demands.

It's All in the Coding

The value of PC as an investigative tool is directly proportionate to the effectiveness of the seed programs which drive and direct the electronic traffic. Accordingly, thorough documentation is the best practice, particularly with respect to the viability of precision and recall thresholds. The programmer's records should clearly reflect examples of random sampling to corroborate the strength of each seed program. Whether or not a court allows PC is often dependent upon achieving agreement among all counsel involved. In those cases where PC is permitted by the court (with or without consensus of counsel), the parties can expect substantial savings in attorney fees and costs during the discovery stages of complicated antitrust cases.



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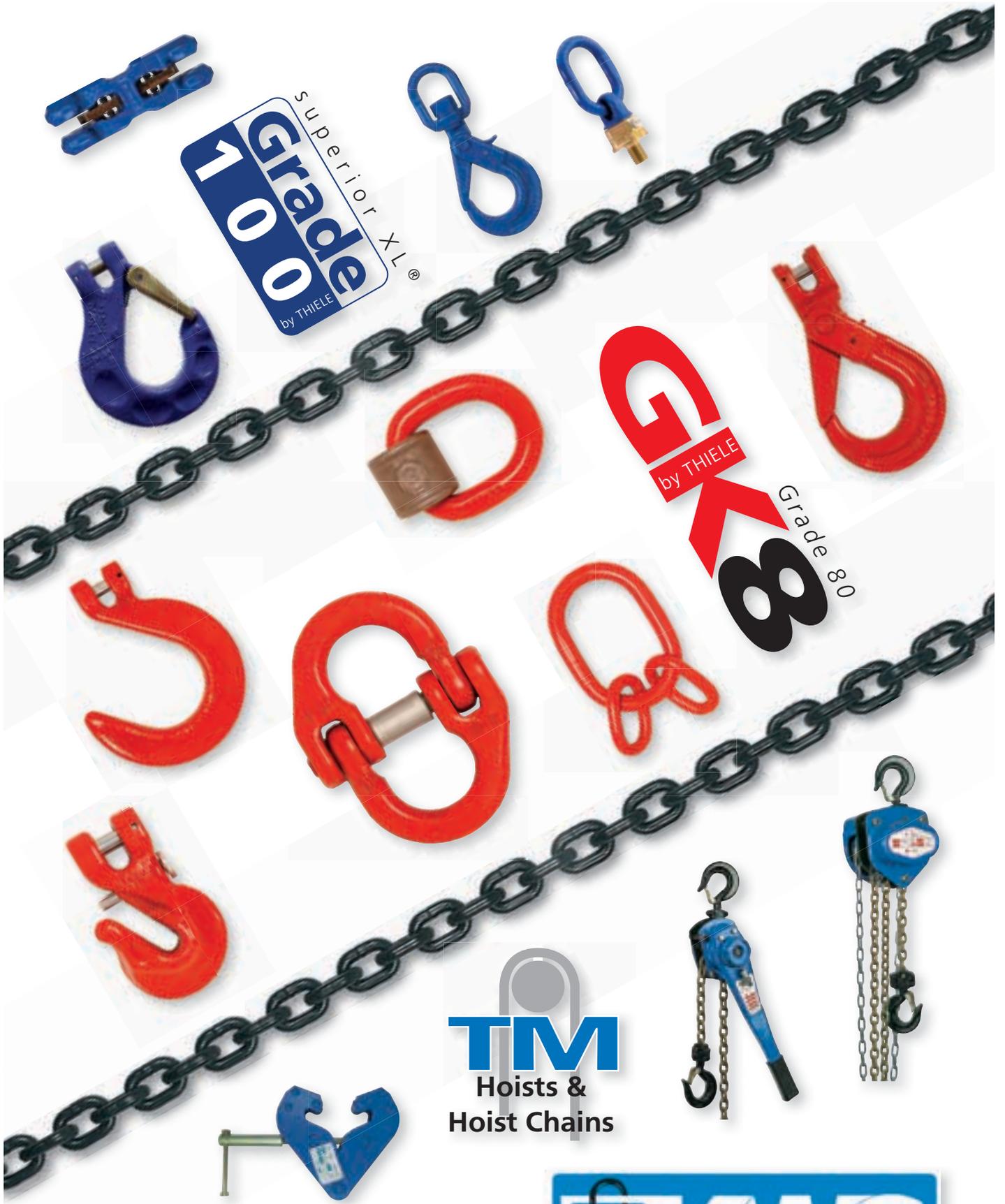


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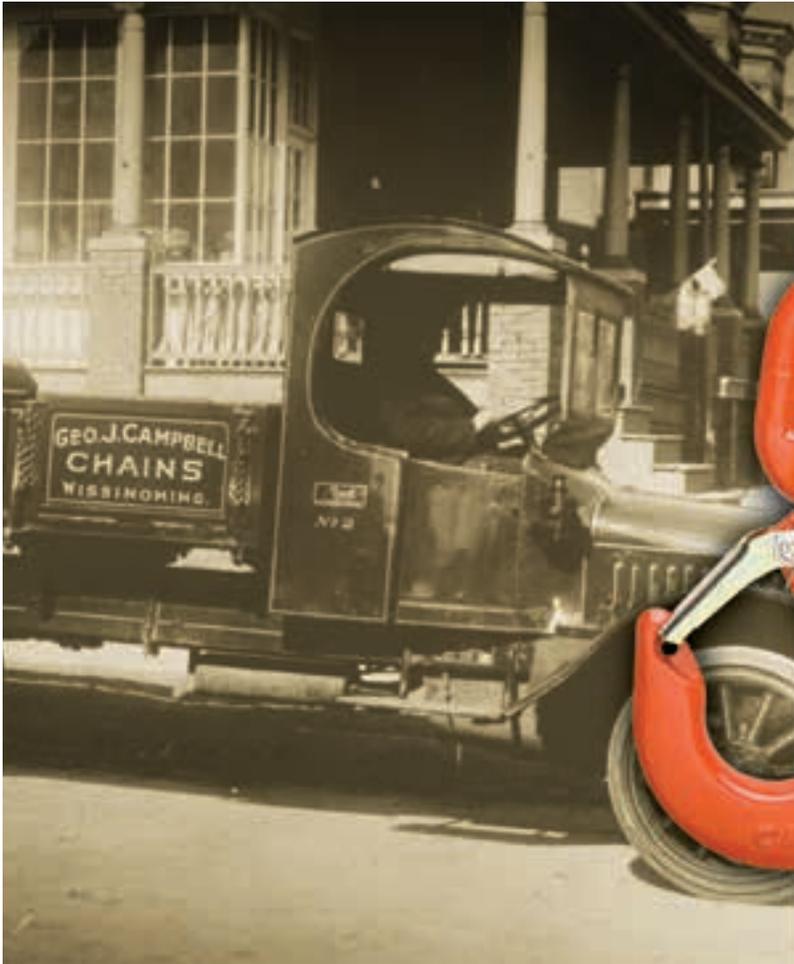
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Submitted by Nick Gladue, Dakota Riggers & Tool

Surveys.....

AWRF will be sending out 6 surveys this year. Before you roll your eyes and make a heavy sigh...please give us a few minutes of your time to explain why these surveys are so important to you, your company and your AWRF.

- **Safety:** This award offers our members recognition to those achieving a high level of success in their company's safety performance. Each AWRF member can utilize the award as a marketing tool but more importantly each member will have a better understanding of how they stand in our industry.

By collecting this data, AWRF can develop specific QHSE goals and better understand what our members need and require for their companies to improve overall safety.

- **Profit:** This report presents a wealth of financial and operating guidelines. It provides direct comparisons between your firm and other participating firms. This valuable information is, however, only available to firms that participate in the study. This report compares your firm with similar firms and provides suggestions for improving your firm's profitability.
- **Compensation:** Regarding compensation rates within AWRF. The membership was last surveyed in December 2011. This report will provide our membership with a better understanding as to compensation and benefit rates industry wide.



- **Membership:** The general goals of this survey are to identify what our membership wants and values, determine how much progress has been made since the last survey and how does the membership feel about some of the newer programs that have developed since the last survey. This survey has not been done since 2010.
- **Health:** This is a new survey that will have 10 questions about the direction the membership would like to go with regards to the programs and features that we are offering.
- **Quality Audit:** A self-audit to assist AWRF members to evaluate their fabrication and manufacturing procedures and identify what aspects of their company operation need attention. This survey will be a working document.

You should have already received the Membership and Compensation survey. Please take a few minutes to fill these out.

Please Note: All information that is submitted by companies for all surveys is strictly confidential and is not shared with other companies.

In order to know what your needs are, there must be ongoing communication. It is vital that you help your AWRF board in its effort to provide an even more responsive organization.

Thank you and see you in Baltimore.



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Written by Florida Hospital and submitted by Nicole Parkerson

Healthy Nutrition Tips For National Nutrition Month

Every March, the Academy of Nutrition and Dietetics celebrates National Nutrition Month by encouraging individuals to make healthier nutrition choices on a daily basis. This year's message is "Eat Right, Your Way, Every Day."

Healthy nutrition is an essential part of health living, but many things can play into an individual's choices. Food preferences, lifestyles and cultural and ethnic traditions all have an impact on how and what we eat. While eating healthy is not "one size fits all," there are general guidelines that can be helpful for everyone.

- **Make half your plate fruits and vegetables.** You've heard this message before, but it bears repeating. Fruits and vegetables not only offer up great nutrition, they are colorful, flavorful and add texture to meals. Eating two cups of fruit and two-and-a-half cups of vegetables daily will provide an abundance of vitamins, minerals, fiber and antioxidants.
- **Snack healthy.** Healthy snacks sustain energy levels and have fiber, protein, vitamins and minerals. To sustain energy throughout the day, choose a snack between 100 and 150 calories, five grams of protein, or five grams of fiber, or five grams of fiber and protein. Examples of healthy snacks include 15 almonds, a half nutrition bar, one large apple (with the skin on) or one-half large apple plus one tablespoon of peanut butter.



- **Get cooking.** Cooking at home, rather than eating out, is another way to eat healthier. Most foods consumed away from home are high in calories, sodium, fat and sugar. And preparing meals at home can save you money. If your cooking skills are a bit rusty, just start with simple meals (sandwiches, salads, soups) and go from there. If cooking is a totally new experience, go to www.eatright.org/howdoi for a variety of "how to" videos that will get you started on the basics.
- **Don't forget the water.** Everyone agrees – we all need water. While there is some debate as to how much we need each day, the Institute of Medicine currently recommends a total daily fluid intake of 13 cups for men and 9 cups for women. Not all of this has to be water, but you will feel better if most of it is

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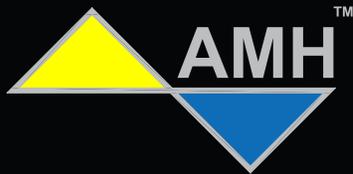
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Press Release



824 Highway 101 • Havelock, NC 28532
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TANDEMLOC, Inc. of Havelock, NC is pleased to announce that an entirely new line of products, developed in response to customer requests and in accordance with corporate goals, is now ready for shipment. Long a manufacturer of top-end lifting devices such as spreaders, lift beams, and lift slings in capacities up to just over 1500 tons, TANDEMLOC is now producing several items for the lower capacity market as well. Unique among the manufacturers that produce lift beams, TANDEMLOC offers sizing to exact customer requirements. Stepping down in load capacity to a newer range of material handling products, TANDEMLOC is building pallet (skid) lifters, coil hooks from ½ ton to 50 ton capacity, pipe grabs, and combo lifters for crane and/or forklift attachment. In their "Rapid Ready" Line for lift beams up to 20 feet in length and up to 13 tons in capacity, they promise to quote, design, manufacture and ship to customer specifications in 5 to 7 days. Like all of the below-the-hook devices that TANDEMLOC produces every single item is also proof-tested to 125% of its capacity before being stocked or shipped. Company President John M. DiMartino has previously been quoted "Our future includes, but is not limited to, growth through the expansion of CNC work, robotic welding work, and the continuous development of new product lines." These new products are a result of that direction.

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Profit Improvement Report



By Dr. Albert D. Bates
President, Profit Planning Group

Supplier Price Increases Are Your Friend

Even in a sluggish economy, supplier prices increases occur fairly frequently. It is safe to say that most distributors approach such increases with a sense of dread if not unbridled hatred.

The reality is that supplier price increases are an unparalleled opportunity to increase profit. However, achieving that profit improvement requires a reversal in the thinking of distributors and a certain degree of fortitude in passing the price increases along to customers.

This report looks at the nature of the supplier price increase issue. It does so from two distinct perspectives:

- **The Emotionalism of Price Increase**—A discussion of the fact that price increases are often viewed with emotion rather than logic.
- **The Economics of Price Increases**—An analysis of the profit impact associated with the proper handling of such increases.

The Emotionalism of Price Increases

The typical response of distributors to supplier price increases can probably best be summarized by the old political phrase, "There you go again." This antipathy towards price increases arises from three distinct issues. First, there is something of a loss of control in the pricing process. Second, there is a substantial amount of activity that must support the price increases. Third, there is the unknown nature of the competitive response.

The issue of lost control arises because some other entity—namely a supplier, is making decisions that impact the fortunes of the distributor. The more the distributor's operation is functioning smoothly under current pricing arrangements, the lower the degree of eagerness to make changes. When changes are forced upon the distributor, some angst is inevitable.

The activity level associated with price changes has two separate components. First, there is simply the operational aspect of making changes in the management information system to reflect the changes in cost, updating pricing information outbound and the like. It is a minor irritant, but still an irritant.

The more important aspect of the activity-based concern is the need to explain the resulting outbound price increases to customers. Even though blame can be laid clearly at the foot of suppliers, there is still apprehension about rocking the boat with customers who have seen too many price increases before.

Finally, the competitive response gets to the very heart of the economic issue. There is a high degree of uncertainty as to how competitors will respond. It is possible some will absorb a portion or even all of the price increase as a competitive tool. Any time things change, there is the potential for disaster.

The heading of this section used the term emotionalism for a reason. All three of these issues are perceived by distributors as being worse than they are. If the price increase can be viewed as a tool for profit improvement, then such emotionalism can be tempered. If it cannot, the emotionalism only increases.

The Economics of Price Increases

Exhibit 1 looks at the economics of a 5.0% supplier price increase. All of the figures in the exhibit are for the typical AWRP member, based upon the latest PROFIT Report. The first column of numbers reflects current results. The last two columns examine different responses to the price increase.

As a starting point, the typical firm generates \$10,000,000 in sales volume. It operates on a gross margin percentage of 37.5% of sales. Finally, it produces a pre-tax profit of \$375,000 or 3.8% of sales.

In order to fully understand the economic impact of price changes, it is first necessary to break expenses down into two components—fixed expenses and variable expenses. Fixed expenses remain constant for this fiscal year, unless the firm takes some sort of action. For the typical firm, these are \$2,875,000.

Exhibit 1
The Impact of Different Price Strategies
for the Typical AWRP Member

Income Statement—\$	Current Results	5.0% Vendor Price Increase	
		Dollar Pass Through	Percent Pass Through
Net Sales	\$10,000,000	\$10,312,500	\$10,500,000
Cost of Goods Sold	6,250,000	6,562,500	6,562,500
Gross Margin	3,750,000	3,750,000	3,937,500
Expenses			
Fixed Expenses	2,875,000	2,875,000	2,875,000
Variable Expenses	500,000	515,625	525,000
Total Expenses	3,375,000	3,390,625	3,400,000
Profit Before Taxes	\$375,000	\$359,375	\$537,500
Income Statement—%			
Net Sales	100.0	100.0	100.0
Cost of Goods Sold	62.5	63.6	62.5
Gross Margin	37.5	36.4	37.5
Expenses			
Fixed Expenses	28.8	27.9	27.4
Variable Expenses	5.0	5.0	5.0
Total Expenses	33.8	32.9	32.4
Profit Before Taxes	3.8	3.5	5.1

In contrast, variable expenses tend to rise and fall automatically as sales rise and fall. As an estimation, these are assumed to be 5.0% of sales volume. As sales increase or decrease, they will continue to be 5.0% of the new sales volume.

The most common response is the second column of numbers labeled Dollar Pass Through. With this approach prices to customers are increased by the same dollar amount as prices inbound have been raised by the supplier. This is probably the most common approach used by distributors.

With the 5.0% price increase from suppliers, cost of goods sold increased from \$6,250,000 to \$6,562,500, an increase of \$312,500. The result is that gross margin dollars remain constant. However, given higher sales volume (even though there is no more sales activity), variable expenses rise along with the price increase and profit falls to \$359,375. In point of fact, the dollar-for-dollar approach will always cause profit to decline.

The last column of numbers is labeled Percent Pass Through but should be labeled Don't Ever Do Anything But This. It involves passing through a 5.0% outbound price increase because of the 5.0% inbound supplier price increase. In doing so, sales, cost of goods and gross margin all increase by 5.0%.

Once again there is an automatic increase in variable expenses because of the higher sales volume. Even with this increase in variable expenses, profit rises to \$537,500 and the pre-tax profit margin increases to 5.1% of sales.

What this means is that when suppliers increase prices their distributors should actually thank them for their actions. The distributor has the potential to make a lot more money. On top of that, the distributor can also blame the price increase on the idiot supplier. The best of all possible worlds.

In reality, the congratulations are offset by the emotional panic that sets in when raising prices sets in. If it were only one SKU increasing in price then the firm's MIS system could simply apply the same set mark-up and raise the price of the item by 5.0%. Unfortunately, it is usually an entire product line or an entire product segment that is affected. It is big and it is noticeable.

When competition is hot and heavy, firms often retreat back to the dollar-for-dollar pass through. Strategically the goal is to find the level of a price increase that will not cause any customer complaints. It is an admirable strategic approach, but an ill-fated profit approach.

All of this leads to an important rule. When prices are rising, follow the percent-for-percent price increase formula to drive higher profit. So easy to understand, so difficult to do. Like so many other things in life.

Moving Forward

Pricing will probably always be the most difficult decision process for distributors. Simply put, no firm wants to be perceived as charging excessive prices. This means that when a supplier price increase materializes there will be the inevitable temptation to raise prices dollar for dollar. Whenever possible, the percent-for-percent approach needs to be substituted.

About the Author:

Dr. Albert D. Bates is founder and president of Profit Planning Group. His latest book, *Triple Your Profit!*, is available at Amazon and Barnes & Noble. It includes Excel templates for understanding the profit structure of the firm and developing meaningful financial plans.

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A Managerial Sidebar:

The Price Increase That Would Maintain Profit

It is possible to estimate how much firms must raise their prices to keep profit exactly where it is in the face of a supplier price increase. The estimation process is relatively straight forward.

The formula for holding profit steady, using a 2.0% price increase as an example, is simply:

$$\begin{array}{r}
 \text{Current Cost of Goods Percentage} \\
 \times \\
 \text{Percentage Increase in the Supplier Price} \\
 = \\
 62.5 \\
 2.0\% \\
 = \\
 1.3
 \end{array}$$

Extreme care should be taken when employing this ratio. While it holds profit constant, the intent should always be to try to increase profit via supplier price increases.

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Press Release

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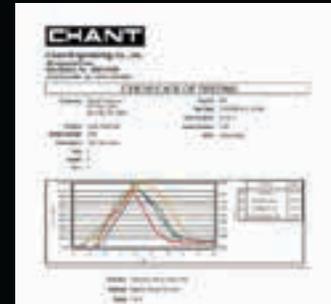
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Press Release

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Columbus McKinnon adds safety and performance features to two world-class hoists

AMHERST, N.Y., January 10, 2014 – Columbus McKinnon Corporation (NASDAQ: CMCO), a leading designer, manufacturer and marketer of material handling products, has added new variable frequency drives (VFD) and spark-resistant options to its **Yale® Global King and Shaw-Box® World Series** electric wire rope hoists. These new options provide users with the flexibility they need to select a hoist best-suited for their unique applications or environments. These hoists are available for the U.S. market.

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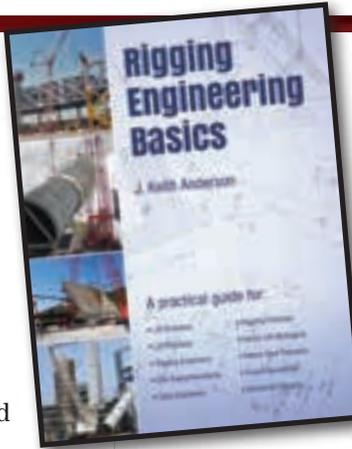
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Press Release

Rigging Engineering Basics Now Available



A must read for all involved in rigging and lift planning activities

J. Keith Anderson, Chief Rigging Engineer for Bechtel, offers his contribution to the rigging and hoisting industry with a dynamic, educational title: *Rigging Engineering Basics*. A comprehensive “bible” for rigging engineers, lift planners, advanced riggers, field engineers, site supervisors, and the like, *Rigging Engineering Basics* is an essential reference guide for all personnel involved in rigging and lift planning activities.

Rigging Engineering Basics is intended to inform key employees planning rigging operations and point them in the direction of best practices, bring to light pitfalls and how to avoid them, and offer instruction of certain basic rigging engineering tasks. Lifting operations are universal to all industries including, oil and gas, construction, power generation, pulp and paper, manufacturing, and many more. As well as being universal, lifting is also one of the most hazardous activities routinely encountered on a job site, making *Rigging Engineering Basics* a must read for all in the rigging and hoisting world.

Initial impressions of the book have spawned ideas and projects in the rigging and lifting arena. One result in particular is a comprehensive new program from Industrial Training International (iti.com), titled

Fundamentals of Rigging Engineering. In addition to serving as the inspiration of the program, Mr. Anderson’s text will be used as a reference tool to students who go through the program and Mr. Anderson himself is signed on as an instructor of two program modules.

Mr. Anderson possesses over 35 years of experience in the heavy lifting industry, with international experience with industry leaders, Kramo Montage, Van Seumern UK (now Mammoet UK), Sarens, and since 2000, Bechtel. In addition to his world class experience, Mr. Anderson volunteers his time as a member of the American Society of Mechanical Engineers (ASME) P30 Lift Planning Standard Committee.

Rigging Engineering Basics is available through the ITI Bookstore. Learn more at www.iti.com or call 1-888-567-8472

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The Entertainment



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Daniel Tatar, Shawn Perucca, Stuart Ambrose and Brian Purcell have put aside their 9-to-5 jobs to create a truly unique musical experience: Timeless Music from the Past Six Decades Mashed With Today's Hits. Audiences have enthusiastically responded, as these modern gentlemen piece together cherished fragments of the past and present before translating them into fresh tunes packed with a rich new flavor and smooth choreography. As the **COMPANY MEN** grace the stage in their immaculately tailored suits and sleek hairstyles, they reestablish the values of a classic American gentleman and pair it with rare charm and magnetic qualities.

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Once the bus arrives, guests will be able to explore the Visitor's Center and fort at their own leisure. A short 10 minute orientation film is shown every half hour on the hour at the visitors center and the fort contains a plethora of plaques and information for guests.



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R. James Woolsey



Ambassador R. James Woolsey, a former Director of Central Intelligence, chairs the board of Foundation for Defense of Democracies and is a Venture Partner with Lux Capital Management.

Woolsey also currently chairs the Strategic Advisory Group of Washington, D.C. private equity fund. Paladin Capital Group and the Advisory Board of the Opportunities Development Group, and he is Of Counsel in the Washington, D.C. office of the Boston-based law firm, Goodwin Proctor. In the above capacities he specializes in a range of alternative energy and security issues.

Mr. Woolsey previously served in the U.S. Government on five different occasions, where he held Presidential appointments in two Republican and two Democratic administrations. From July 2002 to March 2008 Mr. Woolsey was a Vice President and officer of Booz Allen Hamilton and then a Venture Partner with VantagePoint Venture Partners until January 2011. He was also previously a partner at the law firm of Shea & Gardner in Washington, D.C. now Goodwin Proctor, where he practiced for 22 years in the fields of civil litigation, arbitration and mediation.

During his 12 years of government service, in addition to heading the CIA and the Intelligence Community, Mr. Woolsey was: Ambassador to the Negotiation on Conventional Armed Forces in Europe (CFF) Vienna, 1989-1991; Under Secretary of the Navy 1977-1979; and General Counsel to the U.S. Senate Committee on Armed Services 1970-1973. He was also appointed by the President to serve on a part-time basis in Geneva, Switzerland 1983-1986; as Delegate at Large to the U.S. Army, he was an advisor on the U.S. Delegation to the Strategic Arms Limitation Talks (SALT I). Helsinki and Vienna, 1969-1970.

Ambassador Woolsey currently serves on a range of government, corporate, and non-profit advisory boards and chairs several, including the Advisory Boards of the Clean Fuels Foundation and the New Uses Council, and he is a Trustee of the Center for Strategic & Budgetary Assessments. Previously he was Chairman of the Executive Committee of the Board of Regents of The Smithsonian Institution, and a trustee of Stanford University. He is also a member of The National Commission on Terrorism. 1999-2000: The Commission to Assess the Ballistic Missile Threat to the U.S. (Rumsfeld Commission). 1998: The President's Commission on Federal Ethics Law Reform. 1989: The President's Blue Ribbon Commission on Defense Management (Packard Commission), 1985-1986; and the President's Commission on Strategic Forces (Scowcroft Commission), 1983.

Ambassador Woolsey has served in the past as a member of boards of directors of a number of publicly and privately held companies, generally in fields related to technology and security, including Martin Marietta; British Aerospace, Inc.; Fairchild Industries; and Yurie Systems, Inc. In 2009, he was Annenberg Distinguished Visiting fellow at the Hoover Institution at Stanford University and in 2010-11 he was a Senior Fellow at Yale University's Jackson Institute for Global Affairs.

Ambassador Woolsey was born in Tulsa, Oklahoma, and attended Tulsa public schools, graduating from Tulsa Central High School. He received his B.A. degree from Stanford University (1963, With Great Distinction, Phi Beta Kappa), an M.A. for Oxford University (Rhodes Scholar 1963-1965) and an LLB from Yale Law School (1968, Managing Editor of the Yale Law Journal).

Ambassador Woolsey is a frequent contributor of the articles to major publications, and from time to time gives public speeches and media interviews on the subjects of energy, foreign affairs, defense, and intelligence. He is married to Suzanne Haley Woolsey and they have three sons, Robert, Daniel and Benjamin.

J.D. Foster, Ph.D.

Deputy Chief Economics, U.S. Chamber of Commerce

Dr. J.D. Foster is deputy chief economist at the U.S. Chamber of Commerce. He works with Dr. Martin A. Regalia, the Chamber's chief economist exploring and explaining developments in the U.S. and global economies. He also participates in discussions around the country regarding the economy and economic policy and supports other functions at the Chamber with economic analysis and guidance.

Prior to joining the Chamber in June 2013, Foster was the Norman B. Ture Senior Fellow in the Economics of Fiscal Policy at The Heritage Foundation, a longstanding nonprofit, Washington, D.C., research organization.

Before coming to Heritage in 2007, Foster spent five years as associate director for economic policy (chief economist) at the Office of Management and Budget, the White House. In 2001, Foster served as economic counsel in the Office of Tax Policy, the U.S. Department of the Treasury. Prior to that, he served as legislative director to Rep. Crane (R-IL), vice chairman of the Committee on Ways and Means of the U.S. House of Representatives.

From 1993 to 1999, Foster was executive director and chief economist of the Tax Foundation, one of the nation's oldest and most respected nonprofit research organizations. Before that, he was chief of staff at the White House Council of Economic Advisors under Dr. Michael Boskin. Earlier he served consecutively under Sens. Armstrong (R-CO), Symms (R-ID), and Nickles (R-OK) representing them on the Senate Finance, Budget and Policy committees.

Foster writes extensively on tax policy and entitlement reform, as well as on matters of monetary policy and international economics. He received a B.A. in economics and a B.A. in mathematics from the University of Colorado, an M.A. in economics from Brown University, and a Ph.D. in economics from Georgetown University.

Mark Hertling

Since February 2013, Mark Hertling is leading programs for Global Strategy, Physician Leadership Development, and the “Healthy 100” at the innovative Florida Hospital in Orlando. Prior to joining Florida Hospital, Mark served for nearly four decades in the US Army. At the time of his retirement, he was Commanding General of US Army Europe, where he led over 40,000 soldiers, cared for over 100,000 family members, and partnered with the armies of 50 countries in Europe. LTG Hertling commanded units at every level, to include the Army’s 1st Armored Division in combat, and is one of a few individuals who have deployed three times with the “Old Ironsides” Division to combat. He has also Commanded training organizations at the National Training Center in California and the Joint Multi-National Training Center in Germany.

Receiving a Bachelor of Science from the U.S. Military Academy (West Point) in 1975, Mark is also a graduate of the Army’s Staff College, the School of Advanced Military Studies, and the National War College. He holds Masters Degrees in History and International Relations from these institutions, and he also earned a Master’s Degree in Exercise Physiology from Indiana University; after receiving that degree, he taught Physical Education at West Point for three years. He holds many military awards – to include 3 awards of the Distinguished Service Medal, 4 Bronze Stars, the Purple Heart, the Combat Action Badge, Paratrooper Wings, and the Army Commendation Medal for Valor – and he has also received military valor awards from Germany, Poland, Romania and Georgia.

In addition to working with Florida Hospital, Mark serves on an Advisory Panel of the non-profit organization “Mission Readiness,” and he serves as an advisor to “World T.E.A.M. (The Exception Athlete Matters) Sports,”



a non-profit organization helping challenged athletes reach their goals. President Obama recently appointed him as one of 18 members of the President’s Council on Fitness, Sport and Nutrition. He acts and speaks passionately on leadership, national security issues, and health trends.

Mark is married to his best friend, Sue. They have two sons, Todd and Scott, and a daughter-in-law, Lauren, who have all served multiple combat tours as active duty Soldiers. Their other daughter-in-law, Karen, is a teacher and the mother of their grandsons, Ryan and Ethan. He loves being with family, reading history, bicycling, and any form of athletic activity

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Bayview Bridge



Engineering Marvel Crosses the Big River just around the bend from Huck's Hometown

by Peter Hildebrandt

Quincy, Illinois may be upriver just a bit from Mark Twain's hometown, Hannibal, Missouri but the city named for our sixth president, John Quincy Adams is also full of history; in addition to being the westernmost city in the state as well as on the country's largest river. The community has the distinguished position of being recognized as one of the three cities in the State of Illinois having an outstanding collection of architecturally and historically significant structures.

Adding to the area's architectural distinction is the Bayview Bridge, which celebrated its 26th anniversary in August. The graceful structure has done its part in making Quincy an important "gateway" city as well as being the first place in the country to have a hybrid bridge with its distinctive H-shaped towers.

The site of Quincy, Illinois originally was home to Sauk (Sac), Fox and Kickapoo Native American tribes. John Wood founded Quincy in 1822, settling on land that was part of a large area set aside as a Military Bounty Tract for the Veterans of War of 1812. Wood came west from Moravia, New York in 1818 and purchased 160 acres from a veteran for \$60 and the next year became the first settler in what was originally called "Bluffs."

By 1825 the city had its current name. Wood was later elected Lieutenant Governor of Illinois in 1856 and became Governor in 1860 upon the death of elected Governor Bissell. In 1825 Quincy became the county seat, and was named in honor of the newly-elected U.S. President, John Quincy Adams.

Five thousand members of the Church of Jesus Christ of Latter Day Saints, the Mormons, were driven from their homes

in Missouri and arrived in Quincy during the winter of 1838-39. Though vastly outnumbered by the new arrivals, the residents of Quincy provided food and shelter for the Mormons until Joseph Smith led his followers 40 miles upriver to the settlement of Nauvoo.

Quincy's earliest settlers, primarily from New England, were joined by a wave of German immigrants in the 1840's. The new residents brought with them much needed skills for the expanding community. The city eventually gained the nickname, "Gem City," which referred not to any mineral resources, but the fact that in its day, Quincy was considered the jewel of all the cities in the fairly unsettled state of Illinois.

No doubt when Mark Twain penned *The Adventures of Huckleberry Finn*, he soaked in some of the ongoing conflict and confrontation in the air as his great

river formed the only physical boundary between the slave state of Missouri and the free state of Illinois, where it had been abolished. Quincy is only 31 miles to the north, but perhaps in those times a world apart in life and attitudes. Quincy had an underground railway “station” within its borders.

The matter of slavery was a major religious and social issue in Quincy’s early years. Quincy, Illinois, seethed as a hotbed of political controversy. Dr. Richard Eells House, at 415 Jersey, was considered station number one on the Underground Railroad from Quincy to Chicago. Quincy grew rapidly in the 1850’s. Steamboat arrivals and departures made Quincy’s riverfront a beehive of activity. Quincy was a site for the sixth Senatorial debate by U.S. Senator Stephen Douglas and his challenger, Abraham Lincoln and was the largest city in which Lincoln and Douglas appeared. The Civil War brought increasing prosperity to Quincy. By 1870, Quincy passed Peoria to become the second largest city in Illinois. A massive railroad bridge across the Mississippi River had been completed, and Quincy was linked by rail to Omaha, Kansas City and points west

For more than a century and a half, Quincy has counted its blessings and good fortunes, endured an occasional flood or tornado, and settled in as the Gem City of the Mississippi Valley. Twice recognized as an All-America City, Quincy honors its past as its citizens look forward to the 21st Century. McDonald’s owners, Ray and Joan Kroc were even impressed enough with the city of Quincy that they donated enough money for a beautiful downtown fitness, wellness and activity center known as the Kroc Center.

In the early 1980s it became apparent that more capacity for moving traffic over the Mississippi River was needed. The existing Memorial Bridge was not large enough. The new Bayview Bridge came to be constructed, and was completed in 1987. The Memorial Bridge then was in good shape. It is currently in need of replacement, despite being on the historic register of structures.

The Bayview Bridge’s “H” structure benefits the form work of the geometry so that the cable stays are

all on the same plane in addition to being outside the travel lanes; everything is concentric, unlike a typical suspension bridge in which the suspender cables are all parallel as they drop to hold up the bridge deck. The Bayview Bridge deck is high enough above the river to allow six-story high riverboats and cruise vessels to pass underneath with ease.

The main difference in a cable-stayed bridge is that individual bundles of cables are being anchored to a panel point on the roadway, whereas with a suspension bridge, though there are still spaced-out intersections on the roadway, they just go straight up. That load gets picked up by the main cable which is draped over the towers and anchored on each shoreline for the bridge.

The load path on a cable-stayed bridge is directly to the tower. The shape of the Bayview Bridge is one of the first of its kind anywhere in the world, according to Joseph R. Spadea, PE and Marketing Manager with Modjeski and Masters, Inc. Philadelphia, the construction company that designed, engineered and built the bridge.

“We weren’t the engineering firm for the entire project, but were completely involved with the cable-stayed portion of the bridge,” explains Spadea. “How design teams usually work is that we will do a lot of priming; we will lead the contract from a design perspective. Sometimes we’ll switch that role of a local firm to fill in. But in 99% of our projects we’ve done the main river spans.”

Hybrid structure refers to how the road way superstructure is constructed

from steel. This portion of the bridge consists of steel floor beams and at the end of those floor beams is where they’ve anchored the main cables. These cables descend from above and there is a steel assembly on either end at the anchorages or anchor points. Precast deck panels are also used on this bridge, according to Spadea.

“The hybrid aspect of this structure is of the deck, of precast deck panels used for the post tensioning. This sits atop a steel superstructure system. Other cable-stayed bridges may use all concrete; the hybrid offers a little bit of a profile, parts of the structure do not have to go as deep into the bridge’s main deck. They also offer some weight savings. The Bayview Bridge was innovative in being one of the first to use this design.

“Because of the bridge’s composite design, if there’s a problem with a precast deck panel, that can be popped off and a new one can be brought in to replace it,” adds Spadea. “The bridge’s construction is ‘Lego-like’ – all the components are monolithic so that if you have temperature shrinkage causing cracks in your concrete, such an issue means that this is not a problem.”

Modjeski and Masters will be doing another bridge project soon in the Quad Cities just north of Quincy in the upcoming years.

Evidence of the soundness and durability of the Bayview Bridge came when the bridge’s construction was challenged, just seven years after it first opened. The summer of 1993 witnessed what could perhaps be considered one of those notorious “one hundred year flood event” that designers and engineers often bring up.

Continued on page 71



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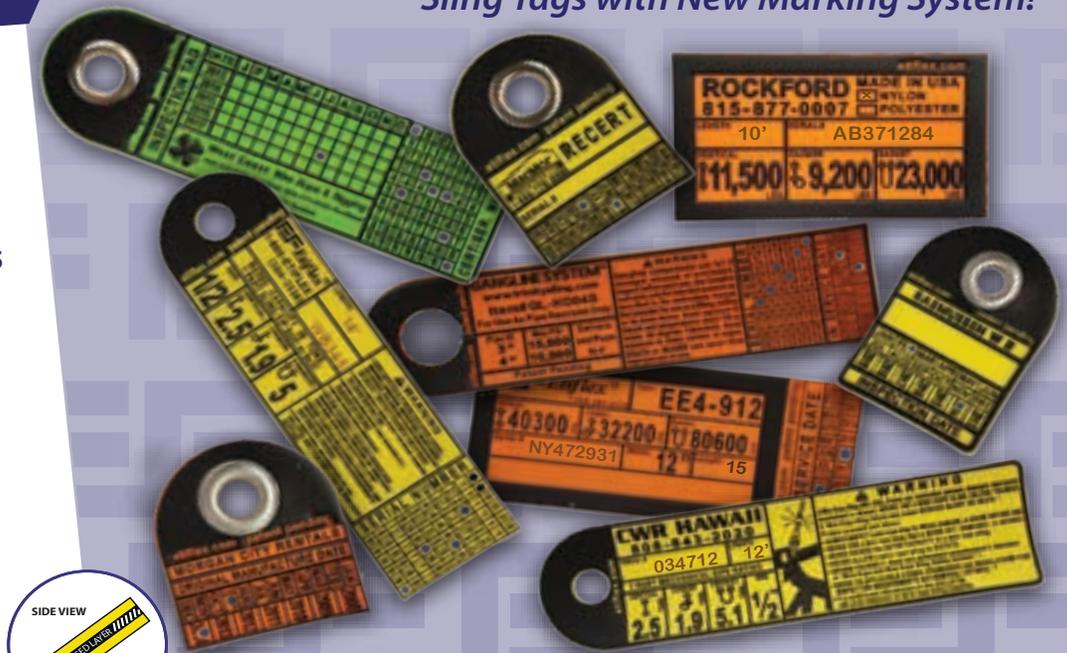


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Chant Engineering Expands Sales Division with addition of Said Baydar, Business Development

New Britain, Bucks County, PA – January, 2014 Chant Engineering Co. Inc. is pleased to welcome Said Baydar to the Chant team. Baydar will lead their Business Development as they expand further into foreign and domestic markets. Baydar, based out of Canada, brings his Electrical Engineering background to complement this new role and will be a huge asset for Chant.

Patrick Shire, Vice President of Sales and Marketing for Chant Engineering, said “Said is a valuable addition to our team. He will play a key role in enhancing relationships with existing customers and attracting new clients – we will be better positioned to continue providing quality service for our friends to the North. We are pleased to have Said and his expertise as part of our growing team.”



Prior to joining Chant, Baydar has maintained his status as a Professional Engineer, with an emphasis in Electrical Engineering. He also has a strong industry background, which includes owning an import and export company catering to the rigging, securing and lifting industry. Privately, he is a proud family man and avid tennis player. As Said spearheads Business Development for Chant, he will be responsible for overall growth and management of the Canadian marketplace.

Chant Engineering Co. is a global diversified engineering company that designs, manufactures, services and calibrates testing machines, systems and related accessories for worldwide industrial and military customers. Chant is the Authorized North American distributor for Friedrich Höpfe and TALURIT AB products and is expanding their warehouse facilities to handle increased machinery and product inventories as well as having more manufacturing space. As a nationally recognized calibration facility, Chant has precision calibration equipment traceable back to the National Institute of Standards and Technology (NIST). Currently, Chant is capable of calibrating testing machines up to 3.3 million lbs with load cells that have the capacity to calibrate to 1.5 million lbs in tension and 3.3 million in compression. For more information on Chant Engineering, visit www.chantengineering.com.

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I am from a generation which grew up thinking “My Country Tis of Thee” was our national anthem. We sang it together in class every morning in elementary school. Our music teacher told us the other song, which had been officially adopted by Congress during the Great Depression, was too difficult for young voices to sing. Apparently the tune always has been too difficult to sing but the current fad for revival style variations makes it easier for vocalists, many of whom apparently don’t know the tune anyway. Many Americans forgive this because they know the melody is actually from a British drinking song intended to be performed after some preliminary inebriation.

This year marks the bicentennial of the lyrics which were written as a poem by an American lawyer. From a technical standpoint there are some interesting details forming part of the story but most people don’t know about them. The style of poetry slightly resembles a lawyer’s summary appeal to a jury. It is more or less an accident for the words of the poem to come close to matching the tune of the song. There isn’t any other connection between the poem and the melody. The actual title of the poem is “The Defense of Fort McHenry”.

At the time the poem was written, England and France were locked in a deadly contest to become the world’s leading superpower. France was had been way ahead in the land battles but England was dominant at sea. The British navy was hoping the USA would stay out of it, but Pres. Madison convinced Congress to declare war on England in 1812. Two years later the French army became exhausted after an attack on Russia, causing their emperor to abdicate. This allowed the British forces to turn their attention to the Americans. They launched an invasion via Chesapeake Bay. After capturing and burning the new American capital in the District of Columbia, the invasion force moved

northward to attack Baltimore, then our third largest city after Philly and the Big Apple.

At the time of the invasion, Fort McHenry at Baltimore harbor was commanded by an artillery officer from Virginia, George Armistead. When he took command in 1813, he had an inspirational idea to purchase two large American flags for display on a very tall flagpole at the fort as a symbol of defiance. Although Mary Pickersgill never seems to get as much publicity as Betsy Ross, the two flags were made by her and her team of seamstresses in Baltimore. She created the proportions of the two flags mainly by using rolls of cheap decorative bunting cloth imported from England.

Both flags had 15 stars and 15 stripes because when Mary began stitching there were 15 states in the union; two of the original colonies had been split in half, creating Vermont from western New Hampshire in 1791 and Kentucky from western Virginia the following year. One of the flags, slightly smaller than the other, was called the storm flag because it was displayed when the weather was poor. The larger one was as tall as a three-story building. When the British attack began early Monday morning September 12, 1814 the weather was awful. Anyone who has experienced the September heat and humidity at Baltimore will testify how debilitated it can make you feel.

General Robert Ross, in command of the British land forces, was the officer who had captured and burned the American capital. He was well on his way to becoming a military superstar. His intent was to march into Baltimore from the northeast side where there was no major defensive fortification, while the navy took care of eliminating Fort McHenry toward the south by bombarding it from ships. It was a rainy day. Armistead’s storm flag was waving over the fort when

several thousand British infantrymen were landed on the northeast shore of the harbor. Due to the showers, the wooded terrain, the dawn, and the distance, it is unlikely any of them ever saw the defiant flag.

The basic European infantry tactic used by both sides in the battle that morning at North Point was to form lines of men shooting smooth-bore muskets at each other - pointblank. The Americans, however, had one minor technical advantage. Most of the continent was covered with forests and filled with wild animals. On the frontiers outside the cities, nearly every able-bodied male owned a hunting rifle. These were the long-barreled Lancaster-style weapons which were accurate at twice the length of a football field. None of the muskets could hit a target that far away.

During the Revolution, the Americans had learned to use riflemen as snipers. In the battles at Saratoga and Kings Mountain, a decisive factor in the victories was the ability of sharpshooters to kill British officers individually. The terrain near Baltimore was perfect for this technique. While the battle was underway, a single rifle shot killed Gen. Ross. The death of the British commander created confusion in the ranks. The invaders had been slowed by the nasty weather so they halted to set up a camp and regroup. They didn’t fear being attacked in camp because they had their own superweapons, the 32-pound Congreve rockets.

Rocket missiles had been implemented against the British a

few years earlier when they invaded the Kingdom of Mysore in southern India. The Indian rockets were studied and perfected by William Congreve, a civilian who worked at the Woolwich arsenal in England. Although inaccurate, the rockets had four primary attributes: they could be fired in volleys against troops like muskets, they could be fired over the heads of troops to start fires and cause explosions in the rear, they could be used as flares to illuminate the enemy on a battlefield at night, and they were terrifying to watch when you were the target. Congreve rockets were the decisive factor in the American defeat when the capital was destroyed. The British plan at Baltimore was to resume their land attack after nightfall using rockets.

The British navy had ships that fired rockets in place of cannon but they also had another major weapon, the “bombarding ketch” often called a “bomb ship”. Basically this was a stoutly-built vessel with a huge mortar (sometimes two) built into the central keel structure. The shipboard mortars fired two kinds of ordnance. One of these, about a foot in diameter, was called a “shell”. It was a hollow cast iron sphere filled with explosives, with a delay fuse which was ignited when fired. The other, somewhat larger, was called a “carcasse”. It was filled with flammable dry chemicals, acting like a tracer in the air and hopefully igniting fires where it landed.

When Gen. Ross was killed and the army’s land attack stalled, the British naval commander George Cochran launched a full-scale bombardment against Fort McHenry using five bomb ships and a rocket ship. Beginning at sunrise Tuesday morning, the bombing continued for 25 hours. The shells and carcasses were much more accurate than the rockets but they had one major drawback. To aim the weapons effectively, the entire bomb ship had to be maneuvered and anchored before firing began. This would require frequent



repositioning in the tidal Patapsco River. Also, they tried carefully to remain a few miles away, out of range of the cannon at the fort.

The trajectory of the bombs had to compare exactly with the burning time of the fuses. In the beginning, most of the shots fell short into the water. Later, quite a few passed completely over the fort. A considerable number exploded in the air, showering the fort with shrapnel but doing little damage. In his official report, Major Armistead estimated as many as 1800 bombs were fired, only 400 of which actually struck the fort. Only one of his cannon emplacements was destroyed. At two in the morning on Wednesday, a concurrent rocket barrage was launched as illumination for a small landing detachment. It was driven away by some American sailors who were manning one of the outer defense works.

As soon as the sun came up on Wednesday, Cochran assessed his meager results and decided to stop firing. When Armistead sensed the attack had ended, he issued a command to take down the smaller storm flag, which

had flown all night, and raise Mrs. Pickersall’s really big flag, which could be seen for miles. The impact of his symbolic gesture energized every American who witnessed it. This may have been the only battle in history where a single rifle shot and the hoisting of a giant flag made all the difference for a nation defending itself.

The rest of the story is well known. A Georgetown lawyer named Francis S. Key was on a truce ship with the British fleet negotiating for release of a prisoner. He had watched the attack all night. Key wrote the poem on a piece of scrap paper. After he was put ashore when the invaders withdrew, he published it, and within a short while it was being sung to the tune of the drinking song. The big flag was given to Armistead whose family retained ownership at their home for a century. Over the years they occasionally snipped off pieces (including one of the stars) which they gave to visitors. In 1912, Armistead’s grandson, Eben Appleton, donated it to the American people. It has been at the Smithsonian Institution ever since. No one has a clue as to whatever happened with the smaller storm flag that survived the bombing.

Quick Facts about the Star-Spangled Banner Flag

- Made in Baltimore, Maryland, in July-August 1813 by flagmaker Mary Pickersgill
- Commissioned by Major George Armistead, commander of Fort McHenry
- Original size: 30 feet by 42 feet
- Current size: 30 feet by 34 feet

- Fifteen stars and fifteen stripes (one star has been cut out)
- Raised over Fort McHenry on the morning of September 14, 1814, to signal American victory over the British in the Battle of Baltimore; the sight inspired Francis Scott Key to write “The Star-Spangled Banner”
- Preserved by the Armistead family as a memento of the battle
- First loaned to the Smithsonian Institution in 1907; converted to permanent gift in 1912
- On exhibit at the National Museum of American History since 1964
- Major, multi-year conservation effort launched in 1998
- Plans for new permanent exhibition gallery now underway

Making the Star-Spangled Banner

In June 1813, Major George Armistead arrived in Baltimore, Maryland, to take command of Fort McHenry, built to guard the water entrance to the city. Armistead commissioned Mary Pickersgill, a Baltimore flag maker, to sew two flags for the fort: a smaller storm flag (17 by 25 ft) and a larger garrison flag (30 by 42 ft). She was hired under a government contract and was assisted by her daughter, two nieces, and an indentured African-American girl.

The larger of these two flags would become known as the “Star-Spangled Banner.” Pickersgill stitched it from a combination of dyed English wool bunting (red and white stripes and blue union) and white cotton (stars). Each star is about two feet in diameter, each stripe about 24 inches wide. The Star-Spangled Banner’s impressive scale (about one-fourth the size of a modern basketball court) reflects its purpose as a garrison flag. It was intended to fly from a flagpole about ninety feet high and be visible from great distances.

At its original dimensions of 30 by 42 feet, it was larger than the modern

garrison flags used today by the United States Army, which have a standard size of 20 by 38 feet.

The first Flag Act, adopted on June 14, 1777, created the original United States flag of thirteen stars and thirteen stripes. The Star-Spangled Banner has fifteen stars and fifteen stripes as provided for in the second Flag Act approved by Congress on January 13, 1794. The additional stars and stripes represent Vermont (1791) and Kentucky (1792) joining the Union. (The third Flag Act, passed on April 4, 1818, reduced the number of stripes back to thirteen to honor the original thirteen colonies and provided for one star for each state — a new star to be added to the flag on the Fourth of July following the admission of each new state.) Pickersgill spent between six and eight weeks making the flags, and they were delivered to Fort McHenry on August 19, 1813. The government paid \$405.90 for the garrison flag and \$168.54 for the storm flag. The garrison flag would soon after be raised at Fort McHenry and ultimately find a permanent home at the Smithsonian Institution’s National Museum of American History. The whereabouts of the storm flag are not known.

The War of 1812 and the Burning of Washington

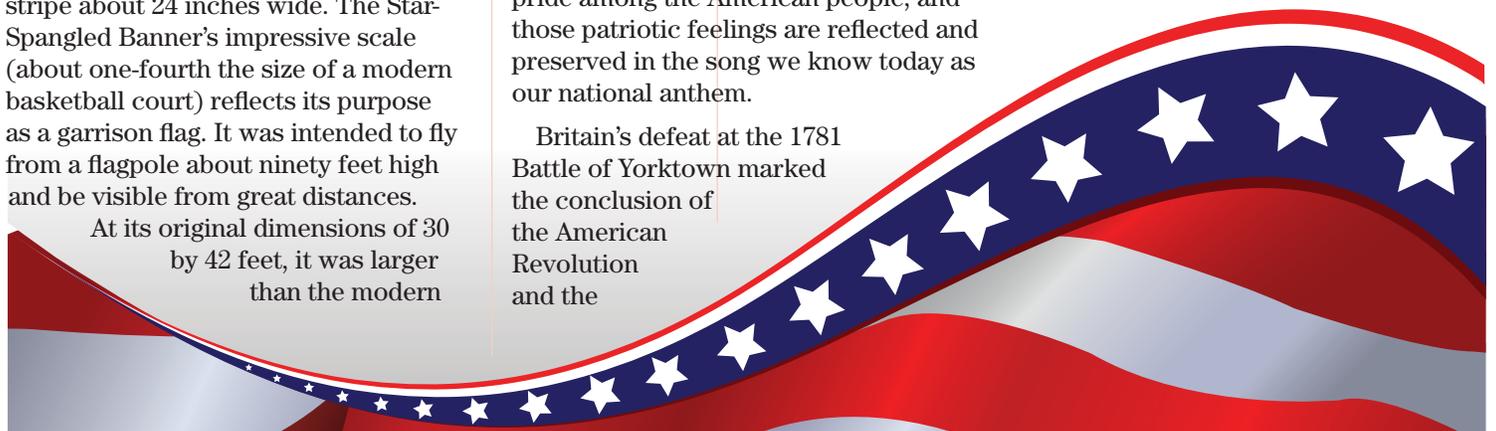
Although its events inspired one of our most famous national songs, the War of 1812 is itself a relatively little-known war in American history. Despite its complicated causes and inconclusive outcome, the conflict helped establish the credibility of the young United States among other nations. It also fostered a strong sense of national pride among the American people, and those patriotic feelings are reflected and preserved in the song we know today as our national anthem.

Britain’s defeat at the 1781 Battle of Yorktown marked the conclusion of the American Revolution and the

beginning of new challenges for a new nation. Not even three decades after the signing of the Treaty of Paris, which formalized Britain’s recognition of the United States of America, the two countries were again in conflict. Resentment for Britain’s interference with American international trade and impressment of American sailors combined with American expansionist visions led Congress to declare war on Great Britain on June 18, 1812.

In the early stages of the war, the American navy scored victories in the Atlantic and on Lake Erie while Britain concentrated its military efforts on its ongoing war with France. But with the defeat of Emperor Napoleon’s armies in April 1814, Britain turned its full attention to the war against an ill-prepared United States. Admiral Alexander Cochrane, the British naval commander, prepared to attack U.S. coastal areas, and General Robert Ross sought to capture towns along the East Coast to create diversions while British army forces attacked along the northern boundaries of the United States.

In August 1814, General Ross and his seasoned troops landed near the nation’s capital. On August 24, at Bladensburg, Maryland, about 30 miles from Washington, his five-thousand-member British force defeated an American army twice its size. That same night, British troops entered Washington. They set fire to the United States Capitol, the President’s Mansion, and other public buildings. The local militia fled, and President James Madison and wife Dolley barely escaped.





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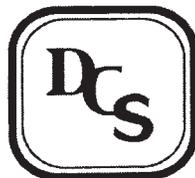
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The LIMA flow station offshore Jakarta, Indonesia, before a simultaneous lift of all structures restored the installation's air gap. All photos courtesy Versabar Inc.

Lift counters effects of subsidence and extends operational life

Lakis Zenios, Versabar Inc.
Nasrullah, Pertamina Hulu Energi Offshore North West Java

Over the life of a production facility, reservoir pressure will reduce as oil and gas flow to the surface. This reduction in reservoir pressure may result in local compaction and consolidation of reservoir rock. Depending upon the local geology, such reservoir compaction may also lead to subsidence. For a fixed offshore platform, one consequence of seabed subsidence is the reduction of the air gap between the average sea level and the underside of the topside, which increases the potential for inundation of the deck in extreme storm conditions. This puts the platform at risk for structural failure under storm loading conditions. As the probability of extreme waves entering the deck increases with further subsidence, some form of remediation will generally be required to ensure that the offshore platform continues to maintain satisfactory levels of structural reliability.

The LIMA flow station off the coast of Jakarta, Indonesia, was built in 1973 by Atlantic Richfield Indonesia Inc. It consists of a production platform, a compression platform, a living quarters platform, three bridges, and flare support structures. The installation was one of 11 flow stations



acquired by Pertamina in 2009 with the purchase of BP subsidiary BP West Java and its operated interest in the Offshore North West Java concession.

Versabar's Deck Raising System uses split sleeves to encapsulate the legs throughout the raising process.

Although the LIMA flow station had operated normally without remediation, subsidence had significantly reduced the facility's air gap over the years. Operator PT. Pertamina Hulu Energi Offshore North West Java (PHE ONWJ) was concerned that platform safety could be compromised before the planned end of the station's production life in 2026. PHE ONWJ thoroughly evaluated various options to remediate the risk of

subsidence, including conventional lifting, on/off operation, construction of new platforms, the use of a mobile offshore production unit, a float-over barge for deck-raising, and deck-raising by hydraulic jacking system. Additional criteria such as technical feasibility, commercial matters, period of shutdown needed, project schedule, and risks were considered during the evaluation. PHE ONWJ concluded that deck-raising by hydraulic jacking offered the best cost-effective and technically sound solution to restore a safe distance between each platform's cellar deck and the mean sea level.

The bridge-linked platform complex needed to be raised 4 m (13 ft) to increase the air gap on three platforms and their supporting structures. Versabar's patented Deck Raising System was selected to raise the entire LIMA flow station simultaneously. The LIMA Subsidence Remediation Project would be the first such operation to use a synchronized hydraulic jacking system with programmable logic controller (PLC) combined with encapsulated leg-sleeves.

PHE ONWJ awarded two contracts: one to PT. SAS International, to provide all specialty deck-raising equipment and services, and one to PT. Timas Suplindo (Timas), for engineering, procurement, construction, and installation. Versabar was subcontracted by PT. SAS International to furnish all synchronized hydraulic jacking equipment.

The company's deck-raising technology was developed in 2006, when a Gulf of Mexico operator needed to raise the topsides on two 8-leg drilling and production platforms. Using hydraulically and electronically synchronized rams, each platform was successfully elevated 14 ft (4.27 m) in less than two hours. The technology uses split sleeves to encapsulate the legs throughout the raising process. This encapsulation provides a high degree of lateral stability during the raising operation and subsequently forms the permanent leg extensions.

The custom engineered HPUs (hydraulic power units) that operate the rams incorporate a redundant design using two of everything where applicable, starting with the use of twin 200-hp diesel engine and hydraulic pump arrangements, each with its own fuel supply and cooling capability. In the unlikely event of an engine or pump failure during the raising operation, the units were designed to be able to continue the raising process unaffected. The HPUs also integrate a failsafe design into the control scheme so that in the event of a lost control or hydraulic signal, all operations would automatically halt until the matter was resolved.



Versabar conducted extensive tests on a full-scale platform model in Houston before deploying equipment to the LIMA flow station site.



One of the platforms during the simultaneous lift.

Testing and deployment

For the LIMA flow station project, Versabar provided detailed engineering, fabrication, and testing of all deck raising equipment, leg extension sleeves, and other raising appurtenances. Two types of rams were custom engineered to raise the platforms in two stages, and a third type of ram was used to simultaneously raise the supporting bridge structures.

Prior to mobilization, Versabar built a full-scale, detailed deck and bridge construction mirroring one of the platforms in order to perform an accurate system integration test (SIT) at the company's Houston facility. Each stage of the lift was performed, with split sleeves installed on the legs and leg pins inserted at each point of the raising operation, as they would be offshore. The mock-up topside and connecting bridge were raised the full 4 m.

"During the testing of the complete deck raising system, we went above full working load to demonstrate the capacity of the system," says Versabar Project Engineer Sid Fabre. "We also went through a sequence of simulated malfunctions and failure mode testing under load to evaluate the failsafe design and redundancy of the hydraulic and control system."

All equipment was shipped from Houston to Indonesia using project cargo transportation. This included six 400 HP hydraulic power units weighing 20 tons each, one control cabin, and 48 40-ft. shipping containers with a total of 120 rams: 12 rams for the connecting bridges, 48 Stage 1 rams, 48 Stage 2 rams, plus spares. Extra care and preparation was taken to ensure all cargo and components arrived safely and on schedule.

Offshore lift

Timas prepared the platforms for the deck raise by installing all of the Versabar-provided equipment on the topsides and bridges, cutting and capping the risers and appurtenances, installing the sleeves and bushings on the deck legs, and installing the initial raising hydraulic rams. Versabar personnel arrived onsite on Aug. 2, 2013, to perform offshore installation, hook-up, and commissioning of the deck raising system, and operation of the raising equipment for the actual lift.

The procedure was to be conducted in two phases. In Stage I, the rams would raise the platforms 38.5 in. (98 cm) and the leg pins would be inserted. In Stage II, dual-rod rams would raise the platforms to 106 in. (269 cm). After pinning off, the Stage II rams would continue to raise the platforms to 159.5 in. (405 cm), followed by a final leg pinning.

The raising operation began on Sept. 4. All six structures, with a combined weight of approximately 3,300 tons, were simultaneously raised 38.5 in. to complete Stage I of the lift in 2.25 hours. Fifteen days later, after the Stage I rams were removed and Stage II leg extension sleeves and rams were installed, the second phase of the lift took place. Once the structures were lifted to 106 in., the Stage II intermediate pin was inserted, and then raising continued to the full height of

159.5 in. The legs were then pinned again, providing a full mechanical lock-off of the deck in the raised position. Stage II was performed in four hours, which helped play a part in reaching the LIMA Subsidence Remediation Project goal of not only raising the decks, but getting the facility back in production on schedule.

"During the design and testing phases of the project we left no stone unturned," says Fabre. "When installing and commissioning a system for an operation this critical, preparation provides the best opportunity for a safe, problem-free operation."

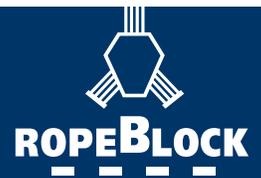
"This raising of three platforms, three bridges, and flare support structures at once with a synchronized jacking system is a first for PHE ONWJ, Pertamina, Indonesia, and probably the world," says Jonly Sinulingga, executive vice president and general manager for PHE ONW. "The success of this project has given us the experience and confidence to apply the most advanced technology in our offshore operations."

The increased air gap provided by the deck raise is expected to grant the LIMA flow station an additional 12-15 years of use.





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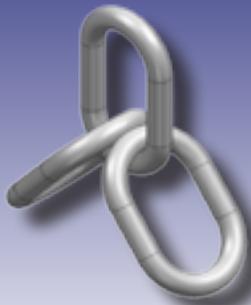
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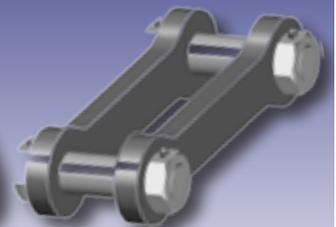
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Press Release

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Yarbrough Cable Service is proud to announce the addition of Jordan Terry, P.E. to its Memphis Tennessee engineering staff. Jordan brings to Yarbrough over 7 years experience as a rigging engineer with one of the nation's

leading crane & rigging contractors. Jordan is a 2009 graduate of Mississippi State University, with a degree in Civil/Structural Engineering. Jordan is also a licensed Professional Engineer in the State of Tennessee. Jordan joins the expanding engineering team at Yarbrough Cable Service, headed by Andrew Mullis as Engineering Manager. The Yarbrough team is excited about its enhanced customer service capabilities in engineered lift planning, structural design, specialized load testing, rigging, and crane rope consulting.



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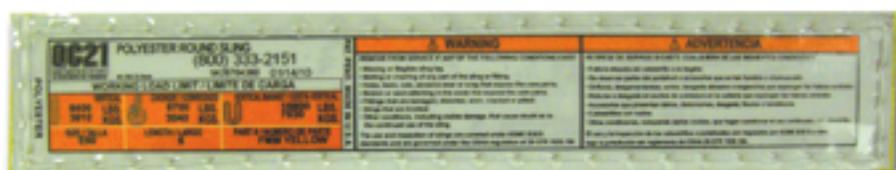
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Bayview Bridge

Continued from
page 46



A rainy fall in 1992 resulted in above-normal soil moisture and reservoir levels states north of Quincy. Winter of 1992–93 saw heavy snowfall. All of that and a weather pattern holding storms over the Midwest for weeks on end led to the “perfect storm” of water levels in the Missouri and Mississippi Rivers.

Some locations in east-central Iowa received as much as 48 inches (1,200 mm) of rain between April 1 and August 31, 1993; the northern plains had precipitation 400–750% above normal. Some 36 forecast points rose above flood stage and 20 river-stage records were broken. This year’s flood broke record river levels set during the 1973 Mississippi and the 1951 Missouri River floods. Navigation on the Mississippi and Missouri Rivers had been closed since early July resulting in a loss of \$2 million per day in commerce in 1993.

Over 1,000 flood warnings and statements, five times the normal, were issued to notify the public and need-to-know officials of river levels. In such places as St. Louis – only 90 miles south of Quincy – river levels were nearly 20 feet (6 m) above flood stage, the highest ever recorded there in 228 years. A 52-foot high floodwall in St. Louis built to handle the volume of the 1844 flood, was able to keep the 1993 flood out with just bit over two feet to spare.

This flood-wall was built in the 1960s, to great controversy, out of interlocking prefabricated concrete blocks. Had it been breached, the whole of downtown St. Louis would have been submerged despite its location on a bluff. Quincy, also located on a 90-foot bluff, was only flooded below, on the floodplain. The waters of the Mississippi crept up the entrance roadway to the Bayview Bridge and rose up the towers below the roadway.

Miraculously, the bridge suffered no damage. It weathered the great flood. Since the previous flood of 1951 extensive protecting levees had been carried out to keep more residential and agricultural areas protected. The rivers were being contained within their beds, with overflow into nearby floodplains.

Quincy was flooded for 152 days. Flooding on the Missouri and the Mississippi Rivers meant that if they’d merged with a flooded Ohio, at Cairo Illinois, overall damage may have been as bad as the legendary flood of 1927. As it was, drought in the Ohio Valley and to the south, where a wider river channel existed, all combined to keep the floods from being much worse in the Lower Mississippi River Basin, beyond Cairo.

The Mississippi River at St. Louis, just below Quincy, crested at 49.6 feet on August 1 – some 20 feet above flood stage. Its peak flow rate of 1,080,000 ft³/s meant that if it had breached the levees it would have easily flooded the entire city of St. Louis. Such a rate of flow rate would have filled a Busch Memorial Stadium-sized bowl in just 69 seconds. The flood destroyed 100,000 homes in the region and had an estimated total cost of 15 to 20 billion dollars. Even after the water was gone, billions of pounds of sand covered homes and farms.

Though at the time, a far lesser catastrophe than it would be today, the 200-year-old New Madrid Earthquake, with an epicenter just south of St. Louis proved to be among the strongest historic earthquakes in North American. The earthquake zone remains active today.

In recent decades minor earthquakes have continued. Late forecasts estimate a 7 to 10 percent chance, in the next 50 years, of a repeat of a major earthquake like those that occurred in 1811–1812, which likely had a truly staggering

magnitude of between 7.5 and 8.0 on the Richter scale.

At the time people were awakened from their beds as far away as Pittsburgh and Norfolk, Virginia. Church bells spontaneously rang in Boston, Massachusetts and York Ontario, while sidewalks cracked in Washington DC. For a 12-24 hours period, the Mississippi River actually flowed backwards, creating what is known today as Reelfoot Lake. There is a 25 to 40 percent chance, in a 50-year time span, of a magnitude 6.0 or greater earthquake from the New Madrid Fault.

A November 2008 FEMA report cautioned that a serious earthquake in the New Madrid Seismic Zone could result in “the highest economic losses due to a natural disaster in the United States,” further predicting “widespread and catastrophic” damage across Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and particularly Tennessee, where a 7.7 magnitude quake or greater would cause damage to tens of thousands of structures affecting water distribution, transportation systems and all sorts of other infrastructure.

The potential for the recurrence of large earthquakes and their impact today on densely populated cities in and around the seismic zone has prompted research devoted to understanding the New Madrid Seismic Zone. By studying evidence of past quakes and closely monitoring ground motion and current earthquake activity, scientists attempt to understand their causes and recurrence intervals.

The lack of apparent land movement along the New Madrid fault system has long puzzled scientists. In 2009 two studies based on eight years of GPS measurements indicated that the faults were moving at no more than 00.0079 inches per year. In contrast, the rate of slippage California’s famous San Andreas Fault averages as high as 1.5 inches a year as it slices through the Golden State.

Quincy’s graceful Bayview Bridge, however, with its innovative hybrid cable-stayed design proved itself solid enough to survive the once-in-a-lifetime 1993 flood catastrophe. It may just withstand the next quake of the century as well.

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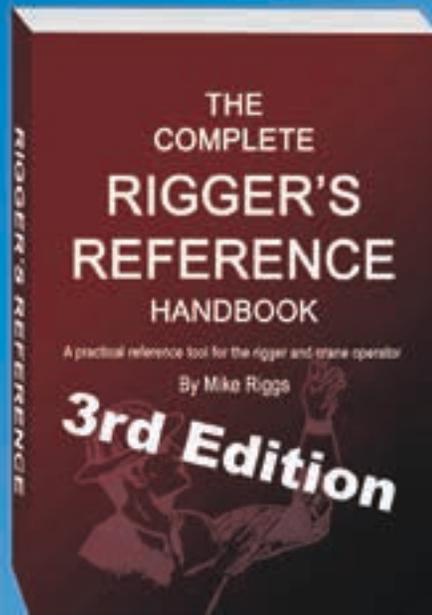
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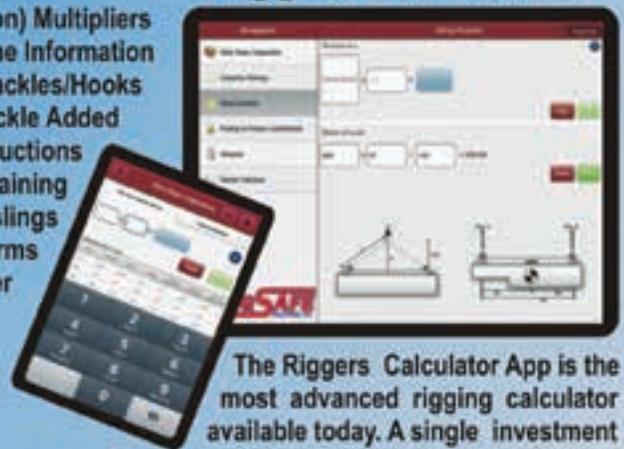
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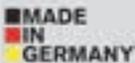


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Press Release

Al Abel Receives Top Trainer Honorable Mention

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Cleveland, OH, December 9, 2013 - - Mazzella Companies, a manufacturer and distributor of a wide range of lifting products for industrial, commercial and specialty applications.

This is the second time since 2008 that Al Abel, Lifting Specialist for Mazzella Companies, has earned this recognition, a testament to his consistency as a great trainer. A retired high school teacher and athletic director, Al knows how to engage students. His question and answer sessions after class are often as long as the class itself. Comments from numerous customers indicate how much they relate to Al, but also how much they've learned and later applied. Al is known as one of the leading trainers in the rigging and lifting industry. Among Al's favorite phrases: "Never be in the shadow of the load," and "Always plan your lift."



Mazzella Companies is a privately-owned business, founded in 1954, and employs over 300 people at 18 locations in Ohio, Michigan, Pennsylvania, North and South Carolina, Kentucky, Maryland, Virginia, Tennessee, Alabama, Illinois and Minnesota. Over 90 employees are certified inspectors of lifting and rigging equipment. Mazzella is a manufacturer and distributor of a wide range of lifting products for industrial, commercial and specialty applications. Mazzella Companies is a leading manufacturer of world-class overhead cranes and has a highly experienced staff that provides overhead crane services nationally.

Some major markets Mazzella serves are: Oil and Gas, Steel, Construction, Energy, Automotive, Mining and Durable Goods.



Press Release



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Alaska Rubber Group completes Washington acquisition

Anchorage, AK January 2, 2014. The Alaska Rubber Group has acquired five additional locations, effectively doubling the size of its employee owned organization.

The Alaska Rubber Group, consisting of three locations within Alaska, Anchorage, Fairbanks, & Wasilla, has purchased five additional locations in Washington. The five additional locations were formerly referred to as the Pacific Rubber Group, and they consist of stores throughout Washington serving the entire Pacific Northwest region. Pacific Rubber Inc. located in Seattle, TIMCO Inc. at the Port of Tacoma, North Sound Hose and Fittings in Everett, Central Hose and Fittings in Pasco, and Inland Pacific Hose and Fittings in Spokane comprise the Washington

locations. The Alaska Rubber Group is the largest distributor of hydraulic and Industrial hose, fittings, and rigging supplies in Alaska. This acquisition expands the market presence and distribution capabilities of its employee owned organization across the entire Pacific Northwest.

President and CEO Janeece Higgins said about the acquisition; "We're always exploring opportunities for growth, and it is exciting to see where this new addition to our group will take us. Some of the former owners of the Washington stores, Don and Drennon Adams were the original founders of our Alaska locations. We all started with a very similar model. It's kind of in our DNA. I have known some of the employees in the Washington stores for years, and the knowledge and experience they bring will help shape the future of the company. Everyone involved is critical to the team, and I look forward to their new ideas, hard work, and the growth that we will experience going forward."

Each location within the group will retain its original name. However, each will be branded as an Employee Owned Alaska Rubber Group Company. Alaska Rubber Group COO Mike Mortensen explained; "We definitely want to keep the local culture at each location intact. There's a strong commitment within each store to customer service, and over the years each store has developed a loyal customer base. As we integrate these stores into the group, we'll look to find efficiencies, win new customers with expanded offerings and skill sets, and capitalize on economies of scale as a much larger group. In addition to these obvious goals, we are bringing the energy and empowerment of employee ownership. In our experience, as employees begin to understand they have a stake in the company, significant growth is a natural byproduct. It's a powerful model and this is just the beginning."

For additional information about the Alaska Rubber Group, please visit www.alaskarubber.com



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Lincoln Hoist Stays True to its Namesake and gets those Jobs Done

Continued from page 7

for the hoist division if things had been done differently,” says Hallen. “In the 1950s, Mr. Wallace and Mr. Uhlig had a falling out. And Mr. Wallace sold his share of the company to Mr. Uhlig.”

Wallace left the company and when the partnership broke apart, Hallen’s father agreed to the split in the companies. That was how the two companies came to be. Lincoln Precision was already in existence and agreed to design and manufacture the hoists. LUG-ALL split off and they were going to sell and market the hoists.

The relationship with LUG-ALL has ended. Hallen feels that during his 30-plus year tenure the biggest challenge now is getting name recognition for Lincoln Hoist. Since marketing has only gone on for Lincoln Hoist since 2008 it is their intention to set up a network of distributors and manufacturers reps. “We’re getting better at it all the time and are starting to get some success with this,” says Hallen.

Domestic Production an important Selling point

On a positive note, Lincoln Hoist finds that people respond to their domestically-made products. Some products claimed to be domestically-made products, in truth they are simply assembled in the States rather than produced here.

“Though there are an awful lot of imported products coming in, I think folks are starting to respond to the domestically-made message. We actually have some accounts now that frankly I didn’t think we could ever get, who have come back to the fold because their customers are demanding the US-made tool. In the end it might actually be a good thing for us.”

The wire rope spools are brought in and then all fabrication is done in their plant. They de-spool, cut and fabricate all the assemblies for the wire rope. The metal is not usually poured into the castings on site. The main component of the hoists - tying up both bulk and weight - is raw casting. The metal is poured at foundries fairly close by

in Massachusetts so freight costs to Lincoln Hoist are relatively low.

“This has been a good area for us,” says Hallen. “It makes a lot of sense for us to stay in this area. Fortunately we have excess space in our factory should we ever have to expand. I think we’ll be here for some time to come.”

Sometimes Lincoln will make the castings patterns onsite, cutting them directly. One of their newer pieces of equipment is a high-speed machining tool very good at making patterns. Very often they make the casting pattern at their shop in concert with the foundry where it is poured locally. Lincoln has been with one of their foundries for the entire history of their business.

Synergy with other Area Manufacturers

Hook forgings are not done on-site. Lincoln buys their forgings from Crosby or Columbus McKinnon. They come in as a rough forging and they do the machining, assembly and painting in their shop.

When they do a new design on one of their products they have to test it. One machine they use, the Universal Tester, has been a great help because it has enabled them to do testing on their own, including: destructive tests of new

designs, receipt tests on castings, hook forgings or new wire rope and testing the effect of the gate and riser changes on the casting itself; any of those things that help metal flow. “We’d get with the foundry and when they would make a flow change we would check those things with our Universal Tester,” says Hallen.

“But sometimes when you do a new design you may need some other testing. So we have a fatigue tester for springs, a fatigue tester for wire rope. We also have a tester for pulleys so that the pulleys, bearings and other various parts on the assembly can be verified and improved. Another machine we built actually cycle-tests the fully-assembled hoist. We have a production horizontal hydraulic proof-tester where each hoist that gets built is tested.”



Since the hoist is so simple to use there usually is no need for training, as long as a few simple rules are followed. “The actual operation of the tool is fairly easy. We have done some training for repair shops. But even there we’ve been focused on a printed manual as well as putting several procedures online. We’re moving in the direction of sidestepping having a repair person come, say, from the Midwest, to people being able to video-conference or work problems out online. The focus is more on the guys that have to repair the tools. I’m trying to get out as much as possible with the manufacturers’ reps to teach them how to sell tools too.”

With a Sense of the Past, Lincoln Hoist Visualizes their Future

Lincoln Hoist has built a real niche in Massachusetts through 60 years in the business, including a lot of dedicated





They have recently introduced a new family of tension meters. This is a bit outside the realm of their come-alongs. Lincoln Hoist also has two or three prototypes in the development stages which they hope to introduce in the near-future. “Nearly all shops have a need for our main product. The tension meter may be something our customers are not currently aware of.

“In 2008 and 2009 we struggled with both the economic downturn and the issues involved with establishment of our new brand name. Through the recession our growth has been steady. But a utility on the west coast may not be as aware of us as they could be. Ultimately we will achieve the more widespread name recognition that we strive for.”

Heading to where Work is Found

They’ve also been getting some nice traction in the new booming energy areas of the Dakotas and down in the Gulf Coast region, according to Hallen. “In that area, for whatever reason, people seem to be most interested in the fact that we are a fully US-made tool. That has struck a chord with those industries; they are quite regulated and safety conscious as well.

“We install RFID chips in all of our hoists which enable production and inspection records to be easily accessed. We are also the only maker of this style hoist that attaches hard serial number plates to its units. The more common decals simply do not stand up long in the field. Some builders don’t serialize at all. The permanent marking, along with the rugged construction of the tool is getting new interest in the energy sector.”

The recent Costa Concordia salvage operations could easily be using the Lincoln Hoist for some of the underwater operations being done. Hallen brings up the fact that they offer a marine series hoist. They recently developed a tool for use on an MRI machine being repaired which had to be specially fitted with a non-magnetic hoist. As a result of their versatility and inventory of custom parts, they are able to help nearly all customers with any special needs.

equipment for hoist construction, since they have specialized in hoist building for most of those years. Part of what’s come with that dedicated focus designing their products in SolidWorks, a 3D CAD solid modeling program in which they can go from the digital data to the cutting of tools for the castings. They’ve actually developed a pretty good niche in rapid prototyping of castings, according to Hallen.

“This dovetails nicely into our product strategy. We are extremely responsive for a company of our size. And for Lincoln Hoist, we have a real opportunity to develop new things and new products within the industry and do it quickly. The idea that we will, through our new distributor network, provide new and useful things to sell will bode well for us in the next few years. We want our distributors and customers happy with the tools we’ve provided to them.”

Challenged by name Recognition - or the Lack of It

The firm remains challenged by the establishment of their name firmly in the industry; things are clearly coming along well though, according to Hallen. “At the moment we’re overcoming a bit of inertia. We have to get people to understand that the first rate tool they’ve been asking for as a possible solution for the past 60 years is still there and available to them. This is still a big piece of what we face.

“Our sales are up some 40% this year which is good news. The trends are very positive and we are pleased with that. We don’t have our full staff back, but we have been able to take some of the people back that we had before.”

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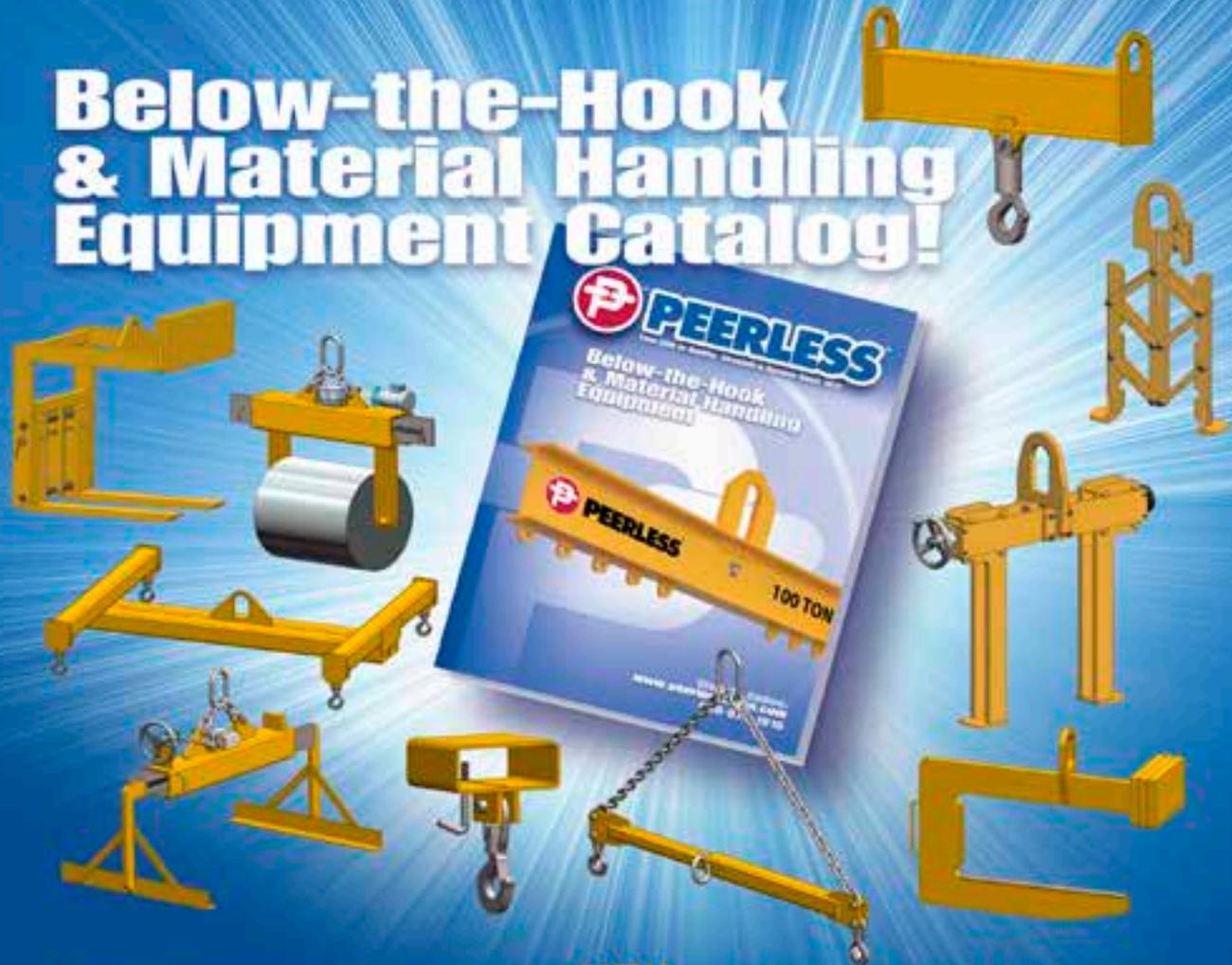


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Press Release

Harrington Hoists, Inc. Announces the Winner of their Outstanding Distributor of the Year award.



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Pearland, Texas 77584
Phone: 713-512-1700
www.deltarigging.com

Harrington Hoists, Inc. is excited to announce **Delta Rigging & Tools** as the winner of their 2012 Outstanding Distributor of the Year award.

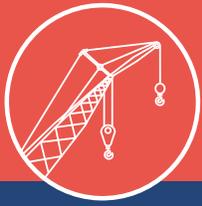
Harrington's Outstanding Distributor of the Year is selected on various criteria. Winners must be a top performing company with positive growth and be a dedicated partner. Harrington Sales Representatives begin the process by nominating one distributor in their territory by submitting a summary on all aspects of their nominee's growth and activities related to Harrington Hoists, Inc. Harrington management then evaluates the nominations and reviews the sales numbers against the previous year to select the winner of the fiscal year Outstanding Distributor of the Year Award.

Delta Rigging & Tools truly embraces their manufacturer/distributor partnership with Harrington Hoists, Inc. and routinely works with Harrington's sales and management teams to promote and sell Harrington products. Their focus to provide their customers with quality products and quality service is a recipe for success which mirrors Harrington's philosophy.

This year's award presentation dinner was held September 28, 2013 in The Woodlands, TX. Representatives of Harrington Hoists, Inc. were Carlo Lonardi - COO, Bret Lussow - VP Business Development, Jason Said -

Regional Sales Manager and Brendan Conley - Sales Representative. Those in attendance from Delta Rigging & Tools included Mitch Hausman - President & CEO, James Kowalik - Senior Vice President, Lifting Operations, Anthony Piwonka - VP of Sales & Marketing.

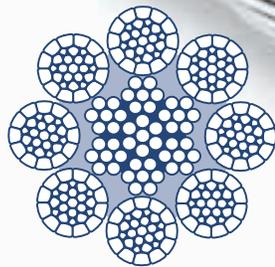




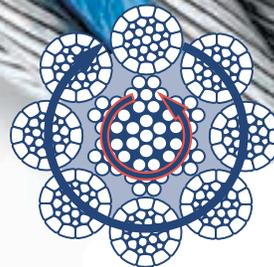
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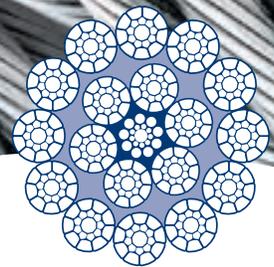
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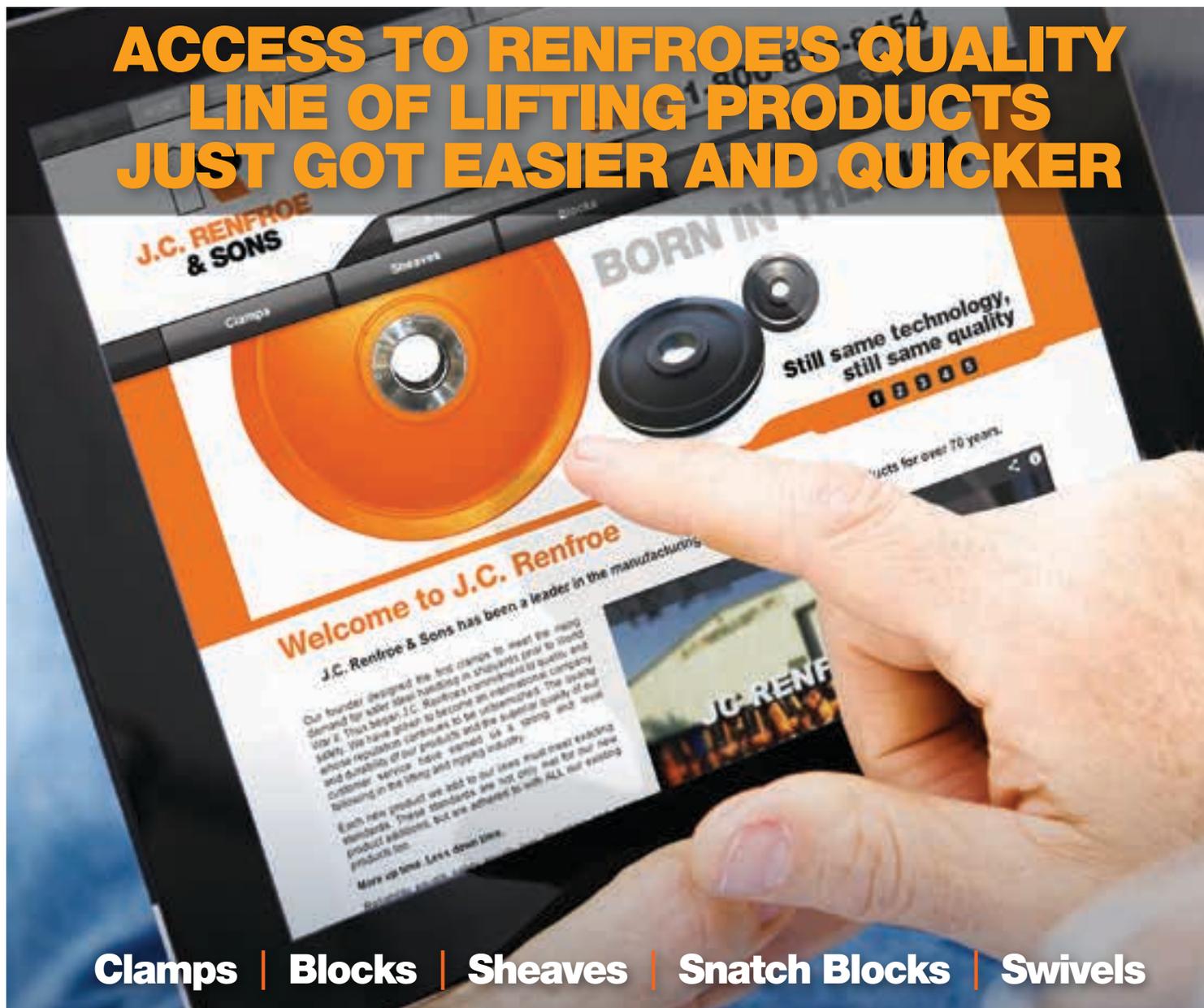
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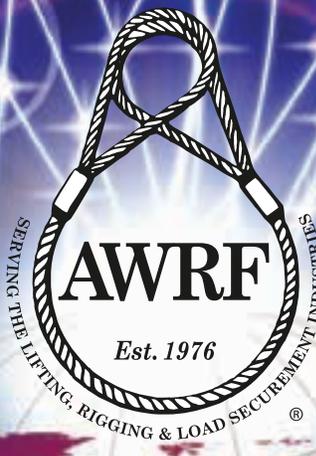
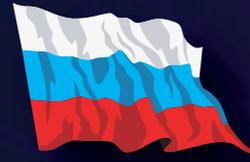
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