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Up close

ink-Belt and Manitowoc are hosting open house type events this month to give customers, dealers and industry onlookers a chance to strengthen relationships, tour facilities and get up close and personal with a host of new and newish cranes. It has been a while since the manufacturers have had the chance to stop and take a breath, after being so focused so long on ramping up their assembly lines to fill backlogged orders.

We're excited to travel to Lexington and Shady Grove to see what the two industry stalwarts have in store. The folks at Link-Belt have been planning their CraneFest "to do" since the first of the year, and sources tell us to expect big things and a big crowd. Some 700 guests are expected, and we're told the trip will be worthwhile. ACT has exclusively learned that Link-Belt will show off two rough terrain cranes, the RTC 8090 series II with a 90 ton capacity and the RTC 8080 Series II, with an 80 ton capacity. Also we've learned that the Link-Belt team is going to show us a new crawler, the 230 ton capacity 298 HSL, and for the first time we'll see in iron the company's TCC-450 telescopic crawler crane. And we're most interested in seeing Link-Belt's new all terrain crane line-up, the 275 ton ATC-3275 and the 200 ton ATC-3200. The company is also showing off a new angle boom attachment for its revered 218 HSL, 110 ton crawler crane.

At the Grove plant in Shady Grove, we're told that 22 machines in Manitowoc Crane Group's product line will be on display, including their newest models in the market, the Grove 4409-2 Yard Boss, the new Grove RT 535E rough terrain and the Potain MDT 98 tower crane. We've also been told that National will be demonstrating the attributes of its 1300H.

In early September, I got up close on a very interesting jobsite, a wind farm in West Texas. While we all have seen the incredible photos of the monster Manitowoc, Liebherr and Terex crawlers erecting wind turbines, it's something you really have to see to get a true perspective. While everything we saw on site was pretty impressive, I am compelled to make note of the extreme safety measures adhered to on these jobsites. Before we were admitted to the actual wind farm development, we underwent a comprehensive safety orientation that covered everything from mandatory clothing – hardhats, bright orange vests and sturdy shoes – to the disclosure that we also might be doing business with rattlesnakes, scorpions, fire ants and poisonous spiders.

Last month our parent company KHL Group introduced the World Construction Week e-newsletter. We've had great feedback on this new news service.

Check it out at www.khl.com

And, as always, let us know what's going on with your company – new projects, new people, new cranes, etc.

D.ANN SLAYTON SHIFFLER

Editor

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On the anniversary of the day the storm blew threw the Gulf Coast, a Tadano TR 500XL lifts and places gate sections at the London Street Canal in New Orleans. Photo by Dan McKain.

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e of the SC&RA ecialized Carriers &

Five new Link-Belts at CraneFest, Manitowoc showcasing 22 products, Grove extends Yard Boss range, second pair of bridge decks installed by Bigge

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OSHA's list of most frequently cited citations for the crane and rigging sector is long and varied. Terry Young reports

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Terry W. Emmert is one of the most energetic, informed and vibrant people in the industry of specialized transport. D.Ann Shiffler reports

regional focus

Last year, just days after Hurricane Katrina ravaged the US Gulf Coast, American Crane & Transport dispatched Dan and Gini McKain to the region to survey the damage. A year later the McKains traveled back to the Gulf Coast to chronicle recovery efforts

self erecting tower cranes

Self erecting tower cranes are slowly but surely being accepted into the North American market. What has taken so long? D.Ann Shiffler reports



industry focus: wind power

Wind turbine erection has become a bonus market for crane operating companies that are courting business from this high flying industry

site report

Spanning the Potomac River between Maryland and Virginia, the Woodrow Wilson Bridge earned the distinction of being among the worst traffic bottlenecks in the United States. Last month the old bridge was imploded, with residents of Washington, D.C., applauding its demise and the promise of the completion of a two-span replacement bridge



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Link-Belt rolling out five cranes at CraneFest

Link-Belt is showcasing five cranes and a boom attachment at its CraneFest '06 October 9-10 in Lexington, KY, ACT has learned. More than 700 are expected to attend the event in which Link-Belt will showcase rough terrain cranes, a lattice crawler, a telescopic crawler and two all-terrain cranes.

A source with the company said attendees will be able to see the new RTC- 8090 Series II, 90-ton and RTC- 8080 Series II, 80-ton version rough terrain cranes featuring a new boom design. Also at CraneFest is the 298 HSL, a 230-ton (208.7 mt) lattice boom crawler and the new TCC- 450, 45ton (40.8 mt) telescopic crawler crane with rough terrain capability and crawler crane mobility and which uses HYLAB hydraulics. The ATC- 3275, 275-ton (220.0 mt) all terrain crane expands Link-Belt's all terrain crane line-up and features the LoadCom system. This load radius compensating system will be displayed throughout the week on the ATC-3200, Link-Belt's 200 ton (160 mt) allterrain crane.

The company will also show a new angle boom attachment for the 110-ton capacity 218 HSL crawler crane. The new boom complements the existing luffer attachment. Attendees will also tour Link-Belt's "Lean Sigma" manufacturing plant along with "experience the Bluegrass with a touch of thoroughbreds and bourbon," the company said.

For the third year in a row, **Associated Equipment Distributors** (AED) has selected Accruit, LLC, as the AED's preferred provider of 1031 Like-Kind Exchange

highlights

- China will keep its status as the developing world's top investment destination in coming years, according to a study released last month by the Economist Intelligence Unit and Columbia University's Program on International Investment. Last vear. China accounted for \$79.1 billion of \$177 billion in foreign direct investment attracted by developing Asian countries. The study predicted China will gain \$87 billion in foreign investment this year.
- President Bush has selected Mary Peters to succeed Norman Mineta as Secretary of Transportation. Peters headed the Federal Highway Administration from 2001 to 2005 before being named national director for transportation policy and consulting in the Phoenix office of Omaha-based architectural, engineering and consulting firm HDR Inc. Previously, she spent three years directing the Arizona Department of Transportation, where she worked her way up through the ranks during a 16year career there.

Buckner buys LR 1750s for wind work

While the LR 1400 is a mainstay in wind farm development in the US, likely the next big hitter from the Liebherr brand will be the 825 ton capacity LR 1750, according to Doug Williams,

1750 "SLK" attachment which is designed specifically for windmill erection. This attachment consists of a folding main boom which allows the boom to roll up and hinge into the final main boom configuration, Williams explained, and the result is that extremely long booms can be erected without the need for derrick and ballast attachments to get the boom off the ground.

"The LR-1750 with the special SLK attachment can erect wind turbines at heights nearly 400 feet and weights in the 200,000 pound range," Williams said. "Buckner's decision to purchase these cranes is somewhat forward thinking as the demand for this type windmill is still a year or more away."

Buckner HeavyLift has purchased two Liebherr LR 1750s in anticipation of wind farm work in the US



president of Buckner HeavyLift.

"Realizing that at some point in the future a certain percentage of windmills will become higher and heavier than the current cranes can handle, we have taken a bold step and purchased two LR-1750s. "One is currently being utilized on a wind farm in the Midwest and the other is in transit from Germany." said Williams. "This model has proven to be quite successful in the 'next' generation of wind mills throughout Europe."

Williams said Buckner will be the only company in North America with the specialized LR-

Contractor MasTec is using a National ENVI boom truck to install 5 ton concrete power line poles along 15 miles of roadway in the city of Terrell, near Dallas, TX. National Crane's ENVI (690EU) is the first environmentallyfriendly boom truck and is the only boom truck in the industry that runs on biodegradable diesel and uses vegetable-based oil in its hydrauli<u>c system.</u>





MCG displaying 22 of its newest cranes

Manitowoc Crane Group has invited dealers and customers to take a closer look at 22 products in its line-up of products Oct 17-18 at its Grove and National facilities in Shady Grove, PA. Four of the company's newest products will be one display,

the Grove 4409-2 Yard Boss, the Grove RT 535E, the Potain MDT 98 tower crane and a National 1300H boom truck

A spokesman says the Crane Expo will feature live demonstrations, plant tours and other activities.



Bigge installs second pair of bridge decks

Bigge Crane & Rigging recently installed the second of a pair of 2,000 ton steel bridge deck sections on the New San Francisco Oakland Bay Bridge. The second mega-lift operation completes the transition spans between the concrete Skyway bridge on the Oakland side and a suspension bridge – not yet built – to Yerba Buena Island.

Installation of the second span took about 10 hours in an overnight operation in late August. Each transition span

section – called tubs - was lifted to a height of approximately 200 feet within tolerances of 1/32 of an inch. Again, Bigge used computer-controlled Hydrospex strand jacks for each lift, with the strand jacks raising the load at speeds of up to 30 feet per hour. During the lifts, the tubs were maintained with an eighth of an inch of the required altitude. Given that the tubs are 200 feet long by 85 feet wide, computerized monitoring was essential



Each tub was lifted from a barge used for transport from Portland, OR, where they were fabricated. As with first span, a temporary support tower has been skid under the span to hold it in place for three months until the concrete joint with the existing Skyway is poured and cured, filling a gap of some 6 feet. The San Francisco (west) end of the tub is being supported by another temporary tower until the suspension bridge is constructed.

"To lift a 2,000 ton load that is 200 feet long and 85 feet wide to a height of 200 feet is an operation that requires precise engineering and thorough planning," said Weston Settlemier, president of Bigge Crane & Rigging. "To do it twice is something special for us. As a local company, we are very proud to have made such a contribution to this project."

Settlemier noted that his grandfather Henry Bigge, who founded this company 90 years ago, hauled the steel that built the Golden Gate bridge in the 1930s. "I am delighted that the tradition of Bigge's involvement in the construction of iconic structures in the Bay Area continues today," he said.

The New Bay Bridge is expected to cost \$6.3 billion and be completed in 2012.

DRS Technologies producing heavy ammunition

trailers for Army Parsippany, NJ-based DRS Technologies has received an \$8.5 million order to produce M989A1 Heavy Expanded **Mobility Ammunition Trailers** (HEMATs) for the US Army. The HEMAT is a key transport system extensively used to transport Multiple Launch Rocket System (MLRS) pods, conventional ammunition and other equipment on paved, secondary or cross-country roads to support Operation Iragi Freedom.

Work for this award will be accomplished by the company's **DRS Sustainment Systems unit** in West Plains, MO. "The DRSbuilt HEMAT system provides the Army with an extremely stable platform to transport MLRS pods and other cargo across the battle space, ensuring military readiness in ongoing operations." said Daniel A. Rodrigues, president of DRS's Sustainment Systems & Services Group, "This key transport system continues to demonstrate reliability, durability and versatility under extremely harsh conditions and remains an integral part of the military's operations in Irao.'

Over the past 15 years, more than 2,000 HEMAT systems, which have a capacity for 11 tons, have been produced and used extensively by the Army worldwide.



Construction equipment exports up 10 percent

Exports of U.S.-made construction machinery totaled \$6.68 billion for the first half of 2006, a 10 % increase compared to January-June 2005, according to the Association of Equipment Manufacturers (AEM). The AEM North American-based international trade group consolidates U.S. Commerce Department data with other sources into a quarterly export trends report.

Central America took delivery of 44 percent more Americanmade construction equipment during the first half of 2006 compared to 2005 by midyear, for a total of \$638 million, and South America increased its purchases 16 percent to total \$950 million.

Construction equipment export volume to the Asia region overall declined 19 percent (a total \$694 million). However, exports to China gained 20.5 percent for the first half of 2006 to total \$114 million and rank China in 11th

top 10 export destinations

1.	Canada \$2.53 billion	up 22 percent
2.	Australia \$640 million	up 11 percent
3.	Mexico \$465 million	up 36 percent
4.	Brazil \$250 million	down 17 percent
5.	Chile \$248 million	down 5 percent
6.	Belgium \$187 million	down 54 percent
7.	South Africa \$154 million	up 55 percent
8.	Singapore \$141 million	down 49 percent
9.	Colombia \$140 million	up 86 percent
10.	Peru - \$115 million	up 38 percent

place as an export destination for U.S. construction machinery.

General construction (residential and commercial) projects and transportation infrastructure continue to account for the majority of recent equipment sales revenue in Latin America and China, according to participants in our quarterly industry conditions surveys," said Arnold Huerta, AEM assistant director of international marketing.

The only other world region

showing a decline was Europe, with a decrease of 17 percent in construction equipment purchases (\$892 million) for the first half of 2006.

Exports to Africa grew 66 percent and totaled \$318 million. Canada took delivery of \$2.53 billion worth of U.S.made construction equipment, a 22-percent gain, and exports to Australia/Oceania increased 10 percent, representing \$657 million worth of construction machinery.

New Assigned Protection Factors (APFs) for respiratory protection programs are being incorporated into **OSHA's Respiratory Protection** Standard. APFs are numbers that indicate the level of workplace respiratory protection that a respirator, or class of respirators, is expected to provide to employees when used as part of an effective respiratory protection program. The standard will now contain provisions necessary for a comprehensive respiratory protection program, including selection and use of respirators, training, medical evaluation, and fit testing. For more information visit www.osha.org.

On September 1, California became the first state to require retailers to sell ultra-lowsulfur diesel (ULSD). All other states must begin selling the fuel by October 15. California was the first to act because of regulations issued by the California Air Resources Board. The refining industry spent \$8 billion to prepare for the conversion from traditional diagal fual

MTU Detroit Diesel hosts **Crane Day**

Engine manufacturer MTU Detroit Diesel (MTU DD) hosted over 60 guests from major crane rental companies, OEM dealers and distributors at its second annual Crane Day event in early September at the company's assembly plant in Detroit, Michigan.

After being led on a plant tour to see the latest technology in diesel engine manufacturing, participants were briefed on the latest MTU DD products and on updates incorporated to comply with 2006-2010 EPA emissions guidelines for both on- and offhighway applications.

MTU Detroit Diesel is the former off-highway division of Detroit Diesel Corp.

Watchdog assesses FEMA contracts

An analysis of Federal Emergency Management Agency (FEMA) records shows that some 90 percent of the first wave of (the post-Katrina reconstruction) contracts awarded were awarded to companies from outside the three worst-affected states, according to a report released by CorpWatch, a nonprofit corporate watchdog group.

After months of controversy and Congressional hearings, companies from Louisiana, Mississippi and Alabama had increased their share of the total contracts to a combined 16.6 percent, or \$1.17 billion, of the \$6 billion in total contracts FEMA had awarded nationwide by July 2006, according to the report. The report on Gulf Coast reconstruction construction contracts is available at www.corpwatch.org.



SC&RA task force briefs Ohio DOT on four issues

SC&RA's Truck Permit Policy Task Force recently met with the Ohio Department of Transportation, raising four issues for discussion: allowance of 60,000 pounds on tridems, 120,000 pounds gross allowance, resend capability of permits and specification of equipment by

As a result of the meeting, Ohio DOT officials committed to a clear review of the weight allowance criteria and will share this data with SC&RA, allowing the organization to consult with other state engineers and independent structural engineers in order to help move Ohio forward. Ohio's DOT will consult with neighboring states that allow 60,000 pounds on tridems to review and compare analytical processes.

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Liebherr reports strong growth in crane sales

GERMANY: Turnover at the Liebherr Group in 2005 rose 15.6% to \$6.7 billion. Performance was strong from the mobile, construction and maritime crane divisions, the company said.

Turnover in the mobile crane group, which includes crawler cranes, rose 13% to \$1.4 billion. The company said that of the 2,700 new all terrain cranes sold

worldwide last year, 1,100 were Liebherrs, giving it a market share

Spain and the US were cited as the best performing regions for mobiles, followed by the near and Middle East, India, Japan and China. Liebherr said that it expects turnover in the mobile crane division to exceed \$1.5 billion in 2006.

Construction (tower) crane

turnover rose \$131 million, or 26%, to \$636 million. Spain, the Middle East and the US were mentioned as the strongest

Turnover for maritime cranes rose \$73 million, or 21%, to \$385 million, with offshore and ship cranes achieving above average turnover. Asia, the UK and Western Europe were the strongest performing regions.

German harbor crane manufacturer Gottwald has celebrated three major landmarks. "This year is an eventful one for Gottwald. We are not only celebrating 100 years of company history, but also the 50th birthday of the mobile harbor crane and the sale of the 1,000th mobile harbor crane," said Mathias Dobner, Gottwald CTO.

- In the last two months MacGregor received orders worth \$19 million for 55 ship cranes. The cranes will be delivered during 2007 and 2008 to shipyards in Asia. Container vessels being built in China will take 44 while six bulk handling cranes will go to an Indian ship yard and three scrap handling cranes and two ship cranes are for a logistics company in Singapore.
- Austria-based loader crane
- Germany's VDMA association for construction machinery manufacturers, which includes crane builders, has raised its 2006 sales forecast for members from an 8% increase to 10%. **Association president Christof** Kemmann said the increase was due to continuing high demand.

manufacturer Palfinger reported record revenue for the first half of 2006. Revenue was 13% higher at \$371 million from the \$327 million in the first half of

"We have sold a lot of cranes in Europe over the years, but we are not active at the moment because of the CE-mark requirement." Akagi continued, "I think this will change in a year or two."

Whether Kato comes back to Europe remains to be seen. In the meantime, the company is seeing an improvement in its domestic sales, "Business is getting a lot better in Japan. It's slowly improving from the low point three years ago," Akagi said.

Like other manufacturers, Kato is finding it difficult to source some key components to help it keep up with demand for new cranes. "It is difficult to get materials, especially tires and high strength steel," Akagi explained.

Tadano celebrates strong first half

JAPAN: First quarter results for the fiscal year period April 1 to June 30, 2006 at Tadano in Japan show a 14% increase in sales compared to the same period in 2005. Sales were \$265 million for the guarter, with fleet renewal cited as the main reason for the rise. In overseas markets sales rose by 26% to \$106 million due to higher demand in North America, Eastern

Europe and the Middle East.

On the profit side, ordinary income rose 43.1% to \$25 million due to increased sales and improvements in the cost of sales ratio.

The company forecasts sales for the full fiscal year from April 2006 to April 2007 to total \$1.157 million.

Kato's latest launch

JAPAN: Kato Works exhibited three new cranes at the recent Conet exhibition in Japan. Largest of the three was the 71 ton capacity SL-650R truck crane. A notable feature is the three section telescopic hydraulic jib that raises the maximum hook height to 192 feet from the 144 feet for the main boom only.

Also on display was the MR-350SL, pictured, from Kato's city crane range. Like the SL-650R, this 38 ton capacity unit has a three-stage fly jib that increases hook height from 109 to a maximum of 155 feet. Also on display was the 14 ton MR-130 city crane.

All three cranes are designed for the Japanese market and, Kiyohiko Akagi, manager of Kato's overseas marketing department, said, "We are ready to export if there is demand but truck cranes like the SL-650R are only really popular in the US and Japan." This partly explains why the company has pulled back from the European market in recent years. Akagi explained,



CHRIS SLEIGHT is one of the world's most internationally renowned construction business writers, with specialist expertise in financial markets and stock market analysis. He is editor of KHL's marketleading International Construction

and Construction Europe magazines, and is a regular contributor to ACT's sister publication, International Cranes and Specialized Transport.

nare prices in the sector took off in a big way last November, and this steep rally continued for seven months. However, mid-May saw the sentiment flip from bullish (buying dominates and prices rise) to bearish (selling dominates, prices fall).

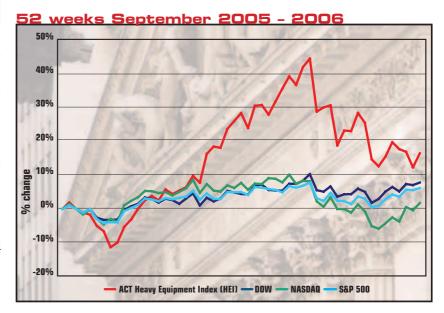
It was odd to see the markets fall so sharply, given how strong the industry's fundamentals were at the time, and remain today. Yes, oil prices, inflation and interest rates may be a worry, but manufacturers' backlogs are still growing, cranes are like gold dust and the construction and mining industries generally seem run off their feet... So why did share prices take a nosedive?

The first thing that happened is that equipment shares got overbought, and therefore overvalued during the rally. Realizing this, investors took their profits out of the market, and it is that strong selling sentiment that has prevailed since.

Share prices may be related to factors like economic growth and corporate profitability, but their behavior is also governed by the forces of the stock market itself. Factors such as the supply and demand for a particular equity can drive its price movement, irrespective of how much money it is making.

There is a branch of market analysis called Technical Analysis The industry is riding high, but equipment manufacturers' share prices have been heading south for months. Perhaps it's time to forget about industry fundamentals and crunch some numbers instead. Chris Sleight reports

Technical view



(TA), which ignores any sort of fundamental economic or corporate information. Instead it looks at trends in prices - these apparent market quirks - to make predictions using statistical tools.

Technical analysis

So since share prices in the sector don't seem to have much to do with fundamental factors at the moment, what does TA tell us about the future?

One general rule is that periods of price volatility are followed by periods of stability (and vice versa). This seems true at the

moment, with smaller weekly movements compared to the steep rises and losses seen earlier in our 12-month timeframe. This trend of relative stability could be one that continues.

Other TA tools such as Relative Strength Index (RSI) show the ACT Heavy Equipment Index is in a period of relative weakness. However, prices have not fallen far enough for them to be undervalued. Equally, a tool called Moving Average Convergence/ Divergence (MACD) indicates weakness, but again, prices are not low enough for this indicator to give a buy signal.

TA also includes the concepts of support and resistance. Support is a level below which an indicator will not fall, while resistance is a high it cannot break. The more frequently these levels are touched (but not breached), the more entrenched they become, and the

harder they are to break.

the current atmosphere, support is important (resistance comes into play when prices are rising). The graph shows two low points, around +12% for the year to date, which have been hit in the last 2 months, which could be the Index's support level. These points correspond to a value for the Index of 122 points.

Outlook

The TA view then is that the ACT HEI will continue to fall for a few weeks, although there should not be any sudden losses. There seems to be a support level around 122 points, which the Index should not fall below. More bullish sentiment could emerge by earlyto mid-October.

DISCLOSURE: Chris Sleight does not own shares in any of the companies named in this column.

about the index

ACT's Heavy Equipment Index (HEI) tracks the performance of 10 of America's most significant, publicly-traded construction equipment manufacturers - Astec Industries, Bucyrus, Caterpillar, CNH, Deere & Company, Gehl, Ingersoll-Rand, JLG, Joy Global, Manitowoc and Terex. In every issue we will report the performance of the HEI against America's headline stock market indicators, with commentary about the sector's ups and downs.

OSHA'S list of most frequently cited citations for the crane and rigging sector is long and varied.

Here's a sample. Terry Young reports



TERRY YOUNG is president of Construction Safety Experts Inc. and a member of the board of directors of the SC&RA. He can be contacted at 919-632-3068 or e-mail: terry@safetyxperts.com

Frequently cited

here are many published documents listing the most frequently cited citations by OSHA. As they do not all apply to the crane and rigging industry, Young has developed a list based on information gathered from OSHA cases, insurance companies and information from Construction Safety Experts Inc. client data. Some of the citations were issued from the OSHA General Duty Clause requiring all employers to provide each of their employees a place of employment free from recognized hazards that are likely to cause death or serious physical harm to employees.

Violations of the respiratory protection requirements were related to companies with painting or welding operations. Crane and rigging, fall protection, hazard communication and powered industrial trucks are programs and violations that have an impact on the safety and health programs of all

crane and rigging companies.

A good systematic safety program will provide a safe workplace for employees, allowing employers to create a safety culture that management and employees will learn to appreciate. A systematic safety program will also help to eliminate OSHA safety citations, lower insurance premiums, and have a direct impact on profitability.

The main reason to provide a safety training and education program for employees is to keep employees safe, showing that you value their well being. The second best reason is that employers really cannot afford not to

OSHA 1926.550

TOP CITATIONS WERE FAILURE TO:

- Furnish a crane operator's manual at the work site prior to operating the crane.
- De-energizes electrical lines or maintains minimum clearance distances.
- Obtain the manufacturer's written approval before making modifications to a crane.
- A willful citation for not ensuring that deficient or defective parts identified by a safety inspection were not repaired or replaced before continued use of the crane.
- Ensure that defective rigging was removed from service.
- Operating a crane with improperly adjusted components.
- Maintain a record and results of monthly crane inspections.
- Clear visibility from all windows in the operators cab.
- To provide anti-skid surfaces on all platforms and walkways on the
- To ensure that all special warnings or instructions were posted in that the controls were not labeled and load rating chart was not valid.



OSHA 1910.178 **Powered Industrial Trucks**

TOP CITATIONS WERE FAILURE TO:

- Provide a program and operator certification
- Employer to remove unsafe trucks from operation
- Inspect powered industrial trucks
- Ensure operator competency and training
- Provide a qualified trainer approved by the employer.



OSHA 1926.501 Fall Protection/Construction

- **TOP CITATIONS WERE FAILURE TO:** Provide personal fall arrest system.
- Train employees in the inspection and use of fall arrest systems.
- Provide proper construction and installation of fall arrest safety
- Proper supervision of fall protection program, policies and
- Lack of employee training.



OSHA 1926.451

Scaffolding/Construction

TOP CITATIONS WERE FAILURE TO:

- Provide fall protection.
- Properly supported scaffolding.
- Provide proper access and egress.
- Have an employee trained as a competent person.
- Train employees of the hazard of working on the scaffolding.



OSHA 1910.134

Respiratory Protection

TOP CITATIONS WERE FAILURE TO:

- Establish and implement a written program
- Provide Appendix D when voluntary use is deemed permissible.
- Conduct medical evaluations
- Employee training and can demonstrate knowledge of training.



OSHA 1910.147 Lockout/Tagout

TOP CITATIONS WERE FAILURE TO:

- Establish an energy control program.
- New employee training.
- Written energy control procedures.
- Yearly employee re- training.
- Periodic inspections of persons using the program and annual review of the program.



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Daniel Grace, Grace Crane Jacksonville, FL

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NCCCO renaming small and large telescopic categories

OLD NAME Small Telescopic. Less Than 17.5 Tons Capacity (TSS)

Small Telescopic, Fixed Cab (TSS)

NEW NAME

Large Telescopic, More Than 17.5 Tons Capacity (TLL)

Large Telescopic, Swing Cab (TLL)

he National Commission for the Certification of Crane Operators (NCCCO) is renaming its large and small telescopic mobile crane categories. The "Small Telescopic, less than 17.5 tons capacity" category will be known as the "Small Telescopic, fixed cab" category, while the "Large Telescopic, more than 17.5 tons capacity" will become the "Large Telescopic, swing cab" category.

"The 17.5 tons capacity was a threshold established in the very early days of the CCO program as a means of distinguishing between mobile cranes with fixed control stations, such as cab-down machines and many boom trucks and those equipped with rotating or swing cabs,"

A bird's eye view of the course that tower crane operators must successfully navigate to achieve their CCO crane operator certification said NCCCO executive director. Graham Brent.

As with many areas of technology, cranes have evolved over the last decade to the point where manufacturers now regularly produce fixed cab cranes with a capacity far greater than 17.5 tons. Realigning the



NCCCO crane categories have been renamed according to the type of controls they are equipped with, fixed cab or (as shown here) swing cab

two categories by type of control system rather than by capacity will eliminate the confusion sometimes caused when a particular model of crane seems to fit both categories, Brent said, while continuing to distinguish between the skills required for operating each type.

The certification codes, TSS and TLL, denoting small telescopic crane and large telescopic crane, respectively, will remain unchanged. The name changes will have no effect on the Practical Exam testing process, which has distinguished between fixed and swing cab for some time, noted Phillip Kinser, NCCCO's manager, program development. "And the cranes selected for the Written Specialty Exams already correspond with the appropriate control type within the respective TSS and TLL crane categories."

Changes to CCO program literature, including tests and correspondence issued by International Assessment Institute (IAI), will begin immediately, with completion expected by fall

Tower Crane recertification now available

The National Commission for the Certification of Crane Operators (NCCCO) has announced the availability of its CCO Tower Crane recertification written examination.

With the introduction of the new exam, crane operators who have been certified in tower crane operation can now make preparations to requalify in

Since the CCO tower crane certification program was introduced in late 2004, more than 1,500 operators have sat for the written examination, and close to 1.000 for the practical, reported David Ritchie. chairman of the Tower Crane Management committee. Ritchie is St. Paul Travelers' risk control specialist. cranes and rigging.

Certificants who have maintained 1.000 hours of crane-related experience in the last five years, and have a current, completed CCO Physical Examination form or a current DOT medical certificate, do not need to retake the tower crane practical examination to recertify.

"Although none of the tower crane certifications

issued has vet expired (certification is valid for five years), operators who need to recertify in mobile cranes can now also take the tower crane recertification written exam at the same time and thereby maintain their tower crane credential," Ritchie said. This has the added advantage that CCO-certified operators have only one common expiration date for all the categories of crane they may be certified to operate. That not only aids accurate record keeping, added Ritchie, but also serves to clarify the certification process.

All tower crane operators in the state of California must be certified by an accredited, third-party certification organization, such as NCCCO. Many maior employers throughout the US also require tower crane operators to be CCO-certified as a risk management measure. Ritchie noted.

Further information on the NCCCO Tower Crane recertification written examination is available from NCCCO at (703) 560-2391 or info@nccco.org



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LIEBHERR



New 35 ton RT from Grove

Grove is launching its RT535E, a new 35 ton capacity roughterrain crane that will be built at the company's manufacturing facility in Shady Grove, PA. The new model features a foursection 102 foot full-power boom, and offers a a 26 to 45 foot offsettable swingaway extension giving the RT535E a maximum possible tip height of 154 feet.

The company says that the crane's rectangular boom is made of high-strength steel, which offers weight savings and improved lifting capacity. The new machine features a new cab design with a streamlined dashboard control panel. The RT535E also features a Work Area Definition System, allowing the operator to pre-set safe working areas.

Maximum line pull from the main hoist is 11,640 lbs, while maximum line speed is 445 feet per minute. The RT535E uses 0.6 inch wire rope and can accommodate 450 feet of rope on both the main

and auxiliary hoists. crane is powered by OSB 5.9 Cummins six-cylinder diesel engine which offers 155 hp at 2,500 rpm. The crane can travel at a maximum speed of 25 mph.

Doyle Bryant, director of product development marketing for Grove, said the new crane fits well into the company's product range between its existing 30 and 40 ton cranes. Bryant expects interest in the new unit to be worldwide.

Liebherr planning new MK 63

At Liebherr-Werk Ehingen and Liebherr-Werk Biberach in Germany a new three-axle mobile folding construction crane, the MK 63, is under development.

The new unit will be the smallest in the MK range behind the four-axle MK 80 and the five-axle MK 100. Both these mobile folding tower cranes, or truck tower cranes, have a maximum capacity of 8.8 tons. The MK 100 lifts 1.7 tons at its maximum radius of 170 feet. There is also an MK 110 version of the MK 100 with more on board counterweight.

The existing models comprise a self-erecting tower crane from Biberach mounted on an Ehingenbuilt carrier.

Hybrid drive system

The RunWise hydro-mechanical series hybrid drive system is designed to reduce fuel consumption and engine emissions. For use in vehicles that frequently stop and start, the Parker Hannifin system replaces conventional drives with a system that combines hydrostatic drive for slower journeys with direct drive for high-speed.

The system is based on the Parker Power Drive Unit and has brake energy recovery technology that is claimed to reduce brake wear.

TAC-3000 prevents tower crane collisions

The TAC-3000 tower crane anti-collision from Persha International 11565 technology to monitor the actions of all cranes on a construction site. The anti-collision, boundary, and zone protection capabilities are suited for single or multi-crane installations, can be used on top slewing and luffing cranes, and is programmable for up to ten cranes per site. Distributed via a high-speed network, Persha claims the TAC-3000 requires minimal commissioning time compared to systems that use a mechanical interface

The anti-collision feature detects and anticipates the risk of hook block, jib, or counter jib collision when multiple cranes of different or same height are in use.

Boundary protection is achieved with a 25-point area in which the hook block cannot operate or

The zone protection feature can determine up to six prohibited zones in which the hook block or jib are not allowed to operate. It prevents the hook block from over-flying restricted zones like buildings, highways and other public areas.

Long boom **GMK4100**

New from Grove is a longboom version of the GMK4100 (GMK4115 in the US) all terrain that was launched at the Intermat show earlier this year in Paris.

The four axle 100 tonne capacity GMK4100-L has a 196 foot seven section boom (against the 170 feet of the standard GMK4100) that telescopes to its maximum reach in nine minutes. Maximum tip height is 272 feet and the 32 to 55 foot bi-fold hydraulic luffing swingaway jib has a 16 foot insert. The company said that the extra reach makes the crane particularly suitable for the assembly of top slewing tower cranes.

Features shared with the standard GMK4100 include a 295 kW (390 hp) Mercedes Benz carrier engine, a 110 kW (147.5 hp) direct fuel injection superstructure engine, and up to 26 tonnes of counterweight.

Gerhard Kaupert, director of engineering on Grove's all terrain cranes, said, "The customer voice remains the driving force behind product design. That is why we created a four-axle model with extra reach, as our customers look for increasingly quicker ways to erect Potain tower cranes. Investments made in research and development for the GMK4100-L have been significant, and we anticipate that the GMK4100-L will generate the same strong levels of interest as the standard model."

Custom manifold blocks

A new series of compact custom manifold blocks (CMB) from Sterling Hydraulics have been designed so that hydraulic services and electro-proportional control of clutches in transmission systems can be centralized. Claimed by the manufacturer to be easier to install and more compact than conventional piped hydraulic assemblies, the units can be fitted with accumulators, gauges and filters to eliminate separate mounting and piping. The CMBs are machined from a single block of aluminium alloy, steel or cast iron and are rated for a minimum of one million cycles at full working pressure. They are supplied fully assembled and



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ATF110G-5



130 Tons 170.6' boom + 98.8' jib

ATF45-3 (50 tons) ATF65G-4 (75 tons) (100 tons) ATF160G-5 (200 tons)

111.5' Boom Length / 49.9' Jib Length 144.3' Boom Length / 52.5' Jib Length 159.1' Boom Length / 52.5' Jib Length ATF110G- 5 (130 tons) 170.6' Boom Length / 98.8' Jib Length 196.9' Boom Length / 122' Jib Length 223.1' Boom Length / 122' Jib Length

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A

Among the hundreds of projects Terry Emmert categorizes as challenging or important, here's a sampling:

- For the Oregon Department of Transportation, removed a railroad bridge that spanned the Bear River in Southern Oregon. The project won the SC&RA's 1999 Rigging Job of the Year.
- Transported three liquor accumulator tanks in sub-zero temperatures. The project won the SC&RA's 1996 Hauling Job of the Year.
- Transported two gold precipitator casings valued at \$500,000 each from Tacoma, WA to a gold mine in Nevada. This project won Emmert International the SC&RA Trucking Job of the Year.
- Relocated the historic mansion the Milheim House, the largest and heaviest (600 ton) structure ever moved in the state of Colorado, to Denver.
- ☼ Established record for the longest, most valuable load transported the longest distance in 1990 (transcontinental relocation of \$60 million experimental steam generator from Pensacola, FL to Los Angeles, CA). The project received the 1991 SC&RA Hauling Job of the Year award.

Emmert says that for most of the large-scale jobs his company completes he has hands- on involvement. "I am always there with the television cameras rolling," he says with a chuckle. "Hey, there's no business like show business."

Multi-tasker extraordinaire

Terry W. Emmert is one of the most energetic,

informed and vibrant people in the industry of specialized

transport. D.Ann Shiffler reports

n baseball, a player that can get the key hits, make big home runs, steel bases, throw out the tying run at the plate and make spectacular defensive plays is termed a "five-tool player." If there were a five-tool player in business, Terry Emmert would definitely fall into the category. An energetic and certified "Type A" businessman, Emmert makes the most of every day, dedicating a portion of his expertise, wit, charm, empathy and heart to people and efforts he deems important. In baseball terms, Emmert bats a 1,000.

Terry Emmert founded Emmert International in 1968, growing it into one of the largest specialized transport companies in North America. When it comes to transporting oversized, over dimensional and downright difficult to move objects, Emmert International has developed a reputation as the company to call to solve rare and difficult rigging and hauling challenges. If there's a piece of equipment needed that doesn't exist, Emmert will design and manufacture one to get the job done. The company has won the SC&RA Job of the Year contest 21 times (see box).

In addition to running one of the largest and most visible specialized transport companies in the world, Emmert owns and oversees the management of two tennis and swim clubs, a large-scale industrial and residential real



From the left, Roy Emmert, Terry W. Emmert, Oregon Governor Ted Kulongoski and Terry Michael Emmert (Terry's son)

estate development and property management company, the largest breeding herd of Asian water buffalo in the US, a slaughter house and meat packing plant, an organic orchard and, if that were not enough, an international basketball team which last year made it to the western regional playoffs.

And then there's Emmert's community service, a list which is long and varied. He has long been active in the SC&RA, chairing the organization's transportation group board. He has also been active in his community, chairing hundreds of programs and campaigns to benefit various causes, mainly youth development.

How does he have time for all this? His answer is simple, "you really only need six hours of sleep a night." In this interview Emmert discusses the specialized transport business and all the "other" things that take time out of his day.

What is it that you like about transporting, moving, lifting and rigging oversized and heavy objects? What come to mind as the most challenging projects your company has undertaken?

It's definitely the challenge to do what others say can't be done, to accomplish projects that others say are impossible. Basically it's charting a new territory in transportation. We often do what hasn't been done before. We work to come up with new ideas and new methods, innovative ideas. That's really what it's all about, traveling down a highway hauling something that no one thinks can go down a

As far as the most challenging projects what comes to mind are numerous jobs that challenge in a different way. The Fairmount Hotel in San Antonio, TX, that was a unique job. There are other buildings that have been moved, but what is significant about this job is that we moved it with all our own equipment that we had designed and manufactured ourselves, all by Emmert, which made it a tremendous accomplishment. The Las Vegas odds makers said it couldn't be done. We did it. (See box story opposite)

Another job was a record breaking haul, the largest load at that time across the longest distance - a generator that we moved from Pensacola, FL to Los Angeles. We say the haul involved seven states and one foreign country, that foreign country being California. We moved the generator and since then the California DOT has recognized the dolly transport system as a safe, dependable, fast form of transportation. The state of California had no idea that dollies could travel at speeds of 35 to 40 miles per hour.



What is the biggest challenge for Emmert International in today's business environment?

Dealing with all the changes that have taken place in our economy and the people available to work with. There's a tremendous challenge to find the right personnel for the right project. It's like a coach for a team, you need to be able to pick the right player for a job. But like coaching a good team with all the talent in the world, unless you put together the right team, you don't win. You have to have a coach who knows when to put the right player in the game at the right time, matching up the right personnel with the task. This is difficult to do in today's employment world because of the lack of qualified people being available

It is now a very litigious society we are doing business in. [At Emmert,] we have been blessed to have a great team that gives an unbelievable team effort and that brings us a lot of customers and repeat business.

Fast forward 10 years - how will Emmert International be different? What about 20 years from now?

I think we have to continually change with the times. We have to adapt our methods and our relationships with customers and governmental agencies. We must change with the times, we must come up with new and better ideas. And

we always will have to keep safety our number one priority.

I think this will continue to happen at Emmert. We are going to be challenged to come up with new ways to move larger loads, bigger loads, safely and complying with all the regulatory agencies and find ways to properly distribute the rates in compliance with these regulations.

Do you envision expansion beyond Emmert's current scope of operation? Merger? Acquisition?

We have performed many acquisitions. The most recent was we expanded into Texas in the 1990s. We've acquired heavy haul divisions and specialized carrier companies. As for what is next, if the right opportunity is there we will look at it. We do not have any prepared plans. We don't have anything on the immediate horizon.

Emmert has a fleet of some 500 pieces of equipment, vehicles and trailers. Of all the equipment and vehicles in the Emmert fleet. which is the most impressive to

The SC&RA first rigging job of the year we won all the equipment was designed and manufactured in-house. Our first hauling job of the year we won, we also designed the dollies and hydraulic jacking systems.



I believe our dollies are an innovation; we started making dollies in 1970. In 1974, we developed a 50 ton dolly and in 1976, a 60 ton dolly and in the 1980s we developed the self propelled hydraulic dollies. In 1982, we started building a fleet of 70 ton dollies which were utilized in that Fairmount Hotel move. When you look at dollies, we think of a set of tinker toys. You can take and put them together in

D-87700 Memmingen

Among the most notable of Emmert International's specialized transport projects was the hauling of the Spruce Goose, Howard Hughes' wooden aircraft, from Long Beach, CA to a museum in McMinnville, OR. "We transported it by dollies onto an ocean-going barge up the Pacific Ocean to the Columbia River to Portland," Terry Emmert recalls. "[While we were in Portland,] then Mayor Bud Clark declared a proclamation of "Spruce Goose Day," as the plane was tied up on the barges."

In the 1984 the company took on what was deemed an impossible project, moving the historic San Antonio Fairmount Hotel to save it from the wrecking ball. The idea of a 3.2 million pound hotel being transported down the street and across a bridge and over the RiverWalk and including a couple of 90 degree corners was one that generated a tremendous amount of media interest. Tom Brokaw covered it for NBC News and David Frost featured it on his show. "We received international coverage for the move," remembers Emmert. "Twenty years later we can still see it on television. We were doing 20 to 30 interviews a day at one point."

An historic property that was built in 1906, the Fairmount is an important part of the history of San Antonio. On April 4, 1985 at an approximate cost of \$1 million, Emmert crews placed the building onto its new foundation. The project won the SC&RA Hauling Job of the year, the AGC's Build America Award and the **International Association of Structural Mover's** Largest Structure Moved award. In 1986, the **Guinness Book of World Records included the** project as the largest structure ever moved on

different combinations to build a transporter and make it into different configurations based on what is required - spreading the weight with a wider or longer base.

There's one dolly we call Big Red. Big Red won us the hauling job of the year in 2002. It was a big load that was hauled in Texas. We have four or five versions of the Big Red. We have seven different hydraulic dolly transporters, seven different styles and configurations that you can use component parts from other units to make them work, they are all red, but Big Red is the biggest one, and in all honesty that's our key mark - the dollies we manufacture and build the transporters using our own tinker toys.

Our dollies have been used to transport items such as the Hubble telescope, the Star Wars project, the Delta IV Rockets, and the Spruce Goose (see box left), another one of those that would go in the "challenging job" category.

We also have a railcar that is Big Red on rail. It's a 20 axle rail car with the largest deck section in the US. It works hand in hand with our Big Red over the road. Everyone likes to play with trains and we have a big train.

We didn't develop the rail car, it was built by a railcar manufacturer. But it's available in our fleet and it opens up a lot of doors and opportunities for us. We have a project coming up for our rail car that will be the largest load ever to be transported by rail in the US.

Finally, about our equipment, a couple of things we've been instrumental in is taking a standard truck and adding special transmissions and gearing, modifying a factory truck to meet our needs...special gearing, special decks, special beds, winches and even steering. Two of our earlier prime movers we built in the 1970s are still operating on a daily basis and both are crane carriers. One is named Brutus and one is named Sampson.

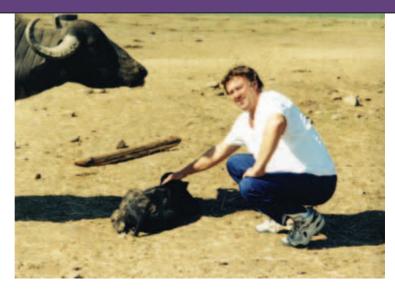


e-mail: info@goldhofer.de

In addition to running Emmert International, you are involved in many other business ventures - real estate, tennis clubs, a basketball team, organic farming, a herd of buffalo, horses, plus all the industry and community service. How do you have time for it all?

I would say it's a great ability for multitasking. [As for community service], I have a hard time telling charities and organizations and functions I don't have time. I truly feel that if we do not have the time to help our youth today, we won't have a future tomorrow. Our youth need to have a decent chance. It's a complicated world they live in now, that's why I've always been so involved in youth organizations.

I firmly believe that the United States is a land of opportunity and we owe everybody an opportunity. We need to take care of our elderly and our young people and those who are less fortunate and have a handicap of one kind or another. We don't owe anybody a free ride. If they're able bodied they need to be a part of our society and to contribute to this country and support this country. I've had the opportunity to meet some wonderful people who are great mentors and great role



models, not only in the SC&RA but also in the business world. I am very passionate about giving back, and it takes a lot of time to give back. Even in our industry, we need to give back. I can say that the SC&RA has allowed me the opportunity to make some wonderful business contacts and develop friendships with wonderful people.

Terry Emmert founded Emmert International in 1964. In addition to the specialized transport company he owns a dozen or so other enterprises, including a 700-plus herd of Asian water buffalo and a basketball team

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Last year, just days after Hurricane Katrina ravaged the US Gulf Coast, American Crane & Transport dispatched Dan and Gini McKain to the region to survey the damage. A year later the McKains traveled back to the Gulf Coast to chronicle recovery efforts. Here's their exclusive report

After the storm

t an event marking the anniversary of Hurricane Katrina and a demonstration of a new floodgate system in New Orleans, Lt. General Carl A Strock, P.E., commander and Chief of Engineers, U.S. Army Corps of Engineers, discusses the massive recovery effort that is still underway: "Without hesitation I would say that the heavy lift cranes used by our many civilian contractors have had a vital part in our recovery effort from the devastation of Hurricane Katrina."

At the London Street Canal, Boh Brothers Co., a major contractor in the rebuilding effort in New Orleans, used a Tadano hydraulic crane to assist in raising and lowering the 7.5 to 10 ton, 35.5 foot long by 11 foot wide, heavily reinforced gate sections. Strock, a combat veteran and registered professional engineer, commended the work of scores of contractors who are still working to rebuild flood-ravished New Orleans.

"From the very beginning we have worked closely with a firm in New Orleans called Boh Brothers," he says. "While the flooding waters were still flowing, the only way we could get these stopped was for them to bring in cranes to drive sheet pile against a highway bridge to isolate the (levee) breaches. We could not have done this without the cranes."

The construction of the London Street Canal Project was one of three undertaken by private contractors with the Corps of Engineers. The other two were at the Orleans Street and 17th Street Canals. They are all part of the work to upgrade the system to cope with a 100-year

As soon as the skies cleared, a Boh Brothers'
American 5300 crawler crane was driving a
sheet pile cutoff wall to stop the water flow
through the breached levees. Today the crane
remains onsite, working to rebuild New Orleans'
extensive levee system

flood protection level, work that is projected to continue through the calendar year 2010. To date the US Congress has appropriated more than \$5 billion to complete this work under 59 separate USCOE contracts. By early September, some 26 contractors had





regional focus: southeast C



Left: Several Manitowoc 4100 Ringer cranes have worked from barges repairing the damaged levee system in New Orleans. Initially the cranes were removing debris washed into the waterways. Today they install massive flood wall storm gates

Below: Work on the London Street Canal has involved scores of cranes. The levee system is being upgraded to cope with a 100-year flood protection level. Work is projected to continue through 2010

been awarded jobs and 90% of the companies involved are firms headquartered in the Gulf Coast region.

Just a year after three major hurricanes, including Katrina, wreaked havoc and caused billions of dollars in damage along the Gulf Coast, there were more heavy lift cranes working on repairs to America's hurricane damaged infrastructure than on any other project. Billions of dollars and hundreds of cranes have been committed to the work. Contractors assembled a contingent of rubbertired and crawler cranes ranging from 8 to 350 tons capacity, to rebuild or repair roads, bridges, highways, levees and entire cities and towns

From Florida to Texas, the American coast that fronts on the Gulf of Mexico, and most especially much of the highway and bridge infrastructure, suffered severe structural damage during both the 2004 and 2005 hurricane seasons, Hurricanes Ivan, Katrina and Rita had left a wide swath of destruction. The majority of the bridge damage occurred along I-10 and U.S. Rt. 90, which lies south of Interstate 10 and just north of the gulf waters. For decades this road has been used by tourists as a scenic highway.

Hurricane Ivan severely damaged the I-10 bridges over Escambia Bay in September 2004. Replacing the storm-damaged I-10/ Escambia Bay Bridge is a top priority for

the Florida DOT, USDOT and the Federal Highway Administration. The immediate goal is to construct one bridge that will contain four lanes of traffic (two in each direction) by December 2006. The existing bridges over Escambia Bay will be replaced with two new bridges. The proposed bridges will each consist of three 12 foot travel lanes and 10 foot inside and outside shoulders. Tidewater Skanska and Flatiron Constructors are the

general contractors on the \$243 million job, where more than two dozen land and bargemounted Manitowoc cranes are working,

Bridge on the east, which was completely destroyed by Katrina, is being rebuilt as is the bridge between Bay St. Louis and Pass Christian on the west. Both will require years > regional spotlight: southeast

In Louisiana the first phase contract has already been awarded for a new \$800 million twin bridge structure across Lake Pontchartrain

of work and millions of dollars to rebuild or replace. Construction just started, almost a year after the bridges collapsed and fell into the Gulf. In Louisiana the first phase contract has already been awarded for a new \$800 million twin bridge structure across Lake Pontchartrain. Construction is now underway by Boh Brothers.

It is in the inundated city of New Orleans, however, where the U.S. Army Corps of Engineers continues to make semi-permanent and expensive repairs to the storm-breached levees, and where dozens of cranes work eight hours a day, and often day and night. The skyline in certain levee side areas resembles one full of dueling crane booms.

Boh Brothers has been completing several major contracts involving rehabilitation work, almost from the day Hurricane Katrina ravaged the Crescent City and inundated its vital infrastructure. As soon as the skies cleared one of Boh Brothers' American 5300 crawler cranes was driving a sheet pile cutoff wall to stop the water flow through the breached



Lt. General Carl A Strock, P.E., commander and Chief of Engineers, U.S. Army Corps of Engineers, commended the work of hundreds of heavy lift cranes involved in the recovery effort in New Orleans





levees. Initial work included the use of several barge-mounted Manitowoc Series Three heavy lift marine cranes to clear sunken debris that blocked the mouth of the Mississippi River at the Southwest Pass. This is the main shipping channel for ocean-going international ships. Since that time and at the present, Boh Brothers has been using a fleet of its own and rented cranes to drive piling and construct new flood protection structures at the 17th Street levee and other areas throughout the city.

Crane work includes pile driving, pouring concrete and lifting and positioning machinery (pumps and generators) and handling heavy components, including the vital floodwall storm gates. Leading the way of this crane fleet has been a series of Manitowoc 4100 Ringer cranes. A number of American and P & H 300 ton capacity crawler cranes have also been used.

Last year, in an exclusive interview with American Cranes & Transport, Boh Brothers spokesman Fred Fuchs said his crews were working 24-7, even though 60% of their workforce had lost their homes and possessions in the

storm. Pickup truck sleeping accommodations were common in the days immediately following Hurricane Katrina.

Today living, sleeping and working accommodations have improved considerably for the contractors' crews, although the work has not gotten any easier nor has the intense pressure to complete the projects quickly eased all that much. Everyone is painfully aware that it would take only one single wayward hurricane to inflict wrack and ruin on the Gulf Coast and New Orleans area all over again.

The one positive fact is that the men, women and machines of the private contractors, including their contingent of heavy lift cranes, are ready to respond to any challenge thrust on them by Mother Nature.

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Self erecting tower cranes are slowly but surely being accepted into the North American market. What has taken so long?

D.Ann Shiffler reports

Seeing is believing

etting the nod to host the 2010 Winter Olympics was a big deal for the city of Vancouver, British Columbia, and they are already preparing for the big event. First on the agenda in preparation for the occasion is the construction of a rapid transit line, an elevated and submerged rail system with a price tag of \$1.7 billion.

With five, count them, five, self erecting tower cranes on the project, the job is an especially big deal for John Brons, manager of the Coast Crane Vancouver branch. "It is a great showpiece for us right now," he says. "It is of interest to a lot of crane owners because it's a visible project and because it's a little bit away from the norm."

Rather than drilling the tunnel for the underground portion of the rail line, contractors are performing a "cut and cover" process, which involves cutting a trench boulevard and then covering it over. After the trench has been dug the self erectors follow

along and assist with the construction of the walls of the subway tunnel. The Potain models on the project include three Igo 50s, an HD 40 A and an MA 21, a mix of rental and purchased machines, Brons says.

This project is not only a showpiece for Coast Crane and the Manitowoc Potain brand, it is also a milestone for every self-erecting tower crane manufacturer trying to increase market share for this product in North America. The route to introduce these cranes to contractors and sell them on their benefits and capabilities has been a long, hard road.

Catching on

When it comes to buying or renting construction equipment, contractors generally know what they need to complete the task at hand. Most often, they decide on a crane that they have experience with, a machine they consider tried and true. For this reason, selling a contractor on a self erecting tower crane is

difficult, even though the machine has a list of attributes a mile long. Contractors aren't willing to "experiment" on a jobsite, and this mindset is why self erecting tower cranes have been slow to catch on in North America.

"We have been at it four years," says Kevin O'Connell of Connecticut-based Shawmut Equipment, also a Potain dealer. "We had to spend a lot of time and commit resources to get the word out about these cranes."

For more than two years, Gerry Wiebe has been working to establish distribution and a North American market for Koenig self erecting tower cranes. While he was sold on the design, engineering and capabilities of these machines, he too has faced the challenge of introducing the crane to customers who had never seen such a machine or had any idea what it could do. "There are two elements,"

A Koenig K43T works on a multi story apartment building in Edmonton, Alberta last winter



A Koenig K72 works on a multi-stage condominium project in Lions Bay British Columbia





LEFT: Five Potain self erecting tower cranes are working on a \$1.7 billion rapid transit project in Vancouver, BC. Portions of the rail line will be underground. Rather than drill a tunnel, contractors chose a cut and cover process where the self erectors follow the trench to build walls

BELOW: A Potain HDT 80 self-erecting crane is constructing a six-story addition to Harvard University's historic Hasty Pudding Theater, in Cambridge, MA. Built in 1887, the theater is an important part of the campus and is the home of Harvard's Hasty Pudding Theatricals, a prestigious fraternity started in 1795

Wiebe says. "Educating the crane industry about ownership and demonstrating to them how to use the crane."

In the case of a self erecting tower crane, a salesman can't just show the customer product literature or a video. For this machine in particular, the contractor must see the machine at work to visualize how he could use it on his jobsite. O'Connell says he has had to "get creative" to self the market on self erectors, taking them on road trips, hauling them throughout

the Northeast to jobsites and contractor headquarters, in a show and tell and sell effort. "It has been a pioneering effort, and in many ways it still is," says O'Connell.

Brons says the self erector is a product that the user must see to understand how it works, which is why it requires so much demonstrating. "Coast Crane was among the first companies to bring this crane to the market," says Brons. "We have done very well with this crane, as well as anyone in the market. I am not sure why the self erecting tower crane doesn't really take off. It may be a mixture of the sales people not giving it enough attention or the contractors being old fashioned and not wanting to try new things."

Whatever it is, Brons, O'Connell and Wiebe concur that it's not about what the product cannot do. Once contractors can see the machine in action – its small footprint, ease of radio remote control operation, electrical power, quiet operation and ease of transportability and set-up, they are often amazed.



Provides solutions

Ward Coffman who, with his wife Beth, owns and operates Boulder Valley Crane Service in Boulder, CO, is a new dealer for Koenig. He saw the Koenig product as an opportunity to expand his business by providing a good material handling solution for existing customers, specifically in relation to urban infill, urban redevelopment and mountain properties, which provide specific problems in regard to crane setup. "We saw this crane as a viable solution so we signed up and started buying a few and we've been really successful with them," says Coffman.

O'Connell has also been successful renting and selling the machines to contractors working on mountainside projects. "We had luck early on in rural settings, mountain homes, lakeside homes, and ski resort condominium projects," he says. "This gave us an opportunity to learn about the cranes ourselves."

Shawmut is now introducing the cranes to urban contractors and is making inroads in more mainstream settings. Recently the company put a HDT 80 on a job at Harvard University. "It was a unique application," he says. "There was very little room on the jobsite and Cambridge is very strict about allowing streets to be closed so the contractor couldn't have any equipment on the street."

Using the space in a small courtyard, they were able to "sneak" the crane into a tight alleyway, setting it up and servicing the structure inside and behind the existing building with the ability to reach out over the street to unload trucks to keep city streets open, O'Connell says.

With 12 Koenig models and two more to be introduced in Germany in the spring at Bauma, Wiebe says that he is getting more and more inquiries about self erectors. In 2006 he has signed up Koenig dealers in Colorado, Ohio, Indiana, California and Washington and will announce others before year end. Koenig has developed an "American package" self erector that has brought many inquiries.

At long last, Wiebe said the market is "opening up" for the self erector product. Customers are realizing their benefits.

With 40 self erectors in its fleet in Abbotsford, British Columbia, Wiebe says Koenig North America has some 18 cranes on order and that it has sold 23 cranes in western Canada and the Western region of the US in the last couple of years.

Competition emerging

O'Connell explains, "Contractors are now seeing them as an option," he says. "We definitely have more and more contractors coming to us, rather than us going to them."

And not only are informed contractors starting to inquire about renting or purchasing these machines, they are also looking at the range of brands available, which is also a good sign. "We certainly find that other brands are coming up in our discussion with customers," says O'Connell.

Coast Crane has sold between 40 and 50 self erectors since it started marketing them a few years back and it has close to 114 self erecting tower cranes in its fleet. Brons too has run into the competition, especially now that Koenig, Liebherr, Piener and Comedil are offering self erecting lines in North America. "The rental market for these cranes continues to grow," he says. "We are now running into competition for rentals"

Competition is a good thing, mainly because it proves market awareness. Wiebe has done an inordinate amount of research about the market for self erecting tower cranes in North America, working to determine market potential and to target the projects and the customers for this product line. He believes the potential for self erectors is huge, mainly because they are applicable to so many jobsites, because they are so reasonably priced as compared to a mobile crane, and because of their ease of operation and use.

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The popularity of Manitowoc's Model 16000 crawler crane in wind power applications continues to rise. The Model 16000 has an optional, pin-on 23 foot upper boom point designed specifically for applications such as wind turbine erection and which offers a capacity of 105 tons



The LR 1400/2 distinguishes itself due its multi-functional boom system, quick crane assembly and cost-effective transport of crane components. The 400 ton machine is controlled and monitored via the LICCONcomputer system. As wind turbines become taller and heavier, the Liebherr LR 1750 will become a heavy hitter in US wind farm work

Wind turbine erection has become the field of dreams for crane operating companies that are hitting home runs in this high flying industry. D.Ann Shiffler reports

Batting a thousand

eep in the heart of West Texas, the rugged terrain has been punctuated by sleek, high flying wind turbines. On the horizon, the white whirligigs twirl fervently, generating more than just electrical power, but also enthusiasm among a long list of business entities focused on reaping profits from this new type of harvest. Wind farms in West Texas continue to be the new "big thing," especially since the revelation in August that Texas overtook California as the nation's top wind energy state.

Moreover, wind power is a big deal throughout the country. Wind energy installations now exceed 10,000 megawatts in generating capacity, a huge milestone, according to the American Wind Energy Association (AWEA). The organization also reports that with hundreds of wind farms under construction in the US, wind turbine manufacturing companies have recently opened facilities in Iowa (Clipper Windpower), Minnesota (Suzlon), and Pennsylvania (Gamesa). "Wind turbine orders are creating jobs all the way down the supply chain, sometimes in areas that do not have a large wind resource, such as Louisiana," the organization says.

The crane and transport sectors are among the industries that are benefiting from the investment in and proliferation of wind power generation in the US and Canada. "Even if there is a downturn in the economy, the good thing about the wind business is that the demand will continue," says Butch Robertson, who specializes in renting cranes to the wind power industry for Buckner HeavyLift, "Wind projects have been a great way to keep our big cranes busy year-round."

High Flying

With a fleet of 13 Liebherr LR 1400s, and nine Manitowoc 999s, Buckner is a well known player in the wind turbine erection business throughout the US and Canada. Robertson says his company has currently or has had cranes working on wind farms in Texas, Arizona, California, Washington, Oregon, Oklahoma, Kansas, Montana, Wyoming, Colorado, New Mexico, New York, Iowa, Pennsylvania, North Dakota and Illinois as well as in Canada.

Among the biggest issues for crane rental firms pursuing wind farm work is supplying the cranes that are in such high demand. Among the biggest issues for wind farm contractors



With ease a Manitowoc 999 owned by Buckner HeavyLift sets in place the lower portion of a wind turbine





The CC 2800-1 can be converted from being a standard crane into one dedicated to wind power applications by means of a few accessory devices. Fitted with a 90 meter SH/LH SGLmax main boom plus special LF2 12 m (40 foot) wind power jib, the crane hoists loads weighing up to 125 tonnes (138 tons) to a hub height of 94 meters (hook height 102 m) (308 and 335 feet)

a smaller crane generally is also on site to erect the lower and mid portions of the turbines, Robertson says. In the case of Buckner HeavyLift, they often supply a Manitowoc 999 to accomplish these tasks. Often smaller RTs are used to complete foundation work and help the larger cranes with the erection process.

is procuring the cranes and experienced operators, and also getting the wind turbine components, ranging from the turbines themselves to the related power transmission equipment. The strong demand for wind turbine components has the manufacturers of this equipment ramped up beyond capacity, with some estimates that turbine manufacturers are sold out for the next four years. There's quite a bit of finesse involved in assuring that a site has components to erect and the cranes

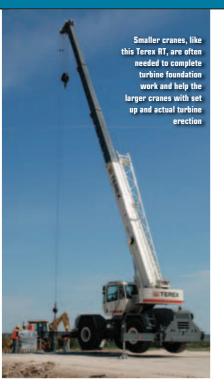
And then there's the weather issue, according to Buckner's Robertson. Obviously, because wind farms are located in areas where the winds are typically high, crane operation must be carefully monitored in order assure safe operation. Often work must be shut down on a wind farm when wind speeds exceed the limit for safe crane operation. As well, rain can be an issue, especially compromising when foundation work is being completed.

Among the wind farms on which Buckner has cranes, the LR 1400 is most often the centerpiece machine. For most turbine configurations, Buckner will typically outfit its LR 1400s with 253 feet of main boom and 57 feet of fixed jib at a 10 degree offset. The crane has 342,000 pounds of superstructure counterweight and 95,000 pounds of carbody counterweight, Robertson says.

While the Liebherr LR 1400 is used to erect the upper most portions of the wind turbines,



industry focus: wind power c



However, the process for erecting turbines and the cranes used differs from one project to another, based on the turbine manufacturer, terrain, crane rental company fleets, availability of cranes and other factors.

Robertson says that Buckner's Manitowoc 999s that are used on a wind farms are rigged

to set the lowers and mids to a height of 160 to 200 feet, far less than its rated capacity. The beauty of the 999, according to Robertson, is that it can move between foundations easily. even on rugged, rocky terrain. In a normal situation, when all the wind turbine components are available and the cranes are ready to work, a contractor can erect 120 turbines in less than six months and then move on to the next project.

Ironically, as the investment in wind energy continues to grow, and is spurred by government tax credits and a prevailing mindset to lessen the country's dependence on oil, the effort to develop wind farm becomes more complicated. Wind farm

The demand for wind turbine components has led three manufacturers to establish facilities in the US

engineers are developing new foundations that are stronger and easier to construct, while wind turbine manufacturers are designing more powerful turbines to generate even more

Typically, wind turbines in the US are smaller than those used in Europe, although developers expect larger and taller turbines to be the trend. Turbines used in the US are typically one or two megawatts, while some European manufacturers are producing 5 MW units. The larger turbines being erected in Europe are presenting significant challenges to transport and erection contractors. Coupled with the component size, weight and height, wind farm sites on land are often in remote locations at higher altitudes, which make access difficult, both to the site and to travel between individual turbines.

Heavier and Higher

In the US, wind turbines for land-based wind farms have rotor diameters ranging from about 164 feet (50 meters) to about 295 feet (90 meters), and with towers of roughly the same size. At the larger end of the category in the US, a 295 foot (90 meter) turbine would have a total height from the tower base to the tip of the rotor of approximately 442 feet (135

Thus far, Buckner's Robertson says the Liebherr LR 1400/2 has been the machine of choice on wind farms in the US. "That's been the machine we've had the most success with although we think that as turbines get larger





The LinkBelt 348 has the capacity and reach to set the mid and lower sections of wind turbines, and can crawl between foundations with ease

and taller we will see the LR 1750 emerging as the crane of choice."

Conversely, Terex-Demag and Manitowoc cranes are doing their fair share of erecting the turbine uppers, with the Terex-Demag CC 2800-1 NT being the turbine erection specialist for that manufacturer and the Manitowoc 16000 that company's leading wind tower crane. The Manitowoc 999, the Link-Belt 348 and the Kobelco CK2500-II are among the more popular cranes for setting the lower sections of the turbines in the US.

Marco Crane rents cranes to wind farm contractors throughout the Southwest and West, from Texas to California, according to Dan Mardian. The company's Link-Belt 348 works on wind farm projects throughout West Texas, including in the Sweetwater vicinity, which has a large concentration of wind power plants. "My only concern about the wind power industry is that if the government subsidies were not there, would this still be viable work?" Mardian asks. "Right now there is a lot of work in the wind business so we're keeping the cranes very busy."

Virtually every crane rental company in the nation is likely involved in or at least looking at wind work as the demand for cranes in this sector increases. Steve Burkholder with IF Lomma in Pennsylvania says that demand for the Liebherr 1400 and the Manitowoc 16000 far exceeds what is available in the US. He says cranes that are on order are already booked.

We have a Manitowoc 16000 on order," says Burkholder. "We have people calling looking for Manitow 16000s for wind work but there aren't any available."

Spanning the Potomac River between Maryland and Virginia, the Woodrow Wilson Bridge

earned the distinction of being among the worst traffic bottlenecks in the United States. Last month the old bridge was imploded, with residents of Washington, D.C., applauding its demise and the promise of the completion of a two-span replacement bridge. ACT reports



<u>Booming</u> bridge aily more than 200,000

commuters battle traffic on the Woodrow Wilson Bridge in the metropolitan Washington, D.C., area. For more than 30 years the bridge has been a traffic nightmare, with residents of Maryland and Virginia suburbs begging for improvements.

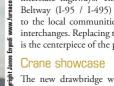
At last their pleas were heard, and with a \$2.4 billion price tag, the Woodrow Wilson Bridge replacement project commenced in 2000. Today most of the contracts on the project are in the range of 60 to 70% complete, with one span of the replacement bridge complete and open to traffic, remains of portions of the old bridge being removed after implosion in late August, and the second span construction underway both on the Maryland and Virginia sides. The project is scheduled for a 2011 total completion.

Residents of the region were so excited about the partial implosion of the old bridge at midnight on August 28th that a contest was held to identify the commuter with the "worst commute." The

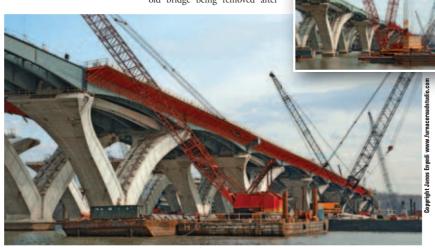
winner, who had traveled the bridge for 28 years, was able to press the plunger which detonated explosives tied to the bridge.

With a project area that spans a seven and a half mile corridor beginning in Maryland and connecting

to Virginia, the bridge is at approximately the mid-point of I-95, one of the busiest East Coast interstate highways. The Capital Beltway (I-95 / I-495) connects to the local communities at four interchanges. Replacing the bridge is the centerpiece of the project.



The new drawbridge will be 20 feet higher than the old bridge with a 70 foot total clearance. The increased clearance will allow for 70% fewer bridge openings and





traffic interruptions. Currently, there are nearly 260 openings a year, which will be reduced to approximately 65, as opposed to some 250 times a year in 2003. The two new bridges will have 12 traffic lanes, six each way.

Aside from the massive scope of the project, the most notable aspect has been the number of cranes required on both sides of the river during construction. Not one, two or even three crane rental operations had fleets available to supply cranes needed on the job. It has been estimated that more than 15 crane rental companies have supplied machines, including W.O. Grubb, Buckner HeavyLift, AmQuip, Essex Crane Rental, JF Lomma and many others, and there has been virtually every age, make, model, class and brand of crane on the jobsite at one time or another.

"It's like driving by ConExpo," says Michelle Grubb, of W.O. Grubb Crane Rental. "Seriously, we have pictures we took at ConExpo that compare to what you see on the jobsite."

Grubb says crane booms have proliferated in the last few months, as contractors race to dismantle the old bridge and build the new span. "It's like a Who's Who project with all the different crane companies with cranes on the job."

Boom time

In addition to cranes on barges, there are cranes at either end of the bridges and also on sections of the old bridge that were purposely not destroyed to build the newest

Steve Burkholder Pittsburg, PA-based JF Lomma says his company was putting a Manitowoc 2250 with a Maxer on the job in mid September. The company has had a 100 ton rough terrain crane on the job for several months. The 2250 will be setting pre-cast approaches, he

"When you come across the bridge, all you see is booms," Burkholder says. "It's the most impressive project that you can imagine. And there are some big cranes out there, some 1,000 ton At 11:59 a.m. on August 28 a half mile stretch of steel beams that supported the old Woodrow Wilson Bridge over Jones Point were detonated in a spectacular event applauded by crowds in two states.

Demolition and removal of the old Woodrow Wilson Bridge began in earnest on July 17, 2006 after all traffic was switched onto the first new bridge. The portion of the old bridge over Jones Point Park in Alexandria, VA was demolished first, as it physically overlays the footprint of the second new Wilson Bridge that is under construction.

Removal of the drawbridge started last summer and is proceeding steadily. The drawbridge leaves are being removed first, followed by the large piers and foundations. The portion of bridge between the drawbridge and Maryland shoreline will be left in place for several months and will be used to store construction equipment and access the second new bridge under construction. Removal of this final portion of old bridge is scheduled for later in 2007.

To prepare for the implosion, the deck of the bridge had to be removed by excavators with jack hammers and hydraulic jaws known as munchers, and hauled away – some larger pieces of the deck were broken into small pieces by on-site crushers before being hauled away.

Once the steel beams were cut, the concrete pier columns are chipped away by excavators with jack hammers. All demolition work, except for detonation of the steel beams, has occurred during daylight hours. Dust is being controlled using water trucks, hoses and street sweepers, while noise is being reduced by using quieter equipment, such as munchers and crushers. In addition, the fabric on the fence along the northern perimeter is serving as a dust and noise barrier. An air quality monitoring program consisting of air quality sampling stations and opacity monitoring by certified inspectors has been implemented. Noise monitoring is also being conducted during active work hours. These programs are verifying low dust and noise

Significant portions of the demolished drawbridge and Maryland approach, including concrete and steel components, are being taken by barge to the Chesapeake Bay to create fish reef.

⇒ For more information see: www.wilsonbridge.com

machines. I was so impressed, the first time I went out there I took pictures from my cell phone camera. I do this for a living and it was an impressive to me."

JF Lomma had been supplying cranes mostly on the Maryland side but will also be placing them on the Virginia side as the



On May 18th, 2006, photographer Janos Enyedi exhibited 42 new digital watercolors celebrating the construction and engineering feat of the new Woodrow Wilson Bridge. The exhibition was part of the ribbon cutting ceremony held on the new bridge. Several of the images from the exhibit are included on the pages of this article as an exclusive feature of American Cranes & Transport. Images from this exhibit can be seen via Acrobat Reader by visiting: www.furnaceroadstudio.com/wwbridge.pdf

contractors have begun to fast track the project, Burkholder explains. In addition, normally competitive crane companies are working together on the project to meet demand. "We're working with Grubb," he says. "They are going to help us assemble the Max-er."



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Heavy lifters

Rigger trucks offer a heavy duty option for

lifting and moving heavy machinery. **ACT** reports

escribed as "a forklift on steroids," today's rigger trucks fill an important and growing gap in the heavy lift sector, especially in industrial and plant settings where machines and supplies continue to increase in weight.

Rigger trucks have been available for about 30 years, and their popularity has grown as manufacturers have customized these machines to meet specific needs. Today's rigger trucks have very large capacities - 30,000 to 200,000 pounds - and are built on a compact frame allowing them to maneuver in tight spaces.

Rigger Trucks have the endurance and capacity to start and finish a job in just a few hours, as compared to a crane that would take days, money and manpower," says Michael Salter, president of Rigger Xtreme. "Rigger trucks are custom designed to fit into any situation and covering any capacity, with an example of the XC70-90. This truck is an extendable counterweight, which allows a rigger to pick at 70,000 pounds or at a maximum of 90,000 pounds. Built with small cushion tires, the XC70-90 offers the customer manageable usage, but still has the strength of a pneumatic."





Versa-Lift custom builds rigger trucks for its customers' individual lifting and moving needs

The versatility of a rigger truck can be increased by using a wide range of attachments now available. Most units are purchased with forks and a boom or jib. Forks allow an operator to pick up cargo from underneath, while the boom allows the operator to pick up items from above. Most

manufacturers of these machines work one on one with their customers to assess usage and needs. Salter says that by assessing the customers' individual needs, his company seldom builds the same rigger truck twice. "There is always a demand for

something new or better," he

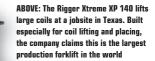
says. "We see to it that each customer treated as unique to our equipment."



There is a range of rigger truck styles and models. Solid cushion tired rigger trucks tend to be smaller capacity and are mainly used in indoor industrial settings. With a smaller pressure footprint, the solid pneumatic tired forklifts are slightly larger but can run on softer or rougher terrain.

Gary Dick, owner of Custom Mobile Equipment, says the market for rental rigger trucks is growing. Custom Mobile Equipment owns 10 Versa-Lift rigger trucks and recently ordered five additional units in anticipation of demand. "We mostly rent them to rigging companies," says Dick. "They are used for all sorts of things, in every facet of the rigging





Royal, based in New Century, KS, manufactures a range of specialized rigger trucks. The 80/100 model pictured has a capacity of 80,000 pounds retracted and 100,000 pounds extended at 36

industry. We rent them to companies that are setting up machinery tradeshows, and to companies that are moving plants from one state to another."

Dick said he is shipping a rigger truck to Missouri to move some large printing presses and he has some rigger trucks in Reno, NV working in the corrugated industry. As they are compact, offer hydrostatic drive and steering, Dick says the machines are small but powerful, and highly maneuverable - a key attribute.

"The Versa-Lift 2535 can lift 25,000 pounds in its normal compact version," Dick says. That's a lot of capacity for a small machine, a very streamlined machine."

Other rigger truck manufacturers include Rigger Lift, Taylor Machine Works, Lift Systems Inc., Erickson's, and Rig-N-Lift to name a few.



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who's who at the SC&RA Specialized Carriers & Rigging Association



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Participants in the SC&RA's 2006 Financial Benchmarking Study reap what they sow, protecting

profits along the way

In praise of participation

e wish to commend our member companies that capitalized on one of the most valuable benefits the association offers by participating in the SC&RA 2006 Financial Benchmarking Study.

Although these members paid nothing to participate, they gained invaluable information about their company's financial performance compared to that of other companies in their industry. To make the study even more relevant, the actual statistics and analyses were separated into three service types - specialized transport, crane rental and rigging.

The 79-page study contains plenty of interesting facts and figures available nowhere else, but it offers much more than that. Used properly, the study becomes a powerful management tool for improving profit and cash flow. The helpful suggestions for gaining maximum benefit from the study function much like a user's manual.

The study becomes even more useful when combined with the company consulting report. These individualized reports, seen only by the company covered, allow participants to measure their own specific results against benchmarks established by all companies responding to the survey.

The study measures financial performance in four basic areas:

- profitability gross profits, net profits, and expense control
- productivity of staff and equipment
- financial position managing assets and controlling debt
- ash flow managing the working capital (cash flow) cycle.

How big a difference can the study make? Consider the specialized transport sector, where top performers have 8.5% in profit before tax. Factor in owner compensation of 2.7% for total profit to owners of 11.2%. Next, compare that to 8.6% total profit for all specialized transport companies.

To see the importance of this 2.6% difference, multiply it by the median sales for all companies surveyed - \$5,680,029. The result is more than \$147,000 in additional profit dollars for those who can match the expense controls of the top half. "Their profit advantage comes from managing direct labor, equipment expenses and, to a lesser extent, sales, general, and administrative expenses," notes the study, which includes similar analyses for the crane rental and rigging sectors.

Even top-performing companies that use the study to begin the process of improving their financial performance can boost profits in a meaningful way. These are proven strategies for identifying problems and possible causes as the basis for developing goals and action plans.

Business Resource Services (BRS), Seattle, WA, has continued to refine the techniques it introduced to SC&RA six studies ago. BRS also has worked with some of the nation's largest and most respected corporations, including Anheauser-Busch, Chase Manhattan Bank, and Harley Davidson.

If you missed the opportunity to participate in the study, you may still purchase a copy of the report for \$495. Although you would not have access to an individualized consulting report, the SC&RA 2006 Financial Benchmarking Study is packed with useful information. To order, call 703-698-0291.

The study also will serve as the cornerstone of SC&RA's Financial Management Seminar, October 11-12, in La Jolla, CA. This year, the association has expanded the seminar to include seven additional sessions on such topics as international expansion, alternative risk financing, and negotiating favorable

The enhanced seminar exemplifies SC&RA's determination to help member companies maximize and protect their profits.

foel Dandrex

Joel Dandrea, executive vice president

Recruiting new members and retaining existing members are an important part of the efforts of the $SC\&RA\space{-0.05em}{'s}$ membership committee. Terry White reports

Building a bigger, stronger SC&RA

t a time when many associations are shrinking, the number of SC&RA member companies has increased steadily in the 21st century from 1,002 at the end of 2000 to 1,132 at the end of 2005. The trend is expected to continue for 2006.

"Over the years, we've found that the best source of new members is existing members," notes SC&RA executive vice president Joel Dandrea. "We have also seen that members who are brought in by other members are more likely to renew."

Membership Committee chairman Dan Bumby, E.C.C.- Lift Systems, Woodland Park, CO, looks to expand SC&RA recruitment and retention efforts. Each of his committee's 10 members is responsible for a geographical area

SC&RA chairman, Jerry Thomsen, Trail King Industries, presents Trevor Pease of KHL USA with a 2005 President's Award for recruitment



Dan Bumby, right, chairman membership committee, is working to increase and retain members

and follows up on reports from SC&RA staff and leads provided directly by other members of the association.

"The entire committee agrees that we're not just trying to grow the membership," he says. "We want good members that will participate and be part of the organization and its functions."

Bumby is particularly enthusiastic about the committee's decision to contact companies that decide against renewing. "We try to find out why they're dropping out," he says. "The more input we get, the better."

SC&RA already has made great strides in retaining new members. In 2004, over a third of new members from the prior year decided against renewing; this year, only 13.5% from 2005 did not renew. "That percentage should decline even more as the Membership Committee starts contacting the new members," says Dandrea. "We have a loyal membership with an overall retention rate of 94%."

Bumby points out that his committee is a very strong group that reports directly to the SC&RA Board of Directors. Among the members is Donald Russell, Sheedy Drayage Co., San Francisco, CA, a former SC&RA president and chairman. Klaus Scholpp, Alfred Scholpp GmbH & Co., Stuttgart, Germany, is also on the board.

Scholpp also plays an important role in international expansion. The Membership Committee has been concentrating on the up-





Reflecting their importance to the association, the awards are presented by the SC&RA president during the closing night awards and recognition dinner at the annual conference. The SC&RA Membership Directory prominently displays names of President's Award winners. They also are acknowledged in American Cranes & Transport. International Cranes & Specialized Transport and the SC&RA newsletter.

these awards each year.

Even member recruiters who fall short of the President's Award requirements receive recognition. Whenever the association welcomes new members in the SC&RA Newsletter, the listings include the names of recruiters.

Members receive full credit whenever they notify SC&RA of a prospect who later joins the association. Prospects who click on the "Join SC&RA Today" link on the SC&RA web site at www.scranet.org go directly to a membership application that asks whether they were referred by someone. Membership applications, in addition to simple membership lead forms, are available by calling (703) 698-0291.

and-coming economic strongholds in Brazil, Russia, India and China (BRIC), according to Bumby. His emphasis is on Brazil, Mexico and other parts of Latin America; Scholpp has been focusing on China and other parts of Southeast Asia, where his company has established a presence.

"As a proud member of SC&RA, our company has experienced a warm welcome among professionals of our industry both in America and internationally," says Scholpp. "Now as a member of the Membership Committee, I am able to extend a similar welcome to other companies that could gain considerably by belonging to the association."

When dealing with prospective members from outside the United States, Scholpp readily discusses benefits his company has enjoyed as an SC&RA member, including:

- contacts with American manufacturers that offer top quality equipment at product shows and presentations
- cross-selling activities and business partnerships seeking support both in Germany and in other locations such as Malaysia and China
- learning opportunities, especially the Job of the Year presentations during the SC&RA

Klaus Scholpp, Alfred Scholpp GmbH & Co., Stuttgart, Germany, is on the SC&RA membership committee and also the SC&RA board, and he is working to expand the association's international reach



Interested in joining SC&RA but want to learn more about the association from a satisfied member? The Membership Committee would love to hear from you. Members who want advice on recruiting other members are also encouraged to contact committee members.

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WILLIAM STERETT, III	Sterett Crane & Rigging	
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Two members of the Membership Committee come from KHL Group, publisher of SC&RA's official magazines - American Cranes & Transport and International Cranes and Specialized Transport. Trevor Pease works out of KHL Group USA offices in Scottsdale, AZ and John Austin operates out of KHL headquarters in East Sussex, England.

"As an organization, we're actively recruiting members for SC&RA as we travel around the world," says Pease. "During our regular conference calls, John and I discuss ways to help the association grow."

Both KHL and Scholpp will coordinate with SC&RA to promote the association at Bauma China 2006, November 21-24, an international trade fair for construction machinery, building material machines, construction vehicles and equipment. The association's strengths simplify the recruitment process, according to Pease. "I really believe in SC&RA," he says. "For a very small investment, you get so much. The quality of personnel, the ability to network with other members of the industry, the technical publications - everything about the association is first class."

Pease is especially enthusiastic about SC&RA's annual conference and other major meetings. "There's nothing comparable to the events held by SC&RA," he says.

Bumby agrees. "You can never underestimate the value of the contacts you make at SC&RA meetings," he says. "More and more, members are teaming up on jobs after striking up alliances at meetings. It's an association. To get the most out of it, you need to associate."



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Benchmarking and other techniques are unparalleled tools in quality management.

Kevin Cunningham reports

Finding the mark

ike cranes, the crane and rigging industry is constantly changing, evolving looking for new and better ways to stay competitive. More than ever crane companies are holding their employees to higher standards when it comes to practices such as operator and qualification safety management. As business shifts and the need to be proactive in a demanding market becomes glaringly apparent, some companies are looking to an old process for new results.

Modern benchmarking didn't exist before the 1970s. Simply defined as "a continuous process of measurement of products, services and work processes, against those recognized as leaders," benchmarking only existed in its infantile state; commonly known as reverse engineering. Reverse engineering, used mainly in the manufacturing industry, was the process of tearing things apart, examining them, improving them, and putting them back together. The dawn of modern benchmarking, referred to as competitive benchmarking, began with Rank Xerox in 1976.

In the 1970s Xerox was the

largest manufacturer of copiers in the world but was being upstaged by Japanese manufacturers that were producing better machines, selling them for less and making more profit. Intent on reclaiming its throne in the industry, Xerox was prompted into expressly comparing itself with its direct and best competitors to determine what it could do to increase productivity while decreasing costs.

The results from the benchmarking were astounding:

- Xerox's ratio of indirect to direct staff was twice that of direct competition
- ⇒ It had nine times the number of production suppliers
- Assembly line rejects were in the order of 10 times worse; product time to market was twice as long
- → Defects per 100 machines were seven times worse

Sub heading here

Over the next five years Xerox would have to increase productivity a lofty 18% to stay competitive – and it did. Through a strategy known as "leadership through quality," which became the foundation of the company's revival, Xerox benchmarked over

largest manufacturer of copiers in benchmarking process

- 1 Determine which function(s) to benchmark
- dentify key performance variables to measure
- (3) Identify best-in-class companies
- 4 Measure performance of best-in-class companies
- **5** Measure your own performance
- **6** Specify programs and actions to meet and surpass
- 1 Implement and monitor results

230 areas in which it needed performance improvement, and went on to win the Malcolm Baldridge Quality Award in 1989. Xerox even benchmarked L.L. Bean, a Maine outdoor sporting goods retailer, because of its excellent warehouse procedures — procedures that are now the standard at most companies

Crane companies, quite literally, are moving the world, but in doing so they are also taking risk. Risk management isn't a byproduct of a successful crane company, rather, it's a requirement. Techniques such as benchmarking, as evidenced by the amazing turnaround of Xerox, which had revenues of over \$15 billion in 2005, are unparalleled tools in quality management. Benchmarking is

used a lot in organizations that want to continuously improve practices and processes. It allows trends to be identified and areas of opportunity to drive down the cost of risk.

How does it all fit in?

As the building industrial movement continues to grow, the crane industry has never been more needed. Urban development projects are flourishing in cities that are gentrifying, and taxi jobs continue to provide steady revenue streams for busy rental shops. Competition is steady and fierce, and benchmarking is the perfect way to see exactly where your company stands.

Xerox eventually turned the data acquired from the benchmarking effort into dollar signs by taking

Malcolm Baldrige National Quality Award

The Malcolm Baldrige National Quality Award (MBNQA) was established by the US Congress in 1987. It was established to recognize US companies and, later, government agencies, for outstanding business practices. These practices are judged on seven categories, including: information and analysis; strategic quality planning; human resource development and management; management of process quality; quality and operational results; and customer focus and satisfaction.

risk management



Benchmarking is the first step for identifying performance gaps between a business and its peers. Next the gaps need to be analyzed to determine their underlying causes, and to develop strategies and plans that address them.

Brad Allen, PricewaterhouseCoopers' leader of middle market benchmarking initiative

what was learned and applying it to daily operations. So too can your company. By benchmarking, long term and short term benefits can be seen immediately.

- Benchmarking brings out the newness and innovative ways of managing operations.
- ⇒ It is an effective team-building
- It has increased general awareness of costs and performance of products and services in relation to those of competitor organizations.
- It brings together all the divisions and helps to develop a common front for facing competition.
- It highlights the importance of employee involvement and, as such, encourages recognition of individual and team efforts.

It used to be that the general perception of benchmarking was that it is only effective in the manufacturing industry. In 2002, however, statistics proved otherwise. PricewaterhouseCoopers (PWC), a major international accounting and consulting firm, performed a study labeled "Trendsetters Barometer." PWC interviewed 405 CEOs from product and services companies that were identified in the media as the fastest growing businesses in the US in the last five years.

The results showed that benchmarking was a risk management tool poised for a renaissance. The fastest growing companies were using a benchmarking database to measure business performance against their peers and were much more productive than those who did not. "Benchmarking is the first step for identifying performance gaps between a business and its peers. Next, the gaps need to be analyzed to determine their underlying causes, and to develop strategies and plans that address them," said Brad Allen, leader of PWC's middle market benchmarking initiative. "The ability to view key metrics for companies on the next rung of the growth ladder is also critical for strategic forecasting, and could identify internal operations to target for competitive advantage."

How does it all fit in?

In addition to revenue related benchmarks, issues including critical lift plans, operator certification statistics, accident causation, side-loading, and overloading are all crane-specific items that can be benchmarked. A crane company can take itself to the next level by watching and studying industry leaders with track records that shine in safety, employee retention and other

To know where you're going, you need to figure out where you are and the easiest way to do that is to benchmark. To raise the bar and perform at a level higher than the status quo your company needs to find out who the best is, figure out how they got there and find a way to beat them. Dan Kugler, assistant treasurer for risk management at Snap-on Inc says it nicely, "Benchmarking puts shape to the landscape."

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RICHARD L. STAPLEFORD, SR.

The industry mourns the passing of Richard L. Stapleford, Sr., 63, owner and operator of Bormann Brothers Riggers & Movers, Pepperell, MA. He served in the US Army in Vietnam and was a member of the VFW and the American Legion. He also was an avid hunter and fisherman. Stapleford is survived by his wife, Kathryn; two sons, two grandsons and two granddaughters. Memorial contributions may be made to the Lahey Medical Center, 41 Mall Rd., Burlington, MA 01805.

Lazenby joins MCG Asia-Pacific, Reeves joins

Anthony Lazenby has ioined Manitowoc Crane Group's Asia-Pacific regional office in Sydney, Australia, as sales manager for the states of New South Wales, Victoria, and Queensland.

Lazenby reports to David Hull, managing director of MCG Australia. In his new position, he will be responsible for the sales and marketing of all Manitowood Crane Group products in eastern Australia.

Prior to joining MCG Lazenby held several sales and management positions with Grove dealer Western Australia Truck and Machinery (WATM), based in

Manitowoc Crane Care has hired Scott Reeves as director of materials management. He

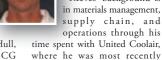
will report to Scott Alexander, vice president of Manitowoc Crane Care Americas. Reeves will oversee Manitowoc Crane Care replacement parts



inventory as well as the rapid response purchasing teams in Shady Grove, PA and Manitowoc, WI.

Reeves' background is in materials management, supply chain, and

time spent with United Coolair, where he was most recently director of operations.



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4 Dockside/Offshore 5 Utility 6 Manufacturer of lifting and transport equipment 7 Other industry 8 Distributor 9 Other (please state)	Crawler cranes Tower cranes Boom trucks/Loader cranes Rigger trucks Hydraulic gantries Dockside/Offshore cranes	What is the annual sales of your company? Under \$1 million
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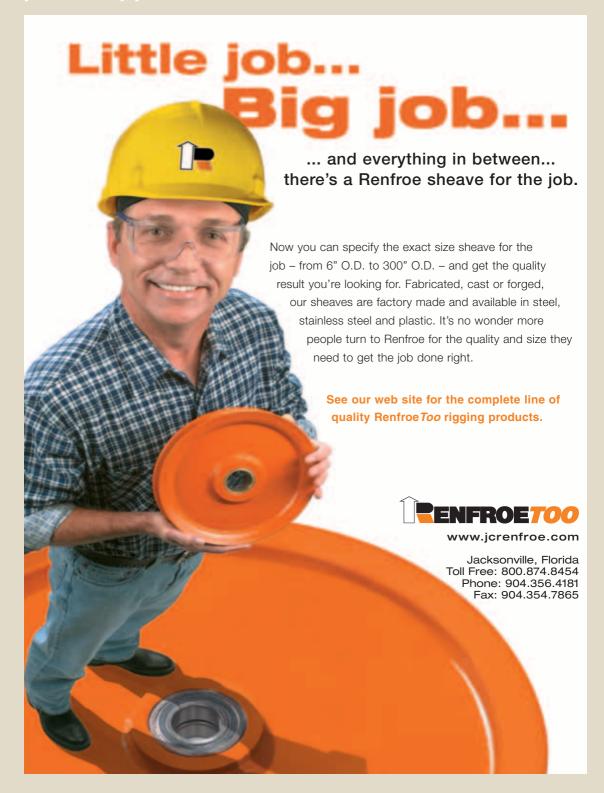
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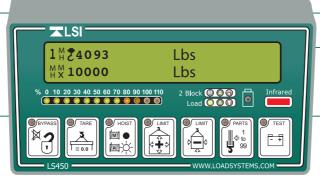
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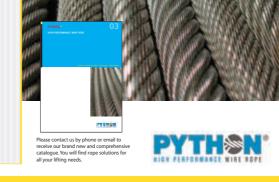
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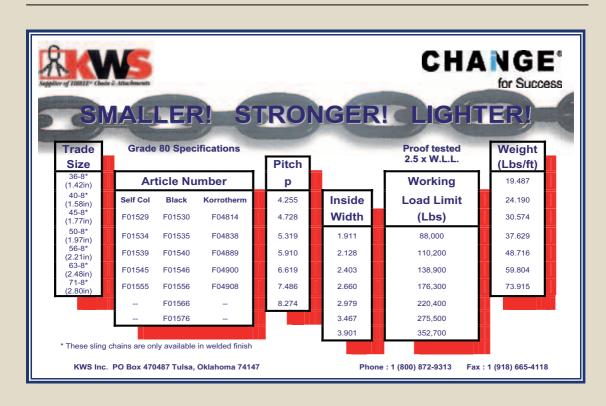
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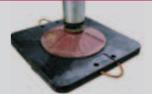


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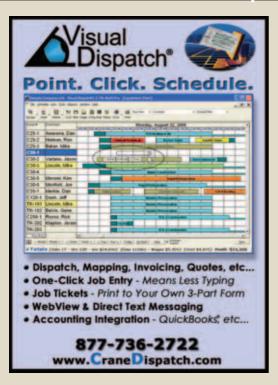
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Inventory Arrivals Before 2007



		On	Total
Model	Inventory	Order	Available
500	9	16	25
600	8	1	9
800	4	7	11
900	5	6	11
1100	0	1	1
1300	0	3	3
1800	0	5	5



		On	i otai
Model	Inventory	Order	Available
1870	2		2
2495	2	1	3
24105	2	4	6
2695	0	1	1
2895	1	0	1
28105	2	2	4
28105R	1	2	3
32105	2	1	3
32117R	4	1	5



		On	Total
Model	Inventory	Order	Available
1770	2	6	8
26101	0	0	0
2892	1	5	6
30102	1	1	2
28102S	0	3	3
38100S	0	5	5

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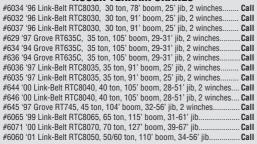
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#6840 '02 Kobelco CK-1000, 100 ton, 180' boom, 60' jib	Ш
I#6800 '74 Link-Belt LS-518, 150 ton, 200' main boom, 60' jib	Ш
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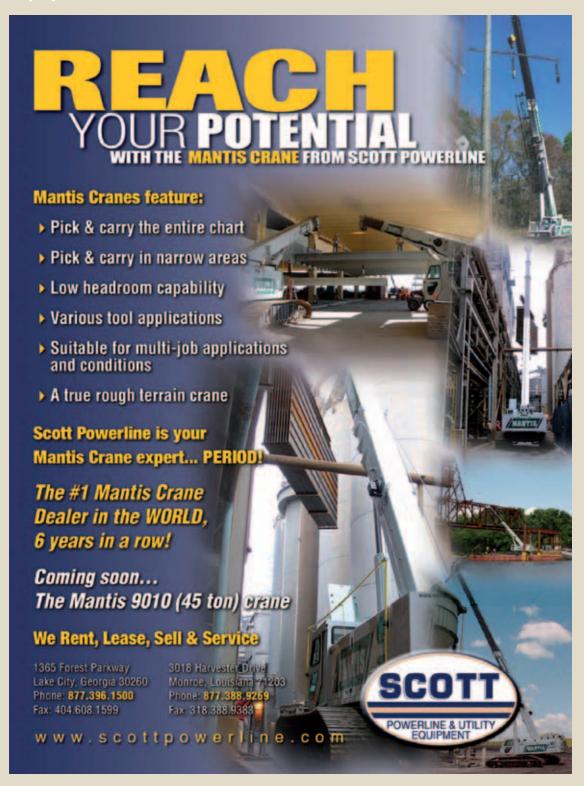














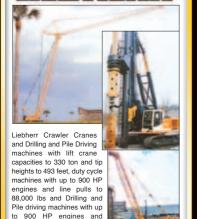


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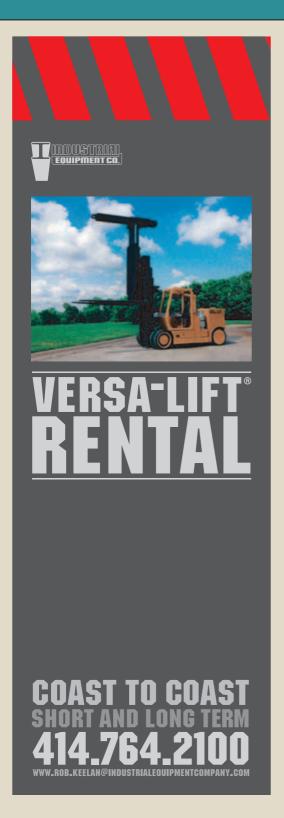


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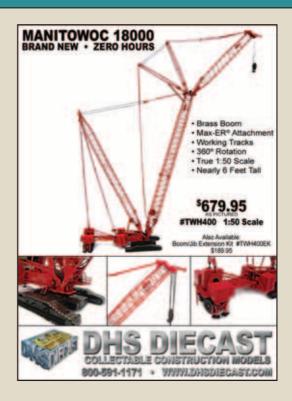
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Pittsburgh, PA	CCO Written Exam Prep	9/11 - 9/15/06	"CCO Written Exam Prep" - 4 days of
Harrisburg, PA	CCO Written Exam Prep	9/25 - 9/29/06	training, text book, & written exams -
Harrisburg, PA	CCO Written Exam Prep	10/9 - 10/13/06	\$1150.00. Recertification Candidates attend the training
Harrisbrug, PA	CCO Written Exam Prep	10/30 - 11/3/06	on Wed and Thurs, take written exams on
Milesburg, PA	CCO Written Exam Prep	1/8 - 1/12/07	Fri \$850.00.
Harrisburg, PA	CCO Written Exam Prep	1/22 - 1/26/07	
Wilkes-Barre, PA	CCO Written Exam Prep	2/5 - 2/9/07	Note: Pittsburgh 9/11 - 9/15 class will require
Harrisburg, PA	CCO Written Exam Prep	2/19 - 2/23/07	parking in a parking garage!!! Written Exam fees do not apply to the Milesburg class. Call for fees.
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Location	Dates	Fees
Pittsburgh, PA	11/8/2006	
Pittsburgh, PA	11/9/2006	The fee for the practical exams are \$325.00 for each exam taken.
Pittsburgh, PA	11/10/2006	Cranes utilized for the practical exams are: Large Telescopic - 22 ton - 30 ton RT, Small
Harrisburg, PA	11/18/2006	Telescopic - small stand up boom truck, small carry-deck crane or cab down RT, Lattice (25 or 40 ton P&H Conventional). Candidates must call to schedule their practical exams
Harrisburg, PA	11/19/2006	least one week prior to taking the exams. No walk-ins.
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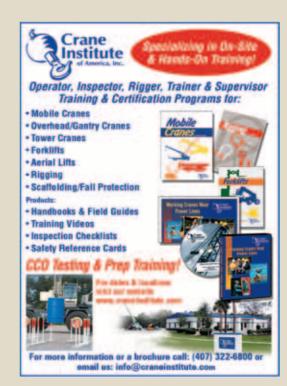
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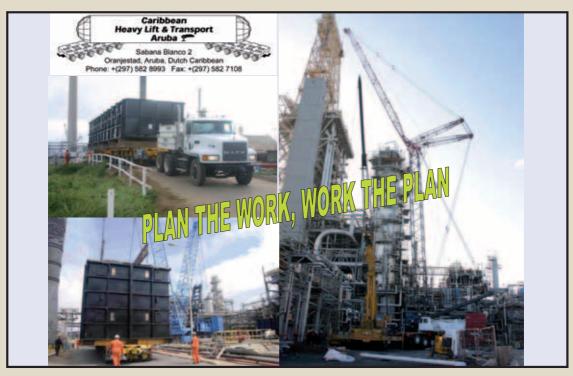
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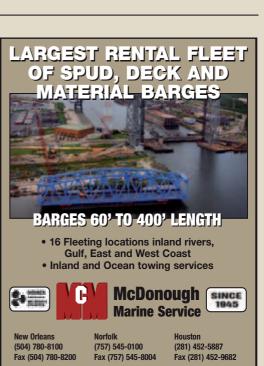
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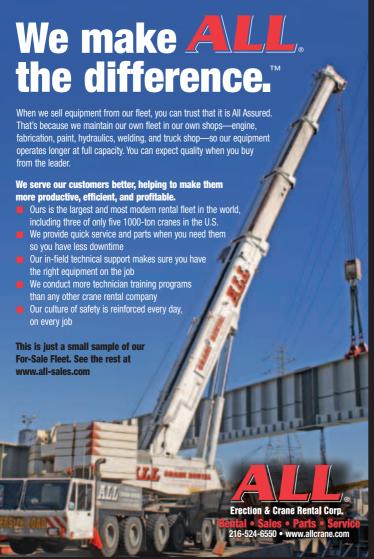


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