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Danny Bishop
Corporate Director
of Value Added Training

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AWRF CALENDAR

2018

January 21 - 26  ASME B30 Committee  
Crowne Plaza Downtown  
Portland, OR

January 31    AWRF Technical and Board Meeting  
February 3    Marriott Suites on Sand Key  
Clearwater Beach, FL

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

May 7 - 10    ASME B30 Committee  
Nashville, TN

May 15 - 18   ACRP General Assembly  
Doubletree Houston Hobby Airport  
Houston, TX

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

2019

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

October 27 - 30 AWRF General Meeting  
San Diego Westin Gaslamp Quarter  
San Diego, CA

from The AWRF President &  
The JAGwire team  
Jeff, Barb, Caren and Emily

Nick Gladue  
Dakota Riggers & Tool Supply  
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### 2016 Safety Award Winners

#### Platinum
- Bairstow Lifting Products
- Brown & Perkins
- Cascade Rigging
- Chant Engineering
- Dakota Riggers
- Hercules SLR
- John Sakash Co.
- Mile High Rigging
- Western Sling & Supply

#### Gold
- Alliance Industries, LLC.
- Industrial Training International (ITI)
- LAMCO Slings & Rigging
- Marine & Industrial
- Pacific Industrial Supply
- Safety Sling Co.
- The Rigging Box

#### Silver
- All-Way Wire Rope & Splicing
- Bishop Lifting Products
- Cable/Cisco
- Cableco
- I & I Sling
- JC Renfroe & Sons
- Kennedy Wire Rope & Sling
- Kentuckiana Wire Rope
- Loos & Company - Naples
- Mazzella Companies
- Memphis Chain & Cables
- Phoenix Wire Rope
- Superior LMS
- Woodward Wire Rope & Slingline

#### Standard
- Actek Manufacturing
- AJT Equipment USA, Inc.
- American Wire Rope & Sling
- APEX Tool Group
- Associated Wire Rope & Rigging (AWRR)
- Blco Wire Rope & Supply Corp.
- Cableworks
- Carpenter Rigging
- Carpenter Rigging - Bakersfield
- Ed’s Wire Rope & Rigging
- Esme
- F.D. Lake
- Harrington Hoists
- Hercules Wire Rope & Sling
- Indusco
- Industrial Magnetics
- Les Industries LAM-É Inc.
- Marine Rigging Inc.
- Metro Wire Rope
- National Industrial Supply
- Page Wire Rope
- Roberts Calibration
- Samsel Supply
- Samson Rope
- Service Thread
- Suncor Stainless
- Trinity Sling Authority
- Tri-State Wire Rope
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- West Coast Wire Rope
- West Equipment
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AWRF General Meeting and P.I.E.

October 22-25, 2017

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The Government Affairs Committee of Associated Wire Rope Fabricators began in 1978 when the Founding Fathers decided that the Association needed a presence in Washington, D.C. There were entirely too many regulations and laws pouring off Capitol Hill every week that affected the rigging industry either directly or indirectly. So there was an obvious need to monitor and sift through this data to determine where to allocate our resources in terms of support or obstruction. It was clear that we had to be both vigilant and proactive. I don’t remember whether I volunteered for the job or was drafted, but it soon appeared to me to be a good fit. I had majored in political science in college and had some experience as a government lawyer, all of which was helpful in understanding, drafting and dissecting proposed regulations and legislation. I was anxious to begin promoting the AWRF brand in Washington and that is what we have been doing for the last thirty-nine years.

Successes and Failures

Although we have experienced many successes and failures during my tenure as Chairman of the Government Affairs Committee, the five I will mention (three successes and two failures) are somewhat typical.

During the Clinton Administration, we were able to lend our resources to the passage of a federal products liability bill by both the House of Representatives and Senate. This was no small accomplishment, given the opposition of the trial lawyers as well as the American Bar Association. This legislation was designed to preempt all state law in the area of civil litigation, capping punitive damages and doing away with joint and several liability among other things. Sadly, President Clinton vetoed the bill, claiming that it infringed on states’ rights. However, some allege that the veto was in deference to the trial lawyers of America who were big Clinton supporters.

Another bill which we went all out for would have allowed the purchase of health insurance across state lines by associations such as AWRF, using the power of numbers to negotiate favorable premium rates. This bill, too, passed both sides of Congress, but was vetoed by the President. You may have noticed that the notion of group purchases across state lines is currently prominent in the national health care debate and has been adopted as part of President Trump’s recent health care executive order.

The three successes I will mention are more directly related to the lifting and rigging industry.

First, after many years of lobbying the Department of Labor, we were able to convince OSHA to provide a new Guidance Protocol, replacing the obsolete and unsafe Sling Safety Manual. It took a hearing before a House sub-committee, at which Howard Will of the Caldwell Group testified on behalf of our industry, to finally get the attention of the Secretary of Labor. That hearing was arranged for us by our friends at the U.S. Chamber of Commerce.

The next success I will mention also occurred only after years of advocacy at the Department of Labor. It seems that OSHA had never seen fit to create a category for swaging machines, lumping them in with power presses, which require barrier guarding at the point of operation. While we were attempting to demonstrate to OSHA that swagers are a totally different machine where barrier guarding would be counterintuitive, our members were receiving OSHA citations on a regular basis. Finally, after we adopted the AWRF Swager Safety Guide as a Recommended Practice and Guideline, thanks to the work of Knut Buschman and others, OSHA relented and provided us a letter which appears at the back of all of Recommended Practices and Guidelines. It states basically that on a case by case basis, the use of the AWRF Recommended Practices and Guidelines on swager safety, is a viable substitute for barrier guarding. This directive is now followed by the vast majority of OSHA inspectors.

Continued on page 76
**FULL COVERAGE**

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Irizar Forge Joins Van Beest

Van Beest – manufacturer of Tycan®, Excel® and Green Pin® lifting equipment – has acquired the majority of the shares of Irizar Forge, based in the Basque Country of Spain. Irizar Forge is one of the foremost forging companies of premium quality, heavy duty crane hooks and blocks in the world. Irizar Forge has state of the art manufacturing facilities that produce hooks, crane blocks and related accessories with a lifting capacity of up to 5000t. The company offers customers a one stop shop solution for specialist lifting and mooring applications: design, manufacturing, inspection and testing are all done in-house. Irizar Forge develops its tailor-made solutions for offshore and onshore application in industries such as oil & gas, construction, marine transport, industrial processing, nuclear, mining, hydro and steel.

This agreement is a major contribution to the Van Beest mission of worldwide leadership in mooring, lashing and lifting equipment for the onshore and offshore Engineering, Procurement and Construction (EPC) industry and Original Equipment Manufacturers (OEM). Richard Meer, Member of the Board of Directors of Van Beest, comments: “With the acquisition of Irizar Forge, Van Beest acquires a strong and well respected company in the lifting and mooring industry. It will not only expand our market position but will also increase the manufacturing footprint of Van Beest through the addition of a world-class production facility.” Maria L. Irizar, CEO of Irizar Forge, adds: “In a volatile market in which having greater scale is a significant advantage, we are excited to have found the right partner to achieve that scale. Thanks to synergies in manufacturing, innovation and market access, I am confident that together we will create new opportunities for our customers and, in the process, further grow our business”.

Celena Moses Joins Van Beest

Van Beest – manufacturer of premium quality lifting and lashing fittings such as Green Pin® shackles, Tycan® chain and Excel® hooks – is pleased to announce that Celena Moses has joined the company as Regional Sales Manager. Celena Moses will be responsible for sales in the Eastern and Southern regions of the United States. She has previously worked in the forging business and is a current board member at the Associated Wire Rope Fabricators (AWRF). Chris Keffer, President of Van Beest USA, comments: “We are delighted to welcome Celena to the Van Beest team: she brings with her a wealth of knowledge about the industry and will contribute greatly to our goal of making Green Pin® and our other brands the top choice in the market”.

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Planning for An Uncertain Future
by Baron Lukas

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A retired Marine Corps Colonel, Baron has forty years of leadership, management, and mentoring experience. In the ten years of his business career, he has been an investment banker, a C-level executive in the oil and gas sector, a management consultant, and for the last two years, the CEO of ELS. ELS is a consultative chemical distribution company for the oil and gas industry, and the premier distributor of nanoActiv® HRT, a disruptive nanotechnology developed by Nissan Chemical America. Baron’s professional career spans a diverse spectrum of positions: Marine Corps officer, fighter pilot, strategist, intelligence officer, professor, commander, and finally, senior business executive.

If the quote by Field Marshal von Moltke does not resonate with you, think of it this way: “No business plan survives first contact with your customers, your vendors, or your competitors.” Either way, what this means is that while plans are an important starting point, it is really the planning (and the planning process) that is important. With a proper planning process, you will discover more about you, your leadership team, your business, and your business environment than you ever thought possible. Now imagine doing this on a continuous basis instead of the typical annual business planning and budgeting exercise, where a plan and a budget is hammered out over the space of a few weeks and then put on a shelf with last years’ plan, only to be forgotten on the first day of the new business year. In a continuous planning cycle, you deliberately test your plan and the assumptions it was based on, thereby continuously improving your operations and performance based on the evolving situation, simultaneously mitigating risks while capitalizing on opportunities. Sound difficult? Well, it’s not. And, neither does it have to be costly nor burdensome to your leadership team. What it takes is discipline, a coherent planning process, and senior leadership buy-in.

I wanted to take you through some of the initial steps of a coherent planning process. First, ask yourself this question: Is your entire leadership team on the same page as to where the organization is going, when and how it will get there, and what each member’s role is? If you can’t answer this simple question with full confidence and conviction, you should consider rethinking your planning methodology. I would recommend having someone conduct a third-party assessment of your business. Think of it like preventive maintenance, or an annual...
It is Assumption Based. There is no annual plan that just gets put on the shelf the minute the ink is dry. This is a continuous evaluation of your plan based on what you know, what you don’t know, and most importantly, on the assumptions you made, and had to make, to continue your plan. Using a disciplined weekly, monthly, and quarterly meeting and planning cycle, you and your leadership team evaluate your plans, assumptions, and performance against the desired objectives and end-state. After analysis and adjustments to the strategic, operational, and tactical plans, you continue to develop these plans, implement them, and evaluate your progress in a continuous improvement process.

It is scenario based. In the military, every plan is “war gamed” to ensure that every possible development the planning staff can think of is tested against your desired outcome and the plans to get you there. This not only requires a standing planning team, but also requires a standing “RED” team that works against your planning staff to test your plan. The red team literally becomes a thinking enemy that tries to poke holes in your plan and in your assumptions (I recommend a senior, highly experienced executive to take this role). Think of it like playing Stratego, with your business plans and assumptions against a thinking “enemy.” In this way, you can look for ways around possible obstacles and think through situations that could represent a significant opportunity. It allows you to test your available resources and it will identify when and where you will need to secure additional resources, such as funding, people, equipment, capacity, etc.

In its simplest form, the entire process can be reduced to just twelve Strategic Questions:

1. What is our Vision?
2. What is our Mission?
3. What are our Core Values?
4. Do we have the right people in the right seats?
5. What is our core business?
6. What do we know, don’t know, and what must we assume to continue planning?
7. What is our marketing strategy?
8. What is our 5-Year Vision?
9. What is our 3-Year Target?
10. What is our 1-Year Plan?
11. What are our priorities for the next quarter?
12. What are our issues and how do we solve them?

There is, of course, more to it than just twelve questions, but the answers to these questions are the fundamental starting points of any strategic business plan. After you answer these, the devil is in the details of developing cascading supporting, operational, and tactical plans along with supporting resources plans (budgets, HR requirements, training, etc.), all of which should directly support your 1-year plan.

Continued on page 60
“K” Line LNG Shipping (UK) 
Navigates New Locks with Samson

The 2016 expansion of the Panama Canal locks shortens the passage from the Atlantic to the Pacific Ocean by 9,000 miles for vessels that exceed the size limits of the old locks. This is a welcome alternative to “going ‘round the horn” through the Straits of Magellan, or cartage operations from coast to coast. For vessels from Asia heading to the east coast of the United States, it significantly shortens transit times compared to the alternate route through the Suez Canal. With container and bulk carrier vessels growing larger with each generation, the need for expanding the locks has evolved, and the effect on global shipping has been immense.

New regulations for the locks also mandated that mooring lines be upgraded; steel wire ropes are not allowed on vessels transiting the new locks.

“K” Line LNG Shipping (UK) currently manages 8 LNG carriers, some of which needed to be equipped to maintain their ability to trade efficiently anywhere in the world. Compliance with the Panama Canal Authority mandate was critical. All KLNG UK vessels with steel-wire mooring lines and the potential to transit the canal were retrofit with Samson high-performance AmSteel®-Blue synthetic mooring lines. The two new build vessels KLNG UK will manage are also to be Panama compliant. Their HMPE mooring ropes have recently been approved to be upgraded to AmSteel-Blue from the proposed yard supply.
In today’s business climate, the importance of reliable, verifiable load testing cannot be overstated. When your lift weighs hundreds or thousands of tons and is worth millions of dollars, you need rigging you can depend on—rigging that you know will lift the load and lift it safely.

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

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

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

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

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Trying to reduce or eliminate sugary soft drinks in your diet? Is the thought of missing what you love most about the fizzy, sweet and sometime caffeinated drink keep you from being successful? Below are a few ideas to keep you motivated.

**Carbonated Options:**
1. Sparkling Mineral Water – Comes in a variety of flavors and is packaged to easily grab and go.
2. Seltzer water – Crispy, bubbling and refreshing, you can add orange or lime juice, or your favorite fruit, for a sweet tartness. You’ll still get the bubbles that you love, but you’re in control of the sweetness.
3. Water Kefir – Probiotic rich water that’s been fermented by kefir grains. It’s like a fizzy lemonade that’s great for your gut!

**Caffeinated Options:**
1. Iced Tea – Of course you want to avoid added sugar, but if you really savor flavor, add lemon or lime, or other fresh fruit juice.
2. Iced Coffee – If you don’t drink it black and need a sweeter and creamier taste, try a splash of unsweetened almond or coconut milk with a dash of cinnamon or nutmeg.
3. Green Tea – If you’re trying to break the caffeine habit too, green tea can help with the weaning process because it contains a small amount of naturally occurring caffeine. Drink it over ice or add some freshly sliced lemon for an extra kick.

**Other Options:**
1. Juice and Water (plain or sparkling) – Spruce up your H2O with flavor using fruit whole or juiced, herbs and/or spices. One crowd pleaser is sparkling water, a splash of white grape juice, and fresh mint leaves. If you really want a zing, add frozen raspberries, strawberries, watermelon or cucumber.
2. Coconut Water – Has a sweet and nutty flavor. You can add citrus juice for extra tang. It’s loaded with electrolytes, which help your body absorb water. This low calorie option is pricey but hydrating. Mix it with Water – If you’re weaning yourself slowly off soda, try cutting it with water. It will help cut the sweetness, which is what hooks most people. Plus, your taste buds will change and soon you won’t need that sweetness anymore.
3. Weaning yourself off something is a gradual process. If you choose to go cold turkey, give yourself at least two weeks. Sometimes it’s easier to think of a temporary goal that’s easier to manage. And besides, after two weeks, you may not even want to go back!

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**Asian Garlic and Sesame Chicken**

**Ingredients:**
- 3-4 oz. raw chicken breast
- 1/2 tablespoon fresh garlic, minced
- 1 tablespoon sweet chili sauce
- 1 teaspoon low sodium soy sauce
- 1 tablespoon scallions, chopped
- 1 tablespoon toasted sesame seeds

**Directions:**
Marinate chicken with all the ingredients except the sesame seeds for at least two hours prior to cooking. Place on a prepared sheet pan, sprinkle the sesame seeds and bake at 350 degrees for 15-20 minutes or until internal temperature reaches 165 F.

**Nutritional Facts Per Serving:**
- Calories: 176, Fat 5.6g, Saturated Fat 1.7g, Cholesterol 65.0mg, Sodium 162.2mg, Carbohydrates 4.8g, Fiber 0.8g, Sugar 2.2g, Protein 25.9g

**Yield:** Three 4 oz. servings
Super-Flex®
Enhanced Large Capacity 9-Part Slings from Union —

Now offering:  Better Efficiencies
             Longer Length Capabilities
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WireCo’s 9-Part Super-Flex slings have improved efficiencies providing the industry’s maximum-rated capacity lifting slings per diameter for wire rope. The improved efficiency is backed with a proven design that provides internal adjustment to distribute the load equally among all nine parts of the sling body.


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What a great opportunity you have to take advantage of the online safety video program that has been set up for AWRF members. With **24/7** access to over **250** safety videos, you can help keep your employees safe. By using the free tokens, you can access the videos from any computer, anywhere! 90% of the videos are available in both English and Spanish with a downloadable quiz. Ask us how to use your free tokens.

**YOU SHOULD NOT PASS ON THIS PROGRAM!**

The QHSE committee and the Board of Directors urges that your safety manager/team takes advantage of this **important** resource. With 2.9 million non-fatal workplace injuries and illnesses reported by private industry, we need to do our part in reducing these numbers.

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The new Power Sling® Shackle saves you 20% on wire rope costs.

In today’s challenging times, heavy lift projects require revolutionary power. The new Green Pin Power Sling® Shackle gives you this power in a range from 125t - 1250t. Its unique design (patent pending) enables you to lift the same load with lighter wire rope, reducing cost by 20%.
The Rule of 72: Having the Assets to Support Future Sales

One of the most interesting concepts in financial analysis is what is commonly called the Rule of 72. It states that the number of years required to double the value of an investment can be estimated by dividing the number 72 by the annual return on that investment. For example, an investment with a 7.2% annual return would double in about ten years (72 ÷ 7.2 = 10).

This seemingly innocuous rule has some very important implications for distributors. Firms that produce a higher level of return on their investment than typical firms can begin to systematically build a larger asset base quicker than the typical firm. They can then use that asset base to generate higher sales.

This report considers how different rates of return result in different businesses in the future. It does so by examining two specific issues:

- **The Different Rates of Return for AWRF Members** — An analysis of the long-term implications of different profit levels.
- **Moving to a Higher Return** — An examination of the requirements for moving to higher-profit levels.

The Different Rates of Return for AWRF Members

Exhibit 1 provides a comparison of typical and high-profit AWRF members. The top set of numbers is for the typical member based upon the latest PROFIT report. The bottom set of numbers is for the high-profit firm in the same survey. To demonstrate the impact of profitability on sales potential over time, both firms are assumed to start with the same level of sales volume.

At present, the typical firm generates $10,000,000 in sales, operates on a gross margin percentage of 29.5% and generates $301,000 in after-tax profits. These results require a total asset investment of $6,000,000, producing an after-tax return on assets of 5.0%. Based upon the Rule of 72, the firm would double its asset investment in around 14.4 years if it reinvested all of its profits.

In contrast, at the bottom of the exhibit the high-profit firm generates the same sales, but produces a profit of $805,000 which yields an after-tax ROA of 13.4%. The Rule of 72 indicates it could double its asset base in only 5.4 years.

The final two columns of numbers track the performance of the typical and high-profit firm over time. The numbers intentionally assume no change in operating performance. This provides a clear view of the implication of different levels of profitability in the industry.

The first column of projected results (Year 5) shows performance five years out. This is a very typical planning horizon for many firms. The final column shows results in year fourteen. This simply rounds the 14.4 figure from the Rule of 72 calculation for the typical firm.

A comparison of the current numbers and the figures for year fourteen presents some startling results. In the current year the high-profit firm has a profit that is 167.4% higher than the typical firm ($805,000 versus $301,000). However, by year fourteen the difference has grown to 685.4%. The high-profit firm is systematically moving ahead of the typical one.

From a sales perspective, the typical firm has more or less doubled its sales volume from $10,000,000 to $19,843,360. At the same time...
the high-profit firm has the potential to grow to $58,274,198 in sales, an increase of 482.7%. Not only is the typical firm behind in terms of current profit, it is falling further behind in future sales potential and the additional profit those sales can generate.

There is no certainty that the higher sales number can be reached. The exhibit simply indicates what could be attained if profit levels remained the same and all additional profits were reinvested back into the business over time.

Clearly, the importance of being a high-profit firm is significant today. Its importance grows exponentially in the future. Typical firms need to plan to catch up to their high-profit competitors.

**Moving to a Higher Return**

In moving to a higher-profit level, there are three major concerns. All need to be address directly.

**Benchmarking** — Without comparison numbers from a financial benchmarking analysis, it is impossible for a firm’s management to know if it is high-profit, typical or, even worse, low-profit. Essentially, the firm is flying blind with management hoping for the best.

AWRF sponsors a benchmarking survey for its members called the PROFIT report. It provides detailed results for the typical and high-profit firms. In addition, it provides insights into how the high-profit firms achieve superior results. Participation in the report should be an essential activity for every firm.

**Management Education** — At the senior management level in most distribution firms, there is a fairly clear idea about what really drives profitability. However, at lower levels of the management ranks this clear understanding gradually fades and maybe even disappears.

The problem becomes particularly acute when managers in different parts of the organization have their own unique ideas about what is important. When some managers are focused on sales generation while others are intent on cost control, conflict inevitably arise. Only a clear understanding of profit relationships can overcome these competing points of view.

**Proper Planning** — The role of planning in generating higher profit levels cannot be overstated. Unfortunately, too many firms continue to plan in a manner that does not ensure improved performance in the future. Those firms simply plan sales, gross margin and expenses then hope it all works out and profit increases. It seldom does. Profit must be planned.

Firms should at least investigate the concept of profit-first planning. This approach starts with a specific profit goal for next year and then works backwards through the income statement and balance sheet to determine how the goal can be reached.

**Moving Forward**

Firms with different levels of profitability (as measured by Return on Assets) face very different prospects for the future. Virtually every firm can grow its sales by reinvesting modest profits. However, firms with higher profit levels can reinvest a much large amount. Slowly over time, the high-profit firms achieve a critical mass that other firms cannot reach.

Firms need to plan for higher profit and then ensure that everybody in the firm knows where the firms is going. All of this needs to be supplemented with a strong dose of financial benchmarking.

**About the Author:**
Dr. Albert D. Bates is Director of Research at the Profit Planning Group, the firm that prepares the PROFIT Report for AWRF. He is also a Principal at the Distribution Performance Project. That organization’s web site: distperf.com has numerous free tools that distributors can use to improve profitability.

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Irish rental firm O’Carroll Haulage and Crane Hire used a modular spreader frame to lift two famous bronze statues and place them into temporary storage while a major construction project takes place at the Curragh Racecourse, located on the Curragh plain in County Kildare, Ireland.

Co. Limerick-based O’Carroll utilised the Modulift CMOD modular spreader frame and supporting rigging gear below the hook of a 100t Palfinger PK 100002 Performance loader crane mounted on an articulated truck. The statues were both lifted, one at a time, onto the vehicle, secured and transported together to an on-site storage area approx. 500m away, where they were both offloaded. A lift area and pathway for the vehicle were prepared with hardcore prior to the lifting team’s arrival onsite.

John Sisk & Son Limited, the main contractor for the work, presented O’Carroll with a challenging scope of work to remove the statues, weighing 6.7t and 4.5t respectively. It was considered to protect them under covering for the duration of the work but they were deemed of great historical importance to the course.

The larger statue, complete with jockey, commemorates the legendary Vintage Crop, a British-bred, Irish-trained thoroughbred racehorse best known for becoming the first overseas runner to win Australia’s premier race, the Melbourne Cup. The lighter statue represents Nijinsky, known in the United States as Nijinsky II, a Canadian-bred, Irish-trained thoroughbred and sire. Both statues had to be removed still attached to their concrete foundations.

Maurice O’Carroll, director at O’Carroll Haulage, explained: “The only option was to bore through the concrete footings and cradle the loads with slings; there were no jacking points so that wasn’t a viable solution. Four 3t slings were good for 12t capacity and, combined with the frame, we were able to create a stable and efficient lifting solution. The rig performed perfectly, as it has done when we’ve employed this solution in the past; the CMOD is a brilliant invention.”

The crane and rigging equipment was sourced from O’Carroll stock but its familiar partner and Modulift distributor in Ireland, Irlequip, provided the modular spreader frame. The CMOD 12 was used in this instance but the range spans CMOD 6 to CMOD 110, boasting 300t capacity. They are commonly used for lifts where there are height restrictions as the height of the rig is lower than, say, a one-over-two solution.

The statues were lifted from the racecourse’s parade ring, which will be transformed by the new development. A new ring will ensure that more patrons can share in the excitement and build up to races. The new Curragh will also see the creation of world-class facilities on a par with anywhere in the world. The centrepiece of the redevelopment will see the creation of a major new grandstand that will incorporate five star corporate facilities.

The construction and utilities marketplaces primarily busy the fleet of loaders plus Liebherr and Grove mobile cranes, but O’Carroll said the Curragh project epitomised the company’s “anything, anytime, anywhere” ethos. “Business is picking up but diverse applications like this challenge us to remain innovative in our above and below-the-hook solutions.”
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Wire Rope’s Start 175 Years Ago, Benefits Allegheny Portage Railway

by Peter Hildebrandt

One hundred and seventy-five years ago John Roebling’s persistence in his desire to try iron wire rope instead of hemp rope for the Allegheny Portage Railways’ ten steep inclines, started wire rope on its long and colorful history. The Allegheny Portage Railroad opened in 1834 as part of the Pennsylvania Mainline Canal running between Philadelphia and Pittsburgh, the state’s answer to New York opening its own famous Erie Canal. Charles Dickens even penned a contemporary account of travel on the railroad in a chapter of his American Notes.

The Allegheny Portage Railway was the first railroad built through the mountains of central Pennsylvania, operating from 1834 to 1854. The project allowed two canal divisions to maintain barge traffic between the Ohio and Susquehanna Rivers. Considered an engineering wonder in its day, it played a vital role in beginning settlement of the interior of the United States beyond the Appalachian Mountains. Along the route was the first railroad tunnel in the US. The Staple Bend Tunnel’s inauguration occurred with great fanfare.

Today, what is left of the railroad is preserved within the Allegheny Portage Railway National Historic Site operated by the National Park Service. The Samuel Lemon House, a tavern located beside the railroad was a popular stop for passengers. It has been converted into a historical museum by the National Park Service. For those interested in visiting the park, it is located not far from Johnstown, Pennsylvania, which is, in turn, an hour and a half from Pittsburgh or four hours from Philadelphia on today’s modern highways.

The canal and portage railway were the chief way to transport goods across the state. John Roebling, a young surveyor and engineer who had emigrated from Germany, had been traveling the state, taking on different jobs. Roebling noted hemp ropes were definitely a problem for the incline railway, wearing out and breaking rather easily. This situation got Roebling thinking, according to Ranger Doug Bosley, at the Allegheny Portage Railway National Historic Site. “Problems with hemp rope made him wonder if a rope constructed out of very thin iron wires instead of fibers may work better on the inclines,” explains Bosley. “Roebling experimented with the idea of using iron rope before going to state officials operating the portage railway, asking if they would try his idea out. State officials eventually went along with the plan – with the condition Roebling would have to use his own resources for the experiment.”

In 1842, Roebling picked the shortest of the incline planes, number three, to try out his new idea in an effort to keep his expenses up front to a minimum. Minor modifications were made to the big wheels of the equipment, so his iron wire rope would fit; the diameter of the wire rope was less than the hemp rope already in use. But in the end Roebling’s wire rope worked out well and went into use during the next year on the third incline. Also, the next year work began on the replacement of hemp with iron wire rope on the other nine incline planes on the mountain. The art of constructing wire rope had never really been attempted in the United States before. Roebling’s early wire ropes for the inclines of the Allegheny Portage railway were assembled out in the middle of a field on the outskirts of Saxonburg, north of Pittsburgh, Pennsylvania. In time, Roebling would build a wire rope making factory in Trenton, New Jersey.

Manufacturing operations were moved there for his growing list of projects involving wire rope construction, in the late 1840s. But for the time being, in the early 1840s, all the wire ropes for the Allegheny Portage railway were hand-cranked and twisted together in the middle of a field with the help of some of his workers, his sons and nearby neighbors all pitching in to get the job done. One piece would be constructed and then additional pieces to lengthen it would be spliced onto the original section. The ropes on the incline plane were a mile long.

“They made very long sections and then spliced those pieces together to get the mile-long pieces they needed for the incline,” adds Bosley. “Wire rope thickness ranged from one-and-three quarters of an inch to one-and-one half inch in diameter. The national historic site here has two replicas of the rope Roebling constructed. These, however, are crafted out of stainless steel. One of these is about one foot in length and
the other is ten feet long, just to show how flexible such wire rope actually is.”

Iron was used to build the wire rope back then as steel-making was still experimental and expensive. The Bessemer process for creating steel had not been devised yet. Thus, from 1834 to 1842, hemp rope was only used in the incline railway north of Johnstown. In 1842, the first wire rope was introduced on one of the inclines. Then it took several more years to complete the project; by 1848 to 1849 all the incline planes had successfully operating iron wire rope.

“They already had hemp contracts in place for a number of years, so the switch over had to be somewhat gradual. I suppose among the biggest challenges with this project was simply getting someone to try this idea out. John Roebling had the idea, but really no one knew if it would work, so the state told him he could try it out.”

An early challenge was whether the rope should be twisted or parallel-laid like on a bridge, with individual wires on parallel bundles with the wrapping on them. Roebling made a shorter piece, parallel with the wrap covering it and used that on the Johnstown Boat Plane where boats were pulled out of the canal. Once the outer wrapping wore through, however, then the rest of the rope fell apart like a bunch of spaghetti. He decided for a rope used this way it needed to be twisted together the same as a typical twisted hemp rope, according to Bosley.

“When Roebling figured out the early construction challenges faced in the use of the rope, he saw the promise in the use of wire rope in such an application,” says Bosley. “Overall this was a complicated system with the incline and the engines doing the hauling, plus this is also part of a canal system and visitors to the National Park Site get to see and understand what is involved. “Visitors get a sense of how people accomplished this amazing feat of getting goods over a mountain when the way became impassible with a canal boat. Branch canals going north and south went off this main one to service places at other ends of Pennsylvania. But this main line was east to west. The mountain section was slightly less than five miles in length. “For the same number of miles, Roebling’s new wire rope was used. The Inclines themselves were 5 miles in total length. The whole mountain railroad was 36 miles long.”

A skew arch bridge displays the handiwork of skilled stone cutters of the time; this is also a feature of the park site. Finished in June 1833, the Staple Bend tunnel was advertised as the first railroad tunnel in the United States. It was the third tunnel of any kind built in the US, the first tunnels were for other canals in Pennsylvania. Work began on the tunnel on November 21, 1831 and often occurred during inclement conditions. The men were paid $13 per month plus room and board for twelve-hour days six days per week. Workers chipped and blasted 901 feet of solid rock to make the tunnel. Approximately 14,900 cubic yards of bedrock was removed using black powder blasting. This was done by drilling three feet long holes and packing them with powder.

Drilling one typical hole took up to three hours of hard effort using a three-man crew. Nine to ten holes, each one-inch in diameter and thirty-six inches in length, were made before blasting. One pound of explosive powder wrapped in paper was pushed into each hole, tamped down, punctured with a sharp needle, and a had a fuse added. Fuses were lit with explosions set to occur at mealtime. Workers would eat while the dust settled then get to work cleaning – also known as “mucking” – the tunnel. Of the 36-inch hole drilled only 18 inches, or half of the hole, was blasted.

The tunnel grew about 18 inches each day, with both sides moving toward the center. On December 21, 1832, workmen broke through the final barrier and connected the two ends of the tunnel. There was much celebration with speeches and toasts. The full tunnel excavation was completed in April 1833.

The ends of the Staple Bend Tunnel were lined with cut stone for safety. Rock and dirt might fall due to rain or other weather, or from the effects of the portage railway going through the tunnel. The flamboyant entrance-ways to the tunnel were designed to impress the travelers and the general public. The style was described as a “Roman Revival style with low relief lintel supported by Doric pilasters on each side.” Of the total cost, $37,498.85, nearly half was to build the fancy entrance ways.

The Portage railway officially opened March 18, 1834. It then became possible to travel from Philadelphia to Pittsburgh in four days. The earlier Conestoga wagons took 23 days to

Continued on page 82
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Thank you!
Q & A: Frank Samsel

By Bob Sandrick, Fresh Water contributor

It’s hard to imagine any good resulting from the infamous June 22, 1969 Cuyahoga River fire, but the incident sparked the mid-1970’s environmental movement and inspired creation of new technologies to clean water and air. The fire was also one impetus for the federal Clean Water Act.

Frank Samsel, a lifelong Greater Cleveland resident, was an innovator and unsung hero in the river cleanup. He designed a boat, the Putzfrau (German for “cleaning lady”) that removed solid waste, oil and petroleum products from the river. Earlier in life, he had sailed the Cuyahoga and Lake Erie on bulk carriers, and received training as a welder. After a stint in the military during the Korean War, he sold wire rope, tackle blocks and rope fittings for the Upson-Walton Co. In 1958, he branched out on his own and established Samsel Supply, which carries construction, industrial and maritime supplies.

Today, the 87-year-old lives in Avon. His five children still run Samsel Supply on Old River Road in the Flats.

Fresh Water contributor Bob Sandrick caught up with Samsel to chat about his experiences sailing the lake and cleaning the Cuyahoga.

How did you first start sailing?

When I was about 16 and living in Olmsted Township, I had a neighbor across the street — a second mate with Hutchinson and Buckeye Steamship. Hutch and Buckeye had a fleet of about 35 boats. The neighbor asked me if I wanted to work on the winter crew. It was a chance to cut school occasionally, so I said yes. I did whatever I was told to do. After high school, I became a full-time deckhand. The Korean War was going on, so I’d figure I’d sail the lake until I was drafted. I did that for part of two seasons, loading and unloading, painting, chipping and scrubbing.

What did you think of the work at the time?

It was hard work but you’re a young fella growing up and you’re going to different places and seeing different things. It was a life experience. You’re living in close quarters with other people and learning to live together and eating good food.

What was the Cuyahoga River like at the time?

It was an open sewer.

The Cleveland sewage department did some primary wastewater treatment, but they would send what they couldn’t service into the river. There had been a law passed at the turn of the century that said no pollutants could go into the river, but business was so powerful then, they had the law changed, so they could throw their waste products in.

Waste from US Steel is dumped into the Cuyahoga River in 1965

What else was in the river?

You would see stuff in the river that you could identify, and some you wouldn’t want to identify. You would find everything from park benches to screen doors. There were countless balls that had run down into the sewers, from kids playing in the streets, and they would end up in the river. Hundreds and hundreds of balls. If it floated, it was in the river.

There was a lot of dead lumber in the river. We found cattle hides and entrails that butchers had thrown in. It was so polluted that when the water got warmer in the summer, it produced methane from the bacteria. The river was bubbling, like a pot of water just starting to boil. When we were there, nobody wanted to be down by the river in August. The stench would drive you away.

How did flammable liquids get in?

Oil that was used for fuel on the oar boats was about three cents a gallon. If you had oil left over in your fueling line, it was cheaper and more expedient to dump it into the river. You’re not losing a dollar and you would save a ton of labor because you wouldn’t have to go to the expense of avoiding a spill.

Also, much of the machinery in factories along the river used oil for lubrication. The oil would drip off the bushings; flow down the sewers and into the river. That was an acceptable way of doing things, going back to before the 1940s. During World War II, they had really big fires on the river. Sohio spilled gasoline into the river because they didn’t have overflow controls for their storage tanks.

So the 1969 fire wasn’t the first. What sparked these fires?

In my time, rail cars carrying molten metal would cross bridges over the river. Hot slag would spill from the cars and onto oil-soaked debris trapped in the river on bridge abutments.

You were running a successful business, Samsel Supply, when the Cuyahoga cleanup started. How did you get involved?
We had a workboat and we would deliver orders to ships in the river, so we were up and down the river every day. We knew the river like you knew your way to work, and we knew what was in it.

In the early 1970’s, after the river fire, they created the Environmental Protection Agency and passed the Clean Water Act. All the companies on the river, like Republic Steel and the old J & L (Jones and Laughlin Steel Corp.) got together to comply with the new law. They formed the Cuyahoga Remedial Action Committee to solve the problem.

I came up with an idea that we patented — an integrated system of boats cleaning the river and trucks hauling away debris. We went to the committee meetings, and they said they would hire us if we were successful and competitive. We formed a new company, Samsel Services, and we built the equipment, and it was as efficient as any equipment ever constructed. I haven’t seen anything that can match it as far as production goes.

Tell me about the Putzfrau. How did it work?

We had three principals. First, we had an articulated clam – like a modified log handler, but smaller – on the back. It had a steel mesh liner and picked up very small debris, trees and trash. On the front, we had a modified Vactor system, which today cities use to clean catch basins, but it was a new technology back then. It vacuumed liquids and anything as large as a volleyball into a holding tank. Then, we had a trash pump that would transfer the liquid and small debris into a tank on shore for disposal.

We had a five-seven-man crew with the ability to pick up about 1,500 gallons in an hour and about 16 cubic yards of debris. We had a modified truck so we could unload both liquids and solids. In 12 hours — in ideal conditions — we could pick up about 100 cubic yards of debris and 15,000 gallons of oil. We could handle most spills in one day. And when we started on a spill, we worked until we were finished.

Who paid you for all this work?

We worked with a lot of different companies – steel companies, chemical companies and tank farms. If the (U. S.) Coast Guard was able to identify the spiller, the spiller paid us. If the coast guard didn’t find the spiller, the coast guard paid.

We had standing contracts with Republic Steel and other companies and cleaned up spills that would come out of their plants, due to their lubricating systems. As the river cleaned up, companies started cleaning up gas stations. When they converted from steel to fiberglass tanks, we did a lot of underground cleanup, but we had to get different equipment for that.

Were you the only ones cleaning the river?

No, we had competition. The Coast Guard would call us out there along with other people. But the others didn’t have the equipment or expertise. And their costs were much higher. We were very competitive and handled some very large spills.

How long were you involved in the cleanup?

About seven years. Companies started to modify their operations or go out of business, because if they had dirty operations, the fines made it unprofitable for them. Then we went into land spills. It got to the point where each type of spill required a different type of equipment, and the laws were coming by the hundreds, like water running over Niagara Falls. Companies couldn’t keep up with it. Eventually we sold the environmental company.

Do you consider yourself an environmentalist?

Yes, I'm an environmentalist, but not a tree hugger or a vegetarian. There is a common-sense way of doing things both on land and on water. And we have to think a lot smarter and we have to use common sense.

So how is the river doing today?

Pretty good. We have fish populations. People are catching steelhead trout up the river. I know fellas that fish in the river, they are catching bullhead, rough fish like catfish and the occasional perch.

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Double Acquisition for Ben-Mor

Ben-Mor is proud to announce their newest acquisition of two leading companies in the rigging and lifting industry. The acquisition of Saturn Industries Ltd. and Roughrider Rigging became official as of September 30th, 2017. The acquisition of these two companies will allow Ben-Mor to expand its range of specialized lifting equipment with exclusive products.

Saturn Industries is located in Winnipeg and Roughrider Rigging is located in Regina and Saskatoon. Saturn Industries is also specialized in the manufacturing of custom trailers. There are 50 employees overall for the two companies.

Together, it will be business as usual; both companies will continue to operate independently. They will continue to provide excellent customer service that they have ensured over the past 40 years.

In the welcoming of this double acquisition; Ben-Mor still upholds its position of being the largest sling and cable assembly manufacturer in Canada. There are now more than 325 employees at the heart of Ben-Mor’s success and 9 locations in North America.
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Think you’re ready to grow your business? Not so fast. Did you know many businesses fail because they don’t appropriately manage their growth?

Bigger is not always better. I realize this concept sounds counterintuitive. In the business world, we’re used to thinking a bigger business is a better one. But it’s a mistake to equate size with success.

**What does success mean for your business?**

First of all, let’s clearly define “success.” From a financial standpoint, the kind of success you should be most concerned with is pretax profitability and cash flow, both short-term and long-term.

So, where does size fit into the profitability formula? The thought is that the bigger you become, the more revenue you can generate. But being bigger also means incurring more costs, which eat away at your profits.

**Impacts of a bigger business**

Let’s think about your own business. A bigger business will require more equipment, inventory, and personnel than you currently have. Your business will also be hungry for more customers to keep revenue up.

So, how do you know if growth is appropriate for your business and how to best go about it? Fortunately, you don’t have to guess. Your numbers will tell you.

For the numbers I’m talking about, though, you’ll need something a little more complex than the standard profitability formula of sales minus costs. That’s because you’ll want to see how your profitability goes up and down as you incrementally generate more sales and incur more costs.

**Use these numbers to help you decide**

Let’s review some key terms you should understand. Instead of giving you a list of definitions, I’ll try to illustrate their meaning by discussing them in the context of a hypothetical business.

We’ll pretend I own a business. Here is a chart representing some key information during a particular time period:

On the chart, you can see that my sales are going upward. That’s good news. But, as you’ll notice, the more I sell, the more costs I incur too. That’s because I have to buy more materials, hire additional help, etc. These are known as my variable costs. Since my variable costs don’t remain flat, I think about them as a percentage of my sales.

I also have certain fixed costs too. These costs remain constant no matter how much I’m selling (the mortgage on my building, office supplies, etc.).

When I add up my variable costs and fixed costs, I get my total costs. That’s the line in red.

Next, the point where my sales equal my total costs is known as my breakeven point. That’s the point where I’m no longer operating at a loss anymore. You can also see that’s where my net profit also is no longer a negative number.
There’s just one more term to go over and that is incremental margins. To understand incremental margins, look at the chart one more time. Notice the area from my breakeven point and above. I already have my fixed costs taken care of so these aren’t eating away at my profits any longer. I’m simply spending more in variable costs but I’m also maintaining positive sales growth too. The amounts I’m making here are my incremental margins.

Once I’m getting incremental margins, that’s where my profitability can really pick up steam. That’s because, with my fixed costs taken care of, my incremental margins should be higher than my normal sales margins.

**What do your numbers tell you?**

If you want to grow your business, you must first know all of these numbers currently and how they relate to one another. What is your current breakeven point? As your sales increase, is the rate of your variable costs going upward, downward, or staying the same? Without this information, you’re simply navigating in the dark.

Plug in different values for these figures so that you can see how exactly your profitability is affected in different growth scenarios. Consider all of the changes that come with growth too. For example, by growing your business, will you have additional fixed costs like a new building? If so, plug them into your chart.

**The aha moment: maybe growth isn’t the best strategy right now**

When I have my clients sit down to work through these numbers, they almost always have an “aha moment” that causes them to rethink their current strategies. They realize that growing their businesses is not necessarily the way to becoming more profitable.

My clients then want to know what they can do right now to lower their breakeven point so that they can experience profitability sooner. That’s when we work on ways to reduce fixed costs, keep variable costs at bay, and generate more revenue.

**Conclusion**

There are a lot of things to consider before pursuing growth. Business growth should be one of your main goals, but be mindful of all the things that come with it. To know if you’re ready to grow, use the information above to help.
Harrington Hoists, Inc. has been a market leader in the technology, design and manufacture of hoist and crane equipment for over 150 years. From the development of the first electric hoist to the first single phase dual speed VFD hoist in the industry, Harrington continues to blaze the trail in product innovation. Our goal has always been to create revolutionary, top quality products that are capable of handling the toughest and most rugged jobs.

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New Enhanced 9-Part Slings from WireCo®

SUPER-FLEX® Slings—maximum-rated capacity lifting slings

WireCo’s 9-Part Super-Flex slings have improved efficiencies providing the industry’s maximum-rated capacity lifting slings per diameter for wire rope. The improved efficiency is backed with a proven design that provides internal adjustment to distribute the load equally among all nine parts of the sling body.

The improved manufacturing process can produce component sling lengths up to 180 feet. This provides users with slings capable of long-fall lifting applications. In addition, the 9-Part Super-Flex sling is extremely flexible, making it one of the easiest slings to rig up. The multiple rope body of the sling will flex and bend to meet the load configurations required of the product while providing a wide bearing surface for load securement.

The Super-Flex sling construction makes it possible to easily inspect all parts of the sling before and after each lift, which is important to remember if the sling is to be used many times. The construction of the sling allows easy access for inspection and monitoring of each component wire rope. For maximum flexibility, the Super-Flex multi-part sling eyes can be supplied plain, wrapped, or seized at the request of the user.

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At this point, it is worth demystifying the concept of “strategy.” This simple word seems to have taken on a life of its own and few people I have talked with seem to understand its meaning. Here is a good, and frankly, very simple definition:

At its most basic, strategy is a matter of figuring out what we need to achieve and determining the best way to use the resources at our disposal to achieve it. The plan is then communicated to all and executed, while continuously monitoring our progress, validating our assumptions, and adjusting the plan to best achieve our desired end-state.

That having been said, here is what it is not: The annual budget, the Vision, Mission, or Core Values Statements, or planning or goal setting without regard to the current situation, assumptions, or resources. Remember, a vision without resources is just a hallucination.

So, now you have your planning process in place, your standing planning team knows what they are doing, the standing red team is challenging you to make sure your evolving plans will work, and you have developed a great strategy for the next year. Now what? Communicate, communicate, and communicate your intent again and again, down to the lowest levels of your company. You simply cannot over communicate. If you cannot ask any one of your employees what the vision, mission, and values are for your company, you have not communicated enough. The military concept of “Commander’s Intent” is a great communication tool and philosophy for any business leader, and I highly recommend adopting it for your business.

Once your plan has been communicated to every stakeholder down to the lowest levels, it is time to execute and adjust. As I stated above, no plan ever survives first contact with your customers or your vendors or your ownership, etc. The plan WILL change as the situation develops. The trick is to be prepared. If you adopt the planning concepts outlined here, you will be well prepared because you will know what you know, what you don’t know, and what assumptions you made to continue planning—and—you will be testing those assumptions almost daily.

Good luck, and keep attacking.
Although the antiquity of human civilization never can be known precisely, anthropologists eagerly attempt to piece together a sequence of cultural steps leading toward an understanding of how early humans behaved. In June 2017, the United Nations group responsible for Educational, Scientific, and Cultural studies awarded the designation UNESCO World Heritage Site to six caves located in two valleys in southern Germany. The location of the valleys (in the Swabian Jura area) has attracted archaeology researchers for 150 years. In the Achtal Valley, a cave known as Hohler Fels got a headline in 2017 when an unusual tool was found.

Scientists have been studying the floor layers of the Hohler Fels cave since 1870. During excavations in August 2015, a well-preserved piece of mammoth ivory was uncovered. The object is 8 inches (20.4 cm) in length and it has four unusual holes about 1/3 inch diameter (7 to 9 mm) drilled in the ivory. Each hole is “lined with deep and precisely cut spiral incisions”. After analysis by a team of experts from the Eberhard Karls University of Tübingen, followed by a physical experiment at the University of Liege in Belgium, a formal announcement was published in the book “Archaeological Excavations in Baden-Wurttemburg 2016”. This 344-page book is edited by the State Office for Heritage Preservation and several other peer-reviewers and is considered authoritative.

Excavators believe they found the fossil rope-making tool in archaeological horizon Va buried near the base of the Aurignacian deposits of the site. Although the full report has not yet been published, the first news release about the tool posted on the University of Tübingen website announced: “Rope and twine are critical components in the technology of mobile hunters and gatherers... but on the whole almost nothing is known about string, rope and textiles from the Paleolithic”. Due to the excellent condition of the tool, a research team at the University of Liege cast a metal replica. They used it to feed vegetable fibers through the holes which they then twisted by hand to make a crude fiber rope.

The team in Belgium was headed by Dr. Vierle Rots who is an expert on the subject of ice-age tools and projectile points. After the rope-making experiment she stated: "This tool answers the question of how rope was made in the Paleolithic, a question that has puzzled scientists for decades."

Although the final report hasn’t been issued, the assigned age of the tool is derived from the estimated age (40,000 BC) of the cave deposit layer where it was buried. The announcement of the discovery in July 2016 came from Dr. Nicholas J. Conard and Maria Malina. The physical location of the entrance to the cave is located near the village of Schelldingen west of Ulm. It is large enough for an adult person to walk in through a natural tunnel. Access for tourists has been facilitated since 1905 by installation of steps and paths allowing visitors to go to the huge internal space where the present excavations can be seen. Electric lights were installed in 1955. The University of Tübingen team has been working at the site for twenty years. Some of their previous finds include unusual items such as musical flutes and human female figurines.

Earlier some prehistoric tools found elsewhere with similar mysterious holes have been interpreted as arrow-shaft straighteners. The Belgian laboratory experiment with the Hohler Fels tool convinced the University of Tübingen team, who stated: “These elaborate carvings are technological features of rope-making equipment rather than just decoration”. Until the formal academic study gets published, we all have the opportunity to review the illustrations posted on the internet. I suggest the ropemaking members of AWRF should take a look at them. A majority of the current search engines such as Google will respond to an entry for “Hohlefels Tool”.

It is logical to imagine the bow and arrow as the earliest device enabling humans to kill animals at a greater distance than can be reached by throwing sticks and stones. The technology for launching arrows depends on the bowstring. The concept of stranding to combine filaments to make something longer and stronger would therefore be elementary in the process. After having a discussion of the images shown on the websites with my close friend Roland Verreet of Wire Rope Technology Aachen, I experienced a slight feeling of minor uncertainty about the conclusions reached from the experiment at Liege. There is no mention of any ropemaker being consulted in the evaluation at Tübingen nor at Liege. Perhaps this might be a topic for discussion at the next AWRF-TC meeting?
CODIPRO launches a new product range: GRADUP

Since its integration into ALIPA Group during 2004, CODIPRO has been in a state of constant development. Such growth has enabled our teams to develop their expertise and allowed us to acquire new techniques. However, none of these changes have been on the scale of the current developments taking place at CODIPRO. This major innovation, the GRADUP lifting rings, is the fruit of more than 40 years' experience combined with in-depth research. The GRADUP range has been especially developed to be the quintessential swivel lifting ring, particularly in terms of the quality of the raw materials used.

The CODIPRO research department, supported by advice from internationally renowned research centers, selected the best quality steel to achieve the best balance between tensile strength, breaking load and fatigue strength.

Each component of the GRADUP lifting rings’ hinge system has also been reviewed. The outer crowding dimensions, the screw couplings and the openings are compatible with CODIPRO lifting rings already on the market.

The new product range, which will be launched at the beginning of 2018, is the result of a long-standing collaboration between our technical teams and European research centers.

Why GRADUP?

The quality of the steel is the essential characteristic of a swivel lifting ring. In the world of lifting, it is normal to speak in terms of class of steel, or “grade”. This “grade” is what it’s all about for a chain, because the diameter of the chain combined with the class of the material is what gives the lifting capacity. But these descriptions are not relevant for lifting devices with multiple components, such as a swivel lifting ring.

In recent years, some “grades” that are higher than others have appeared on the market. Based on this, many manufacturers are offering lifting rings of class 10, 12, 14, etc. But CODIPRO is seeking to move away from this trend that is almost entirely based on marketing promotions. By creating the GRADUP (or optimized grade) range, CODIPRO is offering a breakthrough innovation.
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Leslee Bunnell Retires after Four Decades in the Wire Rope Industry

Pomfret, CT – October 27th, 2017 - Leslee Bunnell will retire from Loos & Co., Inc on October 31st, 2017 capping over 30 years with the company and four decades in the wire rope industry. Please join us in congratulating Leslee on her successful career and in thanking her for the years of service in our industry.

Leslee’s time at Loos & Co., Inc. began in 1974 as young recruit directly out of college. She left Loos & Co., Inc. in the mid-1980’s to work with John Rauh at Cableworks in Putnam, CT. Returning to Loos in 1987, she recently celebrated 30 additional years on the Loos & Co., Inc. sales team.

Leslee had acquired a broad range of knowledge and worked with many people over the past four decades. She started as a sales assistant, working with rigging shops and distributors. As her experience grew, she managed the sales process for aerospace customers, wire markets, and the US Government. With that base of knowledge, she became an invaluable asset to our sales team and our company as a whole.

“Leslee will be missed,” says Robert Davis, Vice President of Sales and Marketing. “She leaves with us a legacy of dedication, hard work, drive, and determination. She helped build the company into what is today, and I thank and congratulate her for that.”

Leslee will be leaving Loos & Co., Inc with fond memories of the people she worked with through the years. “I’ve met many wonderful people, many of whom I’m still friends with today. I’ve had a wonderful time working with so many engaging, interesting people. I wish them all the best in the years to come.”

And we wish Leslee all the best in her retirement. She plans to spend more time with family and friends, and volunteering in her church and community. That is, of course, after a well-deserved vacation in Europe.
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All Material Handling is excited to introduce the new CARTEC Grab-IT clevis shortening hook line. The CDFXA is available in one single hook piece, but also with an integrated master link for one, two, and four leg chain slings. This a great addition to a quality line of Grade 100 chain fittings from CARTEC. Sizes range from 9/32” to 5/8”, giving the CDFXA a more complete offering than the competition. CDFX individual hooks are available down to 7/32”.

Adjustable chain slings are quite common, but the conventional way of constructing those is changing. The Grab-IT offers the ability to have an adjustable sling, with less components than the conventional method. For example, let’s look at a 2-leg adjustable chain sling bridle: the CDFXA2, for instance, will reduce the number of fittings at the top of the sling from 7 pieces down to just 3. That assembly offers the functionality of a master link, connecting link and grab hook. There is no need for an adjuster leg. Having less hardware typically means less weight, which is another plus.

Fewer components also means there is less hardware to inspect for wear or damage. Get the job done more efficiently by spending less time on pre-lift inspections. Riggers can now have these benefits while maintaining the versatility of an adjustable sling for a variety of loads. There is benefit for those assembling adjustable slings, as there are less fittings to mechanically attach, potentially saving time and labor costs as a result.

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InfoChip hires Chief software architect

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Houston, TX, November 1, 2017 – Mike Stradinger, CEO, announced the hiring of Shane Corrallo as the Chief Software Architect for InfoChip, to lead the integration of InfoChip’s TESSALink IoT platform. Technologies include mobile apps, cloud reporting, Bluetooth Low Energy (BLE), Active RFID, and GPS. TESSALink allows our customers to more efficiently track real time locations and conditions of their industrial assets. In his announcement, Mike stated,

“Shane has an incredible record in managing, developing and deploying custom software solutions focused on full stack technologies, languages, and platforms. As a results-oriented, high-energy, hands-on technology leader, he is a perfect fit for the InfoChip Culture.”

From Logistics to Oil and Gas, Shane brings over 20 years of software development experience from a wide range of industries to his new role. When asked about his move to InfoChip, Shane stated;

“I am excited about bringing my skills to this innovative and adaptive team and am completely focused on ensuring that InfoChip’s capabilities are expanded to better service our customers’ current and future needs using IoT technologies. I look forward to exceeding our customer’s expectations and experience.”
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The final success I will address came about as a result of our participation in a coalition composed of numerous trade associations and companies. The administration was proposing a one-size-fits-all ergonomics rule, undermining almost operations involving repetitious movements by workers. When sufficient evidence was accumulated demonstrating a total absence of scientific data, the initiative was abandoned by the Department of Labor and the coalition was dissolved.

**How the Government Affairs Committee Operates**

Essentially, we conduct our advocacy in Washington, D.C. three ways:

- Through membership in Washington based associations
- Through ad hoc coalitions and
- By individual lobbying.

We have selected our Washington affiliates very carefully: first, to cover all bases without excessive overlap and second, to avoid groups whose agendas would be offensive to some of our members. For example, because of the functional diversity within our own membership from small businesses to large corporations, we have elected to avoid membership in the National Association of Manufacturers, the National Association of Wholesalers and Distributors, and the National Federation of Independent Business, all fine organizations with whom we share information, but who have separate ideas about the sharing of liability. In a similar vein, we have opted to avoid taking a position on trade issues where importers are pitted against domestic manufacturers.

The three primary Washington associations in which we enjoy membership are:

- The U.S. Chamber of Commerce where we serve on the Small Business Council
- The American Tort Reform Association and
- The American Society of Association Executives, where we previously served as member of the Legal Section Council.

Coalitions dedicated to one particular cause, such as the Ergonomics group which I alluded to earlier, pop up when the need arises and usually dissolve when the mission is accomplished.

With respect to individual lobbying, we generally gravitate toward fence-sitters and avoid wasting time on the nay-sayers. And we always show our appreciation to our allies in Congress. For example, as the health care issues re-emerges in Congress, we are more likely to approach someone like Senator McCain than dedicated opponents.

Of course, members of Congress are always going to be more receptive to their own constituents than outside lobbyists. So, in many cases, we have been able to gain entry or receive a more enthusiastic reception by noting AWRF members in the relevant constituencies.

**Current Issues**

The Government Affairs Committee is currently engaged with a multitude of issues of importance to our members. I will mention three of the most egregious agency practices.

**Overtime**

The Obama administration drastically revised the overtime regulations in the Fair Labor Standards Act by virtually doubling the eligibility threshold from $23,660 to $47,476. This equates to a required payment of time and a half for each hour of work over 40 hours a week for employees earning less than $47,476. These modifications were overturned in a recent ruling by the Federal District Court for the Eastern District of Texas on the grounds that the Department of Labor exceeded its authority and that the extreme increase is unconstitutional. Experts suggest that we may see a less onerous increase in the future.

**Regulatory Reform**

It is a given fact that U.S. Government agencies too often promulgate rules without legitimate cost benefit analysis, risk assessment or the application of real science. We are working on ways to change bad practices through regulatory reform to ensure transparency and opportunity for those adversely impacted to participate in open hearings.

**Sue and Settle**

The common practice of sue and settle occurs when groups circumvent the constitutional due process requirement of the rule making process required by the Administrative Procedures Act. They simply file suit against the agency responsible for developing the rule they seek, such as the EPA. The agency then acquiesces with a wink and a nod and the two sides present an uncontested Order to the appropriate judge, and suddenly you have a new regulation without any of the required checks and balances. We are working on several avenues to bring an end to this unconstitutional and unfair practice and in August, Scott Pruitt, as chief of the EPA, issued a directive which would curb these types of collusive lawsuits including the practice of paying millions of dollars in taxpayer money to the plaintiffs on the theory that they were the “prevailing party.” There is also legislation on the table to address these matters. Among other things it would require a 60 day period to allow aggrieved parties to enter their objections.

Other current GAC projects include NAFTA, healthcare, tort reform and tax reform.

In conclusion, let me respond to a question that is sometimes asked: “Why don’t we just turn over our government relations business to a Washington lobbying firm?” The question is a good one but it has a simple answer: it simply won’t work because we would get lost in the Washington shuffle. Experience has taught us that our founding fathers were correct in their decision to have our own presence in the lawmaking process. In fact, the sales philosophies of most all AWRF companies call for some personal contact in order to retain market share.

Finally, when we have successes in the legislative or regulatory process, it is all about the Association, it is about AWRF members who fund our work in Washington. So the bottom line is we did it together.
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AND ON THE LAST DAY.....
travel from Philadelphia to Pittsburgh – when the dirt roads were dry.

The total cost of the Public Works system was $16,504,655.84. The railway system portion was $1,828,461.38. The railway and canal system spurred trade in Pennsylvania. The canal and railway carried raw materials east and manufactured goods to the west. With the building of the Mainline of Public Works; Pennsylvania began an era of prosperity eventually making Pennsylvania one of the greatest industrial states in the nation. The Allegheny Portage railway and the Public Works systems ran 23 years, from 1834-1857.

The line proved a way west or east for merchants, passengers, slaves in pursuit of freedom and soldiers from the Mexican War. Unlike New York State’s Erie Canal which followed the Mohawk River Valley for many miles on its way to Lake Eire, the Pennsylvania canal had a mountain to contend with. One 36-mile section had to be traversed with a railway line to connect the two sections of canal.

The steepness of the mountain’s flanks dictated the need for five incline planes on each side of the peak for a total of 10 inclines making a big staircase up one side of the mountain and then back down the other side. Relatively flat sections between the incline planes of track featured the use of horses with hemp rope at first. Later, locomotives were used on these flat sections – also known as levels. On the top of the incline planes were steam-powered engines using an endless piece of rope made of hemp to haul the canal’s boats and loads up the incline. This was the same type of rope used to moor ships. But it wore out quickly in these conditions, breaking frequently as well as causing quite a few accidents.

On February 15, 1854, the Pennsylvania Railroad company had completed its all-rail line system from Philadelphia to Pittsburgh. The completion of the Pennsylvania Railroad took business from the Public Works system. The new Pennsylvania Railroad had no inclines and was only on rails, no water. The Public Works system was unprofitable.

May 16, 1857 saw the legislature pass an act for the sale of the Main Line of the Public Works. On June 15, 1857 the Pennsylvania Railroad Company purchased the system for $7.5 million and took possession on August 1, 1857. The Pennsylvania Railroad, in turn, officially abandoned the Allegheny Portage Railroad on November 1, 1857.

On July 31, 1857, the Pennsylvania Railroad bought the portage railway from the state. The part east of the Gallitzin Tunnels reopened as a freight bypass line in 1904. CONRAIL abandoned this line to Hollidaysburg, PA, in 1981 and removed the rails.

The Lemon House has reopened as of May 10, 1997. A major restoration project was completed restoring the house to its 1840s appearance. While it is the original house on its original location, there is a great scarcity of information available about the home. Plans or contracts for building the house remain elusive. Documentary evidence is lacking, even as to the exact year the house was built. Much of the restoration was founded on archaeology work, period artwork, and documentation of other 19th century taverns in the local area.

After the demise of the old Portage Railway the tunnel had other uses. Neither the “new Portage” nor the Pennsylvania Railroad used the tunnel. It was instead, a popular carriage route until the great Johnstown Flood of 1889. Afterward, flood damage and other concerns made the tunnel a less desirable driving spot although local residents continued to visit, and even go courting at the tunnel up until the 1940s.

In the 1940s a concrete liner was added to the east portal of the tunnel and large water lines, as well as a water vault structure were built. The Manufacturer’s Water Company closed the tunnel to the public and the water lines were used by Bethlehem Steel. In 2001 the tunnel became part of Allegheny Portage Railroad National Historic Site. Rock bolts, shoring posts and other reinforcements were added, as well as a thin mortar between the historic blocks.

The Allegheny Portage Railway National Historic Site today comprises some 1,250 acres including twelve to thirteen miles of hiking trails. The concept of a park on this location was brought to life fifty years ago, in 1964. Three years later the park opened to the public. Visitors can still witness the lengths those who came before them went to, in going about their business and commerce in the new, rapidly growing country. Our country’s first wire rope played an important role in getting those goods over the Pennsylvania mountains.
Rope and Sling Provides Below-the-Hook Equipment for Nuclear Site

Rope and Sling Specialists Ltd. (RSS) provided below-the-hook equipment for ITP (inspection and test procedure) work during decommissioning of Chapelcross, Scotland’s first commercial nuclear station, built on the 92 hectare site of an old airfield in Dumfriesshire.

The site ceased operation in 2004 after generating more than 60TWh of electricity over 45 years of successful operation. Chapelcross has recently completed defuelling ahead of schedule. The overall aim of Magnox’s defuelling programme is to ensure that all of its sites are fuel-free. This involves safely removing the fuel from all of the reactors, emptying all of the cooling ponds and stores containing fuel, and transferring it to Sellafield for reprocessing.

RSS recently supplied a 25t Loadlink plus tension load cell from Straightpoint, two 10t beam clamps and a calibrated 20t hydraulic ram to CTL Seal, primarily for load testing during the latest round of ITP work at the Chapelcross site.

The equipment was delivered to Penny Nuclear, which fulfilled a scope of work for Magnox to decommission a cartridge-cooling pond. Magnox is owned and operated by Cavendish Fluor Partnership on behalf of the Nuclear Decommissioning Authority.

Magnox oversees nine programmes, including defuelling, ponds, plant and structures, waste projects, waste operations, reactors, asset management, care and maintenance and site restoration. All have been established to create a one-stop decommissioning service for the sites. Working this way allows it to use innovative techniques and methods as well as providing a sequenced approach to work using the ‘lead and learn’ approach.

Mick Gill, senior testing engineer at RSS, explained that, prior to delivery to CTL Seal, the clamps were tested on the custom lifting beam and used to hang the bale arm unit. Gill combined with Gary Coleman, site engineer at RSS (both are based at the company’s Rotherham depot), to ensure the equipment was ready for the rigours of the demanding project.

In addition to the bale arm unit, RSS equipment was used to lift and load test a bale arm pintle grab, tipper frame support structure, tipper frame, cradle, and rotating pintle lifting attachment (RPLA) auto latches. Lifting operations for the latest phase of the project were completed over a one-day period.

Gill concluded: “It was an honour to service the project from our Rotherham facility. We know Magnox demands exemplary standards from its supply chain to support the safe execution and delivery of its programme of work.”

The cradle auto latch and rotating pintle lifting attachment (RPLA) has an SWL of 11,510kg and was tested to 17,265kg.

RSS performed a static test on the tipper frame; with an SWL of 14,000kg it was tested to 21,000kg.

The cradle and bale arm unit test. With an SWL of 12,000kg, it was load tested to 18,000kg.
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Eriez® Celebrates 70 Years of Partnership with Representative Agency Dominion-Carolina

Erie, PA—2017 marks 70 years of partnership between Eriez® and High Point, N.C.-based manufacturers’ representative agency Dominion-Carolina. Eriez honored this long-standing relationship by presenting the Dominion-Carolina team with a commemorative plaque during the 2017 Eriez Business Conference which was held in Erie, Pa., in early October.

The foundation for this successful collaboration was laid in 1947, when Bob Merwin, son of Eriez founder O.F. Merwin, and Dean Thomas, a retired school teacher who ultimately formed Dominion-Carolina, initiated the partnership with a handshake. “It’s incredible to think that Eriez—which is celebrating 75 years in business in 2017—was still very much in its infancy at this time,” says Charlie Ingram, Eriez Vice President of Sales and Marketing.

While both Eriez and Dominion-Carolina have grown and evolved over decades and generations, both have remained family-run companies. Today Jeff Carr, Thomas’s stepson, serves as Dominion-Carolina President while Richard Merwin, grandson of O.F., is Eriez’ Chairman.

Although Eriez’ partnerships with a number of United States sales representative companies date back more than 50 years, the company’s 70-year relationship with Dominion-Carolina is its longest. According to Eriez, Dominion-Carolina has consistently been a top sales performer over the years, twice earning Eriez’ coveted Merwin Sales Award.

“We are so proud and grateful to be associated with the top-notch team at Dominion-Carolina,” says Ingram. “The knowledge and experience they bring into the field each day offers immense benefits to our mutual customers and helps both of our companies to flourish.” He adds, “We look forward to working together for another 70 years and beyond.”

For more information about Dominion-Carolina, visit http://www.dominioncarolina.com/.

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**AWRF**

Barbara Gilbert
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In an independent test of the three leading manufacturers of industrial lifting clamps, J.C. Renfroe proved to be the most durable in the category of horizontal lifting. Rexnord Innovation Center (RIC) an independent, accredited laboratory, performed fatigue testing on three manufacturers’ vertical, 180 degree turn + side pull clamps in the horizontal orientation. Results show Renfroe’s new LPA model, completed 1,664,928 cycles while competitor Company A completed only 159,672 cycles before experiencing a crack at the bail pin and Company B only completed 79,352 cycles.

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