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The magazine for the crane, lifting and transport industry

August 2005
Volume 13 Issue 3

AMERICAN Cranes & Transport

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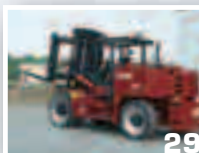
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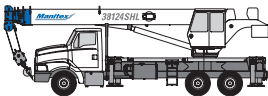


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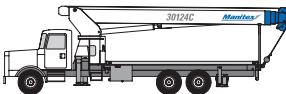


*it's not just what you want to lift,
but how you want to lift it.*

S Series



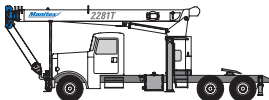
C Series



X Series



T Series



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UPTime means utilization.

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Exciting times

First things first, let me introduce myself as the new editor of *American Cranes and Transport*. Having spent the last 12 years writing for and about the construction industry, I have met many people in this industry, and I look forward to meeting many more of you. One of our many goals is to build relationships with readers to make *ACT* an essential source of information. We encourage you to let us know what you think of our coverage and how we can improve it. Comments, opinions, suggestions and ideas are always welcome. Drop us an e-mail, give me a call. We want to hear what you have to say.

For me, taking this job was all about timing and opportunity. The timing was great, being able to join the magazine after one of the most successful launches in the history of trade publishing. Plus, joining the KHL Group was an opportunity I couldn't pass up, mainly because of their high journalistic standards. Many trade publications purport to be journalistically pure, but in my experience, KHL's magazines are among the few that actually are.

Now is an exciting time to be in the crane and specialized transport industry, with construction starts up in almost every sector throughout the country. While the economic indicators tell part of the story – construction permits up, construction hiring up, sales up, etc., – there's another indicator that is just as telling, and certainly more interesting. It is the perspectives and viewpoints of those in the trenches – the salesmen, the manufacturing reps, the distributor and rental operation managers, the financiers, and the crane operators.

"We haven't seen activity like this in more than 10 years." "We're selling everything we can get our hands on." "We've never experienced a backlog like this." A crane salesman interviewed for this issue put it this way, "It seems like things started to explode right about the time of Con-Expo. I don't know what it was or why it happened, but it's great."

The amazement at the strength of the economic recovery and the surprise at how quickly things in the crane segment went from just "Okay" to "awesome," appear to be an underlying theme in this issue.

Among the most compelling news in this issue is the economic recovery in the Eastern region. Just a year ago, New York City, Boston and Baltimore were still reeling from the 9/11 terrorist attacks. But today business is booming. Skyscraper development is the big story, especially in Manhattan. Check out the eerie rendering of the new Freedom Tower super-imposed on the New York City skyline. Construction is set to start on this handsome icon early next year. See page 14.

With new crane sales at record levels, and backlogs a reality for most manufacturers, the market for used cranes has catapulted. A classic case of demand outpacing supply, the used crane market looks strong across the board. Well-maintained, late-model cranes are selling for prices described as "huge." See the article on page 24.

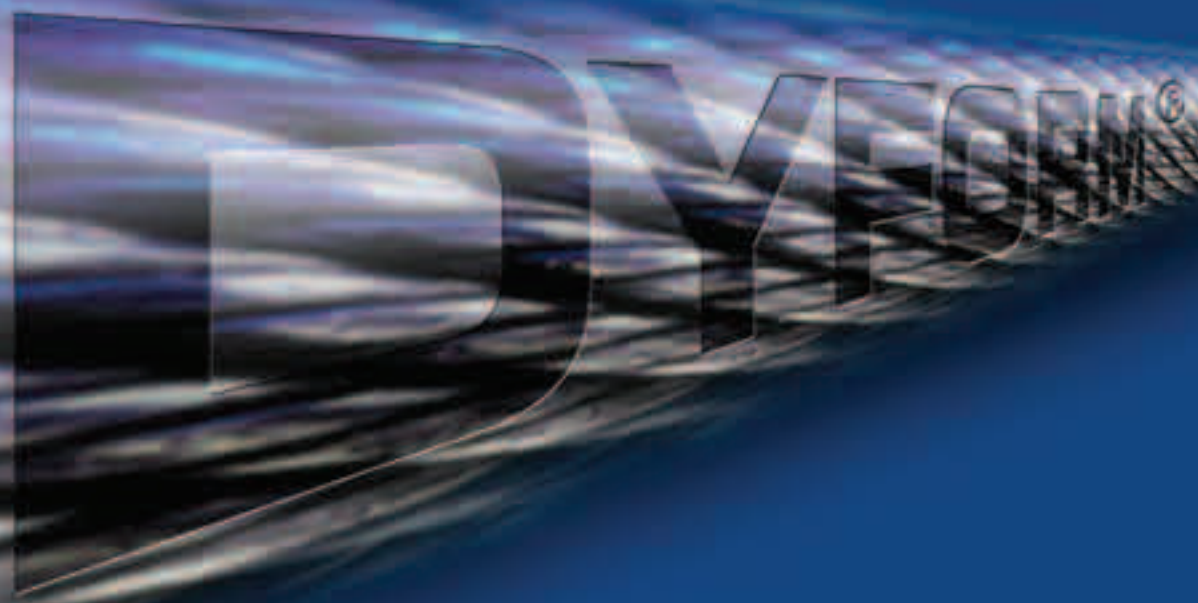
Innovations in forklift design and rigger trucks have taken material handling to a new level, see page 29. Joystick controllers are providing ergonomics and increasing efficiency – allowing crane operators to control the machine easier and with less effort. See page 26.

This issue is a good read, so give it a good look.

D. ANN SLAYTON SHIFFLER
Editor



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Barnhart using a Modular Lift Tower (MLT) with a 200 ton capacity hoist to install a tunnel boring machine for a storm water tunnel construction project in Atlanta

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Produced in cooperation with the NCCCO (National Commission for the Certification of Crane Operators)



Official domestic magazine of the SC&RA (Specialized Carriers & Rigging Association)

news

P&J Arcomet formed, Investors acquire 4 Point Lift Systems, Bridgestone acts to ease tire shortage, Bigge to sell new Spindlejack gantry, New Alaska dealer for Link-Belt

international news

Cranes and transport news from around the globe, including Canada Square collapse unresolved, Third ship secured for heavy lift

business news

Rising interest rates and oil prices took momentum out of the stock market in June and early July, with the effect most clearly seen in the Dow's performance. Chris Sleight reports

certification news

The latest update from the NCCCO

site report

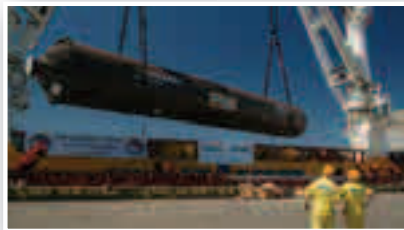
Barnhart used its specialized skills and equipment to bring efficiencies and other benefits to a storm water tunnel construction project in Atlanta, GA

regional report

Skylines from Maine to the Carolinas are punctuated with crane booms. ACT reports on activity up and down the East Coast.

specialized transport

Gino Koster reports on the move of a 628 ton reactor from Houston, TX to Commerce City, CO



product news

The latest lifting and specialized transport equipment

special report

Jake's Crane president Bob Dieleman has got back a special machine that he made and then sold more than 20 years ago. Phil Bishop talks to him about it

safety and training

Employers must assess the work place for hazards and issue personal protective equipment (PPE) if necessary. Terry Young reports



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used cranes

Demand exceeds supply, which has made the used crane market a hotbed. ACT reports



components

Modern equipment is increasingly being supplied with electrohydraulic joystick controls as standard but what is the technology that lies behind them?

rigger trucks

The popularity of rigger trucks has increased recently as the large capacity trucks can often provide an ideal solution. ACT takes a brief look at the compact heavy-lifters

international site report

International lifting and transport specialist, Mammoet, completed a second platform push-up at an offshore yard in the Azerbaijan capital of Baku



comment

From Joel Dandra

benefits of membership

SC&RA's 1,100 member companies in 46 countries benefit in 10 major ways from their membership of the Association. If your company does not already belong to SC&RA, here is what you're missing

risk management

Kevin Cunningham reports that the industry remains on the brink of change, and the next great "injury" may be just around the corner

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World's largest tower crane renter targets US

Arcomet, the world's largest tower crane rental company, has announced the formation of a joint venture with Washington DC-based P&J Crane Systems. The new company, which started trading in July, is called P&J Arcomet and was launched with a fleet of 30 tower cranes and six Arcomet-built self-erecting units.

Orders for five new Terex-Comedil CTT331s and eight Terex-Peiner SK415s have already been placed and the cranes will be delivered before the end of 2005. The two companies have been working

closely together for several years, and in late 2004 announced a joint venture to concentrate on the rental of self-erecting tower cranes.

Arcomet managing director Frans Wouters said, "P&J Arcomet provides us a greater platform in which to move into the North American market. We foresee this growth as being quite considerable over the long term."

The new venture, headquartered in Washington DC, will be headed by Peter and Stephen Jehle, who will be president and senior vice president,

respectively. Frans Wouters and fellow Arcomet director, Dirk Theyskens, will be board members.

"We have been working with each other for several years," said Stephen Jehle, "and as we concluded the self-erecting venture together it became apparent that both parties would greatly benefit from taking it one step further and totally combining operations."

The new company will operate from P&J Crane Systems' existing depots in eastern north America and Canada. The company will continue to distribute Terex tower cranes as it did before the merger.

➔ In Germany Arcomet has acquired the 300-unit tower crane fleet of Caterpillar rental store MVS Zeppelin. The majority of the cranes will remain in Germany with the rest integrated into Arcomet's fleet around the world.



Mostert Cranes & Equipment was called in to place steel handicap ramp sections on the original Catholic Church in Prescott, AZ by steel subcontractor Kenart Metals. A 40 ton capacity Terex T340 truck crane was used to place the 1,100 pound sections using 94 feet of powered boom at radii up to 77 feet.

The church was built in the late 19th century when Prescott was a Wild West town and is listed on the National Historic Register. It is currently used as a performing arts center for the Prescott Area.

Operator Chuck Mostert completed the job in two and a half hours.

CMI is new Alaska dealer for Link-Belt

Construction Machinery Industrial, LLC (CMI) has been appointed Link-Belt crane distributor for the state of Alaska. CMI will provide sales and customer support from locations at Ketchikan, Juneau, Fairbanks, Wasilla, and its headquarters in Anchorage.

"Link-Belt is very pleased to be represented by CMI in Alaska," said Brax Snyder, manager, worldwide sales. "We look forward

to a strong partnership with this outstanding organization that has a proven track record dating back to 1985."

Ken Gerondale, president of CMI, said of the deal with Link-Belt, "Their reputation for quality cranes and superior performance fits with CMI's 'value added' commitment to the industrial, contractor, mining, and governmental markets throughout Alaska."



highlight

➔ Cattron Group has appointed Thomas Vaughn vice president of engineering. Vaughn brings 26 years of engineering experience. His most recent positions were engineering section leader and director of engineering at Honeywell Hobbs. Vaughn is responsible for all engineering functions including design and application throughout Cattron Group's global operations.

➔ At Kone Corporation in Finland, the number of members of the Board has been increased to eight with the addition of Reino Hanhinen.

➔ The 10th World Class Crane Management Seminar, organised by CranePartner International, Inc., will be held at The Mirage in Las Vegas from September 29 to October 1 this year.

The event, which is aimed at improving productivity and performance in both personnel and machines, will focus on management strategies, crane safety, preventative maintenance and improving education and training.

More details can be found online at www.cranepartner.com

Bisso Marine has salvaged a 350 ton dredge tender in Perdido Pass, Alabama. Bisso was contracted to salvage the vessel following a previously unsuccessful attempt at a patch and pump operation. The *Lili Bisso* and *Big Eagle* were immediately mobilized from New Orleans, Louisiana, to Perdido Pass. On location *Big Eagle* was moored next to the dredger to complete a detailed salvage rigging under the vessel. *Lili Bisso's* main lifting block was then positioned over the vessel and rigging was attached by salvage divers, assisted by *Big Eagle*. The dredge tender was then lifted from the bottom and drained. The salvage crew delivered the floating vessel to its owner with a welded steel patch in place over the damaged area.



Specialist consortium acquires Lift Systems

Specialized lifting equipment manufacturer 4 Point Lift Systems has been acquired by a group of investors following the retirement of owner and CEO Gary Lorenz.

The consortium comprises Bruce and Bonnie Forster of Rigging Gear Sales, Ron Hall of Mid-Atlantic Lift Systems, and

Glenn and Sue Blair who have had a close association with Lift Systems for 20 years.

Rigging Gear Sales has been affiliated with Lift Systems since its inception in 1988 and Glenn Blair has been the CPA for Lift Systems for 18 years. Ron Hall began as a customer of 4 Point Lift Systems in 1987,

and, after selling his interest in a rigging business, formed Mid-Atlantic Lift Systems, Inc. in 1992 to represent Lift Systems in Virginia and North Carolina. The consortium says it is "committed to making the transition as seamless as

clarification

➤ Following publication of the news story, *First results from Kobelco Cranes*, on page 9 of last month's *ACT*, we have been asked to clarify that Kobelco only sells Grove mobile cranes in Japan, not in the Middle East and China as the wording towards the end of the article may have suggested.

possible." The company will now revert to its former name, Lift Systems, Inc.



highlight

➤ The American Welding Society (AWS) has announced the 2005-2006 Class of Fellows and Counselors. AWS selects class members based on their accomplishments and welding-industry contributions. Joining the 2005 Class of Fellows are: Harvey Castner, William King, Dr Ravi Menon, Dr Suck-Joo Na, Dr Raymond Thompson, Dr Thomas Zacharia.

Election as a Counselor is based on an individual's career of outstanding leadership accomplishment. Joining members are: Warren Alexander, Lee Kvidahl, Ernest Levert, Glenn Nally, Nancy Porter, Amos Winsand.

Hawaiian Crane & Rigging (HCR) was contracted by Hawaii Modular Space to hoist a 20 ton modular building, over an existing building, and set it on its foundation 90 feet away, at the Honolulu Zoo.

The job was a straightforward one to complete, apart from the presence of a black rhino, one of the world's most dangerous animals, which objected to the crane's presence. Kerwin Chong, HCR president, explained that the rhino charged the crane at one point, stopping just short of the chain link fence at the end of its enclosure.

Fortunately it quickly lost interest in the 350 ton capacity Krupp KMK 7300, which was working with 149 feet of main boom, and the job could be completed.



Bigge to sell new Spindlejack gantry

California-based Bigge Crane & Rigging has signed an agreement with alternative lifting equipment manufacturer Hydrosplex to sell its new Spindlejack gantry in the US, Canada and South America (excluding Brazil and Argentina). The gantry was designed to lower roof sections at a project in New

York and is based around the use of a threaded telescopic spindle jack, instead of an hydraulic cylinder.

In addition to taking a stock of the gantries for sale and distribution, Bigge will add 12 units of the company's 200 tonne capacity strand jacks to its fleet.



Bridgestone plans to tackle tire shortage

In a bid to ease the worldwide shortage of off the road (OTR) tires, manufacturer Bridgestone has earmarked ¥17 billion (\$153 million) to expand production. The Japanese company has also issued a warning to customers of the severity of the current worldwide tire shortage and advised them on how to help alleviate the problem.

The company says the worldwide demand for OTR tires began to exceed supply at

the end of 2003 and by the end of 2004 manufacturers could not keep up with worldwide demand.

Part of the increase in production will be achieved by expanding capacity at the company's Shimonoseki plant about 20% by the beginning of 2008. In addition, production capacity for steel cord will be expanded by about 5% at the

Saga plant and for OTR tire parts at the Hofu plant.

Bridgestone says that by the end of 2007 it will have achieved a "substantial increase to best serve OEMs and replacement customers."

Customers are advised to ensure that tire pressures are checked regularly, overloads or high speed travel is avoided and site maintenance is improved to prevent cuts and wear to maximise the life of existing tires.

➔ **Crane Rental Corporation** has completed its sixth round of crane operator certification sessions at its Davenport facility in Polk County, FL. Operators tested their practical skills on different crane types and had their performances graded. One of the tasks included the assembly of an electric tower crane, which is the first time this type of crane has been used for training purposes in the state.

➔ **Jason Papastavrou** has joined **United Rentals** board of directors. Dr. Papastavrou was CEO and chief investment officer at ARIS Capital Management and has held senior positions at Bank of America Capital Management, Fund of Hedge Fund Strategies and Deutsche Asset Management. Papastavrou holds a Ph.D. in Electrical Engineering and Computer Science. Bradley Jacobs, chairman of United Rentals said, "We are delighted to welcome Jason to our board of directors and look forward to benefiting from his expertise."

The RentEX and APEX exhibitions and conferences, being held from 22 to 24 September in Maastricht, the Netherlands, are free to enter if you register in advance online at www.rentexshow.com

The exhibitions and seminars are aimed at the powered access and general equipment rental markets and will contain new products and educational sessions.

rentex
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REX
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AmQuip marked the opening of its newest facility with a lavish party at the recently opened Laidlaw Avenue location in Cincinnati, OH. More than 400 people attended the ceremony, where AmQuip owner and founder Joseph Wesley and wife Marion cut a ribbon to officially open the depot.



United expansion trail

United Rentals, Inc. has acquired all remaining HSS RentX branch locations in Colorado. HSS RentX, the American operation of UK-based rental company HSS Hire Service Group Ltd., has a total of 14 operating rental locations in the state. Total revenues of the acquired branches were approximately \$9 million for the last 12 months.

Robert Krause, United Rentals vice president, northwest region, said, "With the acquisition of the HSS RentX branch network in Colorado, we have more than doubled our footprint in a vibrant construction market and substantially expanded our service to customers in this state. Colorado's thriving economy and long-term construction forecast support strong demand for our equipment rentals, new equipment sales and contractor supplies."

United has also opened a third branch in New York City, at 2162 2nd Avenue and 111th Street. It will serve construction companies, commercial contractors, building superintendents, maintenance personnel and area residents.



Texas-based Panhandle Crane Service used 60 ton capacity T560 and 40 ton capacity T340 Terex hydraulic truck cranes to lift the fuselage of a V-22 Osprey tilt-wing aircraft into a NASA Super Guppy transport aircraft, bound for Philadelphia.



Both cranes were used to unload a transporter from a truck before the T560 lifted the 50,000 pound cargo onto the transport, which in turn loaded it onto the plane. The T560 hydraulic truck crane used 50 feet of main boom and the T340 used 39 feet of main boom.



➔ **Straightpoint** in the UK has appointed Balmann Instrument Co. Ltd in Ulsan, Korea as a distributor. Balmann specializes in supplying sensors and instrumentation to Korean industry, including Daewoo and Hyundai. Straightpoint sales director David Ayling said, "our worldwide distributor network is growing steadily and we are looking forward to working in this exciting emerging market."

➔ **Cargotec Corporation** president Carl-Gustaf Bergstrom has forecast net sales of €1.15 billion (\$1.8 billion) for the company's first six months as a publicly listed company. He said, "Net sales for the first half of the year amounted to approximately 1.15 billion euros. The market situation continued very good in all our three business areas. As we estimated in early May after the first quarter, the value of orders received during the second quarter remained below the exceptionally high level of the previous year. However, we are very satisfied with the 1.15 billion euros achieved in January-June."



The German town of Ulm has taken delivery of the first fire brigade specification Liebherr LTM 1070-4.1 all terrain mobile crane following its debut at the rescue services exhibition, *Interschutz 2005*, in Hannover. The 70 tonne (77 ton) four axle hydraulic has a six section 50m (164 foot) telescopic boom – 8m (26 foot) longer than its predecessor, the LTM 1060/2 – and is telescoped automatically using Liebherr's Telematik system.

The LTM 1070-4.1 fire brigade specification includes an 80kN rescue winch, towing equipment with an 8 tonne (8.8 ton) capacity, revolving identification light, fire siren and working spotlights on the base and boom head.

The crane also has an emergency back up system comprising a hydraulic transformer and separate drive unit to allow the crane to operate in the event of engine or hydraulic pump failure.

Investigators fail to resolve fatal collapse

UK: No conclusive explanation has been found for the collapse of a tower crane in London's Canada Square five years ago, according to a report by the UK's Health and Safety Executive published last month. The Wolff 320 BF tower crane, owned by (what was at the time) Hewden Tower Cranes, collapsed while being raised using hydraulic lifting (climbing) equipment on 21 May 2000, killing three workers.

The top of the crane, the new mast section and the hydraulic climbing system overturned while the last section of mast was being positioned on the HSBC Tower site.

The accident is believed to be only the second involving the collapse of a tower crane during climbing. The first occurred in San Francisco on November 28, 1989 and was attributed to the

combination of slewing during climbing and pre-existing defects. Witness evidence indicated that the Canada Square crane was not slewed when the accident occurred, but damage sustained during the collapse prevented HSE from being able to rule out the existence of defects.

"We have been unable to prove how or why this tragic incident occurred but the comprehensive investigation has identified a number of actions that the industry needs to take to avoid the risk of further incidents," said HSE acting chief inspector of construction, Rosi Edwards.

Following the investigation, work is now being undertaken by the British Standards Institute to revise BS 7121: *Part 5 Tower Cranes* to incorporate an improved approach to crane climbing systems.

Third ship secured for Danish specialist lifter

Denmark: Plans to construct a crane ship with a lifting capacity of more than 1,250 tonnes (1,378 tons) took a step closer to reality last month following A2Sea's acquisition of the M/V *Sea Installer*. A2Sea, headquartered in Denmark, specializes in the construction of offshore wind farms and, once converted, the ship will transport up to six 5MW turbines to offshore sites and install them.

Requirements for the pedestal mounted crawler crane upper that is the main lift crane include a hook height of 125m (410 feet) above the water, and at a radius of 24m (79 feet), lifting capacity will need to be 480 tonnes (529 tons). At a hook height of 80m (262 feet) above water and the same 24m radius, the lifting capacity will need to be 1,000 tonnes (1,100 tons).

Due to its boom length the main lift crane will have to be mounted further aft than on A2Sea's existing two crane ships to allow the boom to be stowed in transit. *Sea Installer* already has two 63 tonne capacity (69 ton) hydraulic deck handling cranes.

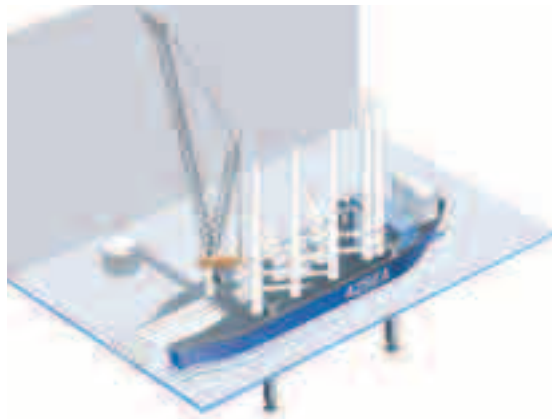
Loads up to 1,000 tonnes will be moved around the ship so a very large ballast capacity is needed. To do this the vessel already has built-in pumps to move ballast water around (between 1,600 and 2,000 tonnes (1,764 and 2,205 tons) of water can be pumped around for ballasting).

Conversion work will include lengthening the hull from 105 to 140m, widening the beam from 20 to 32m, fitting side sponsons,

jack up legs, dynamic sensing and accommodation.

The standard jack up legs will be designed to allow the crane ship to operate in water depths up to 35m (115 feet) and these will be extendable by another 10m (30 feet) for operation in deeper water.

The vessel is in Singapore and a shipyard has yet to be selected for the conversion work but A2Sea expects the crane ship to enter service during 2006.



Rising interest rates and oil prices took momentum out of the stock market in June and early July, with the effect most clearly seen in the Dow's performance. As a result there have been very few net share price gains in the year to date. **Chris Sleight** reports

Black gold

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



There is a familiar feel to the shape of the Dow's curve this year. Like 2004, it started the year reasonably – there were a few ups and a few downs, but by the end of February it looked well established in positive territory.

The Dow started heading south towards the end of Q1 2004 because commodity price rises started to ramp-up, and it was clear they were not going to be flash in the pan issues.

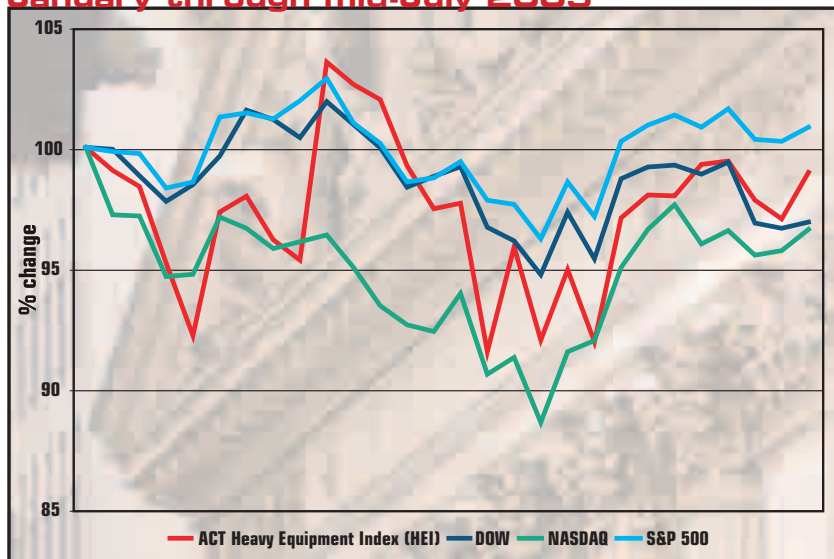
Improvements in the economy helped pull things back towards the end of the year, giving the Dow a net gain of just 2.12% for 2004. Compare that to the 6 to 7% rises seen for the benchmark stock market indicators in the UK, France, Germany and Japan.

Rising rate

A similar pattern is replaying this year, with the added issue that the Federal Reserve is now much more aggressive on interest rate rises. They were raised another 0.25% at the end of June to take the discount rate up to 4.25%.

The Dow's cycle may look similar to 2004's, but a year's perspective illustrates just how much has changed. For example, June 30, 2004 also saw the Fed raise the discount rate, but back then it was from just 2% to 2.25%. Oil prices at the time

January through mid-July 2005



were around the historically high US\$40 per barrel mark. Fast forward a year and they were above \$60 per barrel – what would the markets give right now for a return to the good old \$40 per barrel days?

So with these factors weighing on the markets, it is perhaps not surprising that the Dow is struggling to get into the black this summer. If last year is anything to go by, things could

get worse before they get better. Hopefully there won't be any of the oil workers strikes in Norway and Nigeria that bumped up prices last year, but one factor that can be counted on is the summer hurricane season, which impacts on oil production in the Gulf of Mexico.

Equipment shares

The heavy equipment sector is seeing the impact of these issues just like any other, but while the Dow was down 3.4% at the end of week 27, ACT's Heavy Equipment Index (the ACT HEI) of 11 major lifting, construction and mining equipment manufacturers is down just 1.04% over the same period.

There have been some

remarkable performances in the sector this year. Most striking of all is Gehl, which makes telescopic handlers, among other products.

Gehl's share price has almost doubled in the first half of the year. One of its main competitors in lifting products, JLG, is also doing well with a share price increase of around 50% over the same period.

So it's not all doom and gloom. Realistically though, the markets are not going to see big improvements until commodity prices start to fall again or if there is a large (and unexpected) improvement in the economy.

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

act



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.

Bechtel's waste plant requires CCO operators

One of the most populous crane sites in the northwest right now is the River Corridor Project at Hanford, Washington.

No fewer than 33 cranes are engaged in the construction of Bechtel's Vitrification plant there, a vast complex of treatment plants that will convert dangerous

radioactive waste into stable glass.

Cranes on-site range from 10 ton boom trucks to a 650 ton Demag with luffing boom. They include 10 Link-Belt lattice and telescopic boom cranes of 100 ton capacity and above, and nine Terex telescopic. Three Potain MD1400 tower cranes

Two lattice boom cranes, including a Link-Belt crawler, "flip over" the dished head of the first Pretreatment Facility 4-pack tank to support the next phase of pre-assembly



stand up to 240 feet high.

As a condition of work on the project, and as part of its overall risk management program, Bechtel requires that all crane operators be CCO-certified.

Curt Koegen, IUOE 370, based in Spokane, reports that there are 38 operators certified by the National Commission for the Certification of Crane Operators working at the plant.

OSHA ponders impact of draft crane rule on small businesses

OSHA is conducting an economic analysis of its draft rule on cranes and derricks to determine if further study of the potential impact on small business is needed before publication of a proposed rule.

If the agency decides that a study is necessary, it will form a so-called SBREFA panel (after the Small Business Regulatory Enforcement Fairness Act of 1996) possibly as early as September. Should the SBREFA process not be needed, a proposed rule would be the next step.

The rule in question, 29 CFR 1926, forms part of Subpart N of the standard and addresses hazards associated with various types of hoisting equipment used at construction sites. The existing rule, which dates back to 1971, is based in

part on industry consensus standards from 1958, 1968, and 1969. In recognizing the considerable technological changes that have taken place since then, OSHA established a negotiated rulemaking committee in 2003 to develop a draft proposed rule.

The so-called C-DAC, Crane and Derrick Negotiated Rulemaking Advisory Committee, completed 11 meetings before it was disbanded in July 2004 after it submitted a recommended revision of the crane standard to the Assistant Secretary of OSHA.

Among the changes called for in the revised standard is certification of crane operators, either through a nationally accredited certification organization such as NCCCO, or an employer program audited by such an organization.



For information on the National Commission for the Certification of Crane Operators (NCCCO) go to: www.nccco.org

? overhead crane CCA

The CCO Overhead Crane Operator certification program was introduced earlier this year. Here are answers to frequent questions from candidates.

What do I have to do to become certified as an overhead crane operator?

You need to pass the overhead crane written examination, pass the overhead crane practical examination, and meet medical (physical) requirements as outlined in the candidate handbook (overhead cranes).

Is the overhead crane examination another specialty exam similar to

the CCO large telescopic and small telescopic mobile crane examinations?

No, the overhead crane examination is a stand-alone examination. You are not required to take the core exam for mobile crane operators unless you wish to certify in mobile cranes.

If I am already certified as a mobile or tower crane operator, can I become certified as an overhead crane operator?

Yes, you would just follow the same procedures outlined above.

If I am already certified for other categories (mobile or tower) will I

have a different expiration date for overhead cranes?

No. A CCO-certified operator can only have one expiration date; an individual cannot have different expiration dates or separate certification cards for different categories of certification.

If I am already certified in mobile or tower cranes when I certify in overhead cranes, do I have to recertify on overhead cranes when my mobile or tower crane operator certification comes up?

It depends on how much time you had remaining on your certification when you took the overhead crane

examination. If you become certified in overhead cranes within 24 months of your current expiration date, you do not have to take the overhead crane recertification examination when you recertify in mobile or tower cranes.

What if I have more than 24 months remaining on my existing certification when I certify on overhead cranes? If there is more than 24 months remaining in your mobile or tower crane certification period when you certify in overhead cranes, you will be need to take the overhead crane recertification examination when you recertify in mobile or tower cranes.

Practical examiner program underway for overhead cranes

Practical Examiners are now being trained and accredited to administer CCO Overhead Crane Practical Examiners through NCCCO's series of Accreditation Workshops that have proved effective in its mobile and tower crane programs.

Host to the first two Workshops recently was Zachry Construction, San Antonio, Texas, and Operating Engineers Local 324 in Howell, Michigan. In all, about 20 candidates signed up for the programs which each took place over two days.

CCO Examiners are trained how to verify the test site has been laid out according to the detailed instructions and CAD plans developed by NCCCO's practical exam office, and then briefed on every aspect of exam administration from initial paperwork processing, to reading of verbatim instructions to the

candidate, to correct scoring of the test itself. Accreditation is good for five years and must

be maintained throughout that period by regular administration of CCO tests.

Through this training and accreditation program, the integrity of the practical testing process is preserved, a key element of CCO certification that is required to be verified by virtue of its accreditation by the National Commission for Certifying Agencies (NCCA).



CCO overhead crane practical examiners-in-training rehearse test procedures at a recent workshop

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Assembling the TBM at the surface using Barnhart's MLT and 450 ton strand jack.

The lifting and lowering method was chosen to be cost efficient, improve worker safety, and shorten completion time

Lower and slide

Barnhart used its specialized skills and equipment to bring efficiencies and other benefits to a storm water tunnel construction project in Atlanta, GA

The metropolitan area of Atlanta has experienced rapid growth in the last decade. For more than 100 years Atlanta has operated a combined sewer and run-off disposal system but storm water run-off has overwhelmed the current system.

The city's response is to create temporary underground storage for storm water run-off that will cut overflows to four a year. Main contractor Obayashi Corporation (North America) is constructing tunnels, shafts and a pumping station to capture, store and treat rainwater before returning it to the environment.

The \$210 million West Area Combined Sewer Overflow (CSO) Storage Tunnel project,

to the north and west of Atlanta, includes 8.5 miles of tunnels.

An innovative method – the first of its kind in the country – is being used to construct the 24 foot diameter tunnels at depths to 300 feet. Barnhart's contract, for Atlanta CSO Constructors (ACC), is worth around \$750,000 and centers on assembling and installing two tunnel boring machines (TBMs).

Jeff Latture, Barnhart senior vice president, explained the company's involvement, "Our job was to provide a lifting system on top to pre-assemble the TBM components into large segments. We then lowered each segment to the bottom of the shaft where it was received by our hydraulic slide system. The segment was then moved forward into the tunnel [on Barnhart's slide track] and the next segment lowered for mating. This continued for about five segments that comprised the main machine."

For the first project Barnhart used a traveling Modular Lift Tower (MLT) with a 200 ton hoist. As components were lowered to the bottom of the 300 foot shaft a slide system was used to move the modules for final assembly "in the hole". A 450 ton capacity strand jack instead of the 200 ton hoist handles the large items, and a 500 ton hoist is used for multiple lifts.

For the second project, later in this year, Barnhart will move the system to another shaft and use the 500 ton hoist. Latture says he expects to remove both TBM units in a year or so. Tunnel completion is due in October 2007.

act

The cutter head of the TBM reaches the bottom of the 300 foot shaft



With the construction sector operating at full tilt, skylines from Maine to the Carolinas are punctuated with crane booms. High-rise buildings and transportation infrastructure are providing much of the impetus for crane sales and leasing activity up and down the East Coast. **ACT** reports

Breaking records

Crane booms are a mainstay on the skylines throughout the Eastern United States, where a proliferation of private and public construction has crane distributors, rental operations and owner/operators are struggling to meet demand.

Just six months into the year, all sales and rental people contacted reported sales above their forecasts, and they are optimistic the construction surge in the region will hold out beyond 2006, assuming that several projects that have been awarded actually start as planned.

Among the most visible construction sites in the East are skyscraper and transportation infrastructure projects, both of which rely heavily on cranes.

In Manhattan, it is all about skyscrapers. The one that promises to significantly alter the Big Apple's skyline is the architecturally dramatic Freedom Tower, which will be the world's tallest building at 1,775 feet (about 400 feet taller than the World Trade Center's original Twin Towers). Owned by Silverstein Properties, the \$1.5 billion project has started but due to design changes is not expected to be completed until at least 2009.

Other high-rise projects in Manhattan include the \$1 billion, One Bryant project, which developers claim will be New York's most "green" building and the \$800 million New York Times Building, slated for completion in 2007.

"Private building is very strong throughout our region," says Andy Schultz, crane specialist for Hoffman Equipment, with a territory that includes the state of New Jersey, parts of New York and New York City and through Delaware and Philadelphia. "Public work is out there too, but the biggest problem is getting the agencies to fund the work," Schultz explains.

Several other public projects are on the drawing board for Manhattan, New York and New Jersey, although start dates are up in the air for some of them. Schultz says he knows of one contractor that recently pulled out of a public infrastructure job his firm was awarded because it had been delayed several months because the funding had not come through. "There have been a few jobs that have bid and been awarded but the work was pulled back. More than a billion dollars-worth of agency sponsored work hasn't been funded," says Schultz, who sells Manitowoc and Grove cranes and Manitex boom trucks. "But other than that, sales are good. They would be better if some of these projects would start."

Strong demand

From his vantage point, Schultz says while there appears to be a lot of competition on every deal, everyone in the region seems to be prospering, from the smallest crane owner/operators to the largest rental companies.

Schultz attributes the rise in construction projects to the mass of people in the region and the demand for updated structures. The economic recovery of the East after 9/11 was slower than in other parts of the country, but the rebound is now charging full speed ahead.

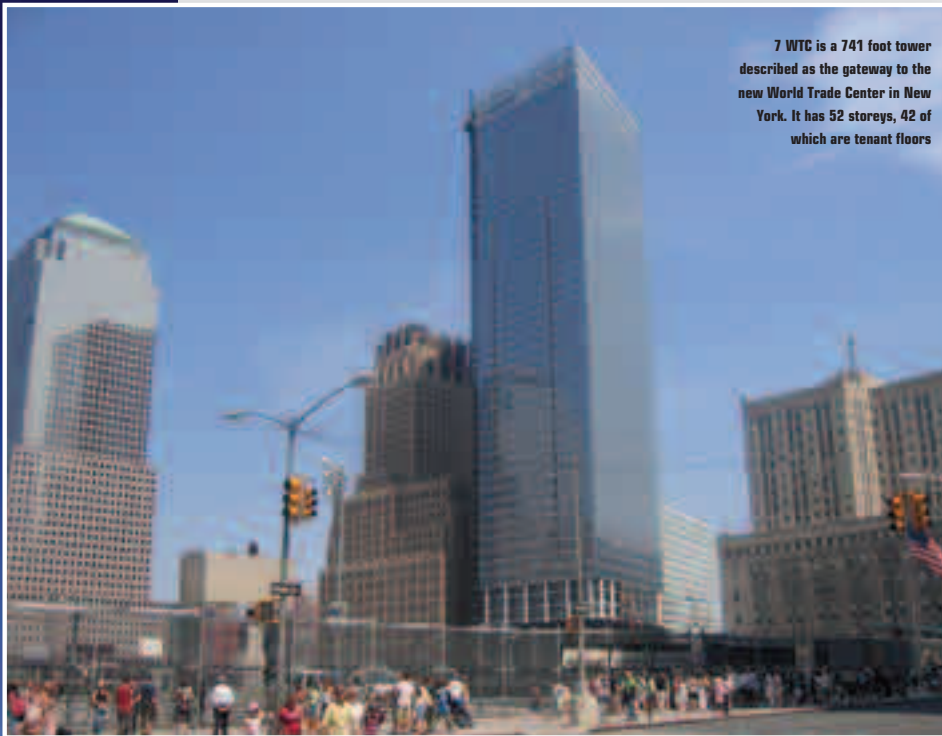
"We are seeing a lot of rehabbing of older buildings or the knocking down of an old building and the construction of a new one," Schultz explains. "The small private crane owners and small rigging businesses seem to be really busy with this type of work." Schultz says the best selling crane at his company is the Grove GMK3055. "This crane covers a broad range of uses, it has a lot of capacity, and a lot of boom," Schultz says. "It's easily maneuverable."



A recent version of the design for New York's Freedom Tower

Large-scale projects underway in New Jersey include the \$200 million Borgata Hotel Casino and Spa Expansion, the \$400 million Pfizer expansion and the \$1.3 billion Meadowlands Xanadu sports and entertainment development. The construction sector is also strong in Philadelphia with three major high-rise office buildings under construction, including the Cira Center and the Comcast Center.

7 WTC is a 741 foot tower described as the gateway to the new World Trade Center in New York. It has 52 storeys, 42 of which are tenant floors



Slated to open in the spring of 2006 is Harrah's Chester Casino and Racetrack under construction in suburban Philadelphia. Pittsburgh is also experiencing an urban renewal, with several new retail projects under construction or in planning, including The Waterfront, an urban re-use project that involves converting an old steel mill into a multi-use retail, restaurant and nightlife development.

Boston is also a hotbed of construction activity, with crane rental and sales operations struggling to keep up with demand. Major projects in the Boston area include the \$850 million Boston Convention and Exhibition Center, the \$14.6 billion "Big Dig" Boston Central Artery Tunnel Project that is nearing completion, and the renovation and re-construction of two new terminals at Logan International Airport. Boston also is expanding its cultural attractions, including the new \$62 million Institute of Contemporary Art, the first new art museum to be built in Boston since 1909. The Boston Museum of Fine Arts is planning an addition to its building as are the Museum of Science and the Children's Museum.

Above average

United Crane and Rigging in Baltimore rents cranes to contractors across the Baltimore and Washington, D.C. areas. "Our cranes are all over the area, I would say especially in Washington, D.C.," said Stephen Dieren, in the United sales team. "We've been doing work at RFK Stadium and FedEx Field. We've got cranes out on bridge and roadway jobs, at major airports and on commercial buildings. I would say things are above average for us." He says the highest demand has been for larger hydraulic cranes and tower cranes.

Residential high-rise construction is very active in the Capitol, with several major new

projects under construction as well as some large-scale residential renovation.

"This has been a tremendous year for us as a distributor," said John Dozier, territory manager for Link-Belt distributor Pinnacle Cranes in North and South Carolina. (Pinnacle also carries Elliott boom trucks and Shuttle Lift carry decks.) "I would say for us the machine with the highest demand has been the Link-Belt HTC-8690 truck crane. We've also sold several of the Link Belt HC-218 crawlers and the Link-Belt HTC-8650 truck cranes.

On the road

On the HTC-8650, "It is the next logical step for us to add the rear steer feature to this crane," says Rick Curnutte, telescopic crane product manager for Link-Belt. "Maneuverability is critical to a crane's productivity and by adding rear steer, this crane will only get better."

Transportation and infrastructure projects in the Carolinas account for most of the demand for the cranes sold by Pinnacle, according to Dozier, who pointed to highway, bridge and bypass projects in the Raleigh, Charlotte and Clayton, N.C.

"I've been doing this [selling cranes] for 20 years and I've never seen it where all the [new] inventory has been bought up like this," says Dozier. "If someone were to call you and say they wanted a 90-ton truck crane, if you were smart enough to order it six months ago, you'd have a deal."

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The 628 ton reactor being unloaded by Big Lift's *Happy River* on to Dock 16 in the Port of Houston

Unloading a 628 ton (570 metric tonne) reactor in the Port of Houston marked the beginning of a unique and record breaking operation. The so-called **hydrotreater**, measuring 115 feet long and 13 feet 10 inches in diameter, took a 1,200 mile rail journey from Houston to Colorado on a 36 axle Schnabel rail car.

Gino Koster reports

In an effort to reduce the sulfur content of diesel fuel and to meet the new government regulations by June 1, 2006, Suncor Energy USA is modifying and upgrading its Colorado refinery, about six miles northeast of Denver. The \$300 million job, codenamed Project Odyssey, encompasses 13 individual projects. The hydrogen desulfurisation reactor – the hydrotreater – forms the cornerstone of the project.

Preparation for the logistics to move the reactor to site started in April 2003, as part of the bidding process, by manufacturers around the world. It soon became clear that the proposed design; 120 feet long, 14 feet 6 inches diameter and 810 tons (735 metric tonnes), was just too much for any route leading to Commerce City, according to Bill Feliss of the Heavy Haul Division of Rock-It Cargo USA.

Rock-It's detailed route surveys, including

water, road and rail options, revealed that dimensions and weight had to be adapted. But, even more important, the only feasible route was via rail using the unique 36 axle CEBX 800 Krupp so-called Schnabel rail car. The 880 ton capacity special rail outfit is owned and operated by Westinghouse Energy.

The Schnabel concept allows the load to be suspended between two arms, each resting on an 18 axle rail bogie combination. Overall length of the loaded rail car would be 357 feet. The planning and preparation process of the US part of the route, starting in the Port of Houston, involved representatives from; Suncor, Rock-It Cargo, Burlington Northern Sante Fe Railroad (BNSF), Jacobs Engineering, Cooper/T. Smith Stevedoring, the Port of Houston Authority and Specialized Rail Transport.

As part of the preparations the entire rail route was checked twice to produce a list

of some 100 obstructions that required temporary removal, according to Bill Feliss. They included sign posts, crossing gates and whistle boards. A bridge in Cameron, Texas required temporary shoring to handle the weight. Rock had to be cut back from tight canyon and ravine walls.

Port record

The hydrotreater took 13 months to build and was fabricated by Italian specialist, Belleli in Mantova. On February 10 the reactor left Porto Maghera in Italy, loaded on board Big Lift's heavy lift vessel, *Happy River*. Before the vessel could unload its bulky cargo on to Dock 16 additional preparations were required. The weight had to be spread to prevent overloading the quay.

In addition, the loading process between the Schnabels meant the reactor had to be positioned on a parallel set of longitudinal



Giant rail



GINO KOSTER has been interested in cranes and heavy hauling since he was 10 years old, and the passion has continued to grow ever since. He makes his living out of it and it is also his hobby. By 1984 his urge to write about the industry led to publication of his first article in a trade journal in The Netherlands. Eight years later he started writing for ACT's sister magazine *International Cranes and Specialized Transport*. In 1999, with a specialist local veteran, he published a history book in German on heavy hauling.

With the rear part of the Schnabel rail car already connected to the reactor, the necessary adaptor is fitted to the front part of the load



ride

beams. The beams had to be elevated to a position where they were in reach of the vertical lift range of the Schnabels. Stevedores, therefore, created an additional floor of hardwood crane mats and heavy steel plates.

Before the reactor could be lifted from the ship's hold it had to be rotated so nozzles on the outer shell would not interfere with the maximum height and width as defined in the route surveys. After that, the ship's 400 metric tonne (441 ton) capacity cranes lifted the reactor in tandem on to the set of beams and additional floor. This operation was a record in that the Port of Houston Authority claims it to be the largest single load to pass the port.

When the vessel was unloaded adaptors were fitted to both ends of the reactor and it was secured to the beams. Once the outer ends of the beams were pin-connected to the lower part of the Schnabels or arms, the

inbuilt hydraulic lift capability of the rail car raised the reactor, laying it in its set of beams, free from the additional floor. The adaptors transfer the compressing loads, derived from lifting, to the reactor. In this way the reactor itself becomes an integral part of the Schnabel transport method.

On March 26 Burlington Northern Sante Fe Railroad (BNSF) provided one of its large locomotives and a ground crew to start the rail journey to Colorado. Westinghouse Energy had its crew on the Schnabel rail car. This crew operated the Schnabel system that provides a maximum vertical lift of 44 inches and a horizontal shift of 40 inches from either side of the center line.

To leave the port the Schnabels had to be lifted 25 inches, before lowering them to



ABOVE: The reactor suspended between the Schnabels, or arms, of the 36 axle rail car combination



ABOVE: After a trip of about 25 days and 1,200 miles the reactor arrived at Suncor's refinery in Commerce City, Colorado on April 15

the standard travel height of 18 feet once outside the port area. From Houston it went southwest to Alvin and then to Rosenberg and onto Temple and Brownwood. Next, it passed through Sweetwater, Lubbock, Amarillo and Dalhart to reach the border.

After crossing into Colorado, the load continued through Trinidad, La Junta, Pueblo and Colorado Springs before reaching Commerce City. In general it traveled at 12 mph, and only during daylight. After a 1,200 mile trip, taking about 25 days, the reactor was delivered to Suncor's refinery on April 15.

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Latest Liebherr

New from Liebherr is the LTM 1200-5.1 wheeled mobile crane, which the manufacturer claims has, at 236 feet, the longest boom in the five axle class. Lifting capacity is 220 tons and Liebherr says the new model is the first mobile crane in the world to be fitted with air disc brakes. The new brake system is said to both improve braking operations and directional stability.

Also fitted is active, speed-sensitive rear-wheel steering, which helps achieve the smallest turning radii and reduces tyre abrasion, Liebherr claims. At high speeds, the active rear-wheel steering helps straight-running stability. Because all axles are steered, uniform axle loads are achieved even when the crane is being driven on a building site with all equipment. Raising the

axles during crab steering is not required and the driver can choose from six steering programmes.

Extension of the seven section, 236 foot boom is fully-automatic using the Telematik single-cylinder telescoping system. An optional 22 foot lattice jib section increases the base point for the 39 to 72 foot long swing away jib, which can be extended to 118 feet using up to two 22 foot lattice jib extensions. The swing away can be set at 0°, 22.5° or 45°, or an option is a hydraulic version infinitely adjustable between 0 and 45° under full load.

Long lift davit

A new material handling davit crane fitted with a Columbia HD650 AC electric wire rope hoist is available from Allied Power Products (APPI), based in Oregon. The crane is designed and manufactured by APPI to meet US Department of Commerce requirements for performance, operation and safety. Targeted are material handling and maintenance service applications with long lift distances.

Maximum lifting capacity of the APPI Model 4FFM Davit is 400 pounds. The Columbia hoist has 115 feet of 5/32 inch wire rope and an average lifting speed of 25 feet per minute. An upper limit switch and a removable remote pendant control are included.



Anchored safety for two

To protect decking crews from fall hazards, a new portable anchorage is available from Dalloz Fall Protection. The unit is for a maximum of two workers and has continuous 100% tie-off with overhead anchorage points.

As the cable lifeline system is not fixed, swing fall and tripping hazards are said to be reduced.

The fall protection system meets the Occupational Safety and Health Administration (OSHA) requirements and the American National Standards Institute (ANSI) standards.



Terex-Demag upgrade

New from Terex-Demag is the AC 160-2 telescopic wheeled mobile, an upgrade of the AC 160-1. Maximum boom length, with a four segment extension, is 314 feet, an increase of 25% compared with the AC 160-1.

Many of the design features of the five axle AC 160-2 have been carried forward from its predecessor. The 40 foot carrier allows a turning radius of 36 feet, aided by the electro-hydraulic rear-axle steering. At up to 45km/h (28mph) both rear axles provide automatic steering. They lock at higher speeds to improve directional stability.

The AC 160-2 uses the powertrain technology of the



larger AC 200-1. It is powered by a Daimler-Chrysler OM 502 LA diesel, rated at 380 kW (510 HP) driving through a ZF AS-Tronic gearbox.

The AC 160-2 has the IC-1 crane control system with touch-screen and color display, as well as the UNIMEC boom telescoping and pinning system.

Rope lubrication

New from LAB, LLC is wire rope lubricant Lube-A-Rope. The lubricant is available in a 16 ounce aerosol and contains pressure additives that create a thin film over the rope to provide maximum lubrication and protection. It can also be used on cables, gears and chains.



Street Legal comes

Jake's Crane president **Bob Dieleman** has got back a special machine that he made and then sold more than 20 years ago. **Phil Bishop** talks to him about it

In 1991 the largest street legal crane in California was the 8470 American conventional truck crane, rated at 180 ton capacity. It was the king of the road. By comparison, the largest hydraulic at that time was the 1300 Grove, rated at 130 ton.

Bob Dieleman, president of Jake's Crane – based in Las Vegas, Nevada, but just 36 miles from the state border with California – wanted something bigger. He went to American Crane first, then Link-Belt and Grove. "But nobody had any interest in making it," he recalls.

Faced with this negative response, Jake's decided to design, engineer and manufacturer itself what it wanted. Starting with a blank sheet of paper, it produced a 400 ton capacity lattice boom truck crane. "We designed it around our needs and the street legal part was the single most important issue that we faced," Dieleman says. He called the machine the SL 400, for Street Legal. It had "state of the art" hydraulic controls and Rexroth components.

It had a 290 foot heavy duty boom or a 350 foot-high light boom. It could travel on Californian highways at 55mph without undocking it. It just required the outriggers and counterweight taking off (maximum counterweight: 210,000 pounds), and go down to 45 foot basic boom, and it was ready to go.

"When we finished we hired American Test Center who took it out for ANSI testing. We had to have 500 tons of test weight for the 25% overload test and hold it for two minutes."

Cost recovery

But it was an expensive business. Says Dieleman: "You can imagine what it would cost any company to design, engineer and manufacture a crane like that. We did one job with it – very profitable – a refinery in Southern California and then sold it to Cornell." It was a decision made of financial necessity, but one he did not enjoy taking. "We lost a lot of money in the development of this



machine. It has been very difficult to recover from that even though it has been many years," Dieleman says.

Cornell kept the SL 400 for a year before selling it on again to the Salem nuclear power plant in New Jersey. "There was one pick it made that no other production crane could make at that time," Dieleman remembers. "They had to drive it through a narrow path." He says that the truck was just 11 feet wide, while the upper was 3 meters (10 feet) wide. "It was a North American carrier and an international upper. We wanted to be able to use it anywhere."

Over the years Dieleman kept a close eye on the progress of his SL 400, waiting for the day when he would be able to buy it back. Finally in April this year his time came and he was able to buy it back, though he won't say what he paid.

"We broke it down and hauled it back to Las Vegas. It hadn't been painted and it wasn't pretty but structurally it was 100%. There wasn't a dent on it. It was like a brand new crane."

First job for the refurbished SL 400 was erecting tower cranes for a bridge on the Hoover Dam bypass





home

PHIL BIS 10P is a freelance journalist with 20 years' experience writing about, commenting on and analyzing the construction industry. For the last eight years he has specialized on the crane and lifting sector.



"There were some minor hydraulic leaks that we repaired. But beyond that, we just cleaned it up and repainted it."

"We'd been trying to buy it back ever since we lost it," Dieleman says. On the one hand he says "it's just a tool for us to provide our customers with a service that isn't available elsewhere. It's just a niche market for maybe when crawlers can't fit in." Yet there is clearly an emotional attachment, "You might say that," he admits. "It's a wonderful machine, it really is."

Having it back

Now back home with Jake's in Las Vegas, the refurbished SL 400 has carried out its first job, putting up tower cranes for a bridge on the nearby Hoover Dam bypass.

The 3.5 mile bypass includes a crossing of the Colorado River about 1,500 feet downstream of the dam. The 2,000 foot-long, composite concrete deck arch bridge is being built by a joint venture of Obayashi Corporation and PSM Construction, which began work on site in January this year.

On each side of the river is a luffing jib tower

crane, both of which went up in June. These have also been supplied by Jake's, and although they are not entirely "home-made", they too have been significantly customized by their owner.

These diesel powered TG tower gantry cranes were made by Link-Belt (Cornell owns the manufacturing rights today) but Jake's – which has 10 of them in its fleet – has refurbished them with new cabs and new hydraulic controls. Diesel powered tower cranes are out of favor these days, with only Favelle Favco of Malaysia manufacturing them. Dieleman, however, remains a fan of the power and lifting speed they offer. The peak production capability of a TG is about four times that of an electric powered tower crane.

Putting up the TG tower cranes was not a straightforward task on the dam bypass – at least not on the Nevada side of the river. On this side the TG crane stands right on a hairpin bend in the road. "We sat the SL 400 right on the edge of a cliff that is well over 700 feet above the canyon floor," Dieleman explains. "Then we had to boom out." Any mistakes

and it would have been a long drop. Dieleman himself took the saddle for this job. He is 57 and has been president of the company for 24 years, but he still likes to take the wheel sometimes. "This was such a great job I just felt like I wanted to do it."

Taking into account the Nevada OSHA requirement for a 15% de-rating for the setting up of tower cranes, the SL 400 was working at capacity, lifting 120,000 pounds over the side at an 80 foot radius on 140 feet of boom.

"We tested to see what the tipping point was. We went in with our eyes wide open. We had to be absolutely sure. In testing, we picked a lot more than we would, and over the side where the chart is at its weakest, and it performed beautifully."

Close to the edge

Tests are one thing. On site is a different place. "Before setting the TG we boomed out 10 feet beyond radius over the highway. When you are on a cliff, there are a lot of things you don't know. You have an idea, but you don't know for sure how sound the cliff is. We had to be really careful."

He adds: "One of the questions on the CCO test is: How far should you be from the edge of an embankment? The answer is one foot for



every foot down. That's a rule of thumb but we'd have had to be 800 feet away.

So as not to disrupt the heavy traffic over the dam, Jake's worked from six at night until six in the morning. One of the two lanes was blocked off for the duration. While actual picks were made, the whole road had to be shut, though never for more than 10 minutes at a time.

"The crane was just amazingly smooth and handled very well," Dieleman says.

"With the combination of the SL 400, which we designed from the ground up, and the TG cranes, re-designed by us, this was a real good example of what Jake's capabilities are in terms of satisfying our customers," Dieleman says.

And somehow it was appropriate that it should all come together at the Hoover Dam. Jake's is in Las Vegas today only because Bob Dieleman's father Jake came to the area to work on the construction of the dam and ended up setting up Jake's Crane.

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TERRY YOUNG is president of Construction Safety Experts, Inc. Young is active in the SC&RA and is one of six new Board members elected to serve three-year terms at this year's Annual Conference in April.

He can be contacted at 919-625-4040 or terry@safety-xperts.com



Employers must assess the work place for hazards and issue **personal protective equipment** (PPE) if necessary. **Terry Young** reports

PPE requirements

It is an OSHA requirement that employers conduct an assessment of the work place to determine if hazards are present, or are likely to be present. The results of that the assessment could necessitate the use of personal protective equipment (PPE) on site.

One of the key factors in PPE effectiveness is the employers' communication with affected employees—good communication is crucial in establishing guidelines and procedures when using PPE. In addition, all employers must:

- Ensure that all PPE is of safe design and construction and is suitable for the work performed
- select and have each identified employee use the proper PPE
- explain the limitations, proper care, maintenance, useful life, and disposal procedure of the PPE
- show employees how to don, remove adjust, and wear PPE
- make sure the PPE selected fits properly
- train employees to a level where they can demonstrate an understanding of the training and show the ability to use PPE properly
- keep accurate certifications and records of all training required by OSHA
- always follow the OSHA, ANSI, NIOSH and manufacturers' guidelines when selecting, using, maintaining, and caring for PPE.

Types of personal protective equipment include: head protection, eye protection, hearing protection, foot protection,

hand protection, high-visibility vests, appropriate clothing, and respiratory protection.

Head protection includes ANSI Z89.1 Type one top impact only class E (electrical) class G (general) and class C (conductive) head gear. Employers must remember that proper selection is necessary depending on the work hazards assessment. Care and maintenance procedures for head protection include; inspecting for defects (and replacing if there are any signs of loss of surface gloss nicks, cracks, fading, flaking, stiff or brittle surface), electrical contact, strike by a falling object, or any deformations of the hard hat. Do not paint, store in direct sunlight, sit on, modify the shell or suspension, or ever use solvents or cleaners on hard hats.

Eye protection includes ANSI Z87.1 eye glasses, mono goggles, face shields, and shaded eyewear. Selection criteria to be considered are work tasks such as chipping, grinding, machining, sawing, fastening, chiseling, welding, cutting, wood working, and handling chemicals and acids. Employers and employees must keep the equipment clean and inspect it for defects, cracks, scratches, broken or bent frames or damage from impact.

Hearing protection includes Niosh-approved ear-muffs or ear-plugs to protect from noise sources such as cranes, heavy equipment, chipping, grinding, machining, sawing, power fastening, drilling, and industrial machinery. Users should clean their hands and the

hearing protection equipment before each use and replace plugs when they are no longer pliable. Reducing noise levels below 80 decibels is best practice.

Foot protection includes ANSI-approved footwear to protect against falling or rolling objects, objects piercing the sole, and exposure to electrical hazards. This includes protection from impact, compression, cuts, or puncture injuries.

Hand protection includes OSHA approved gloves that are appropriate for a particular application. Gloves may be selected based on exposure to skin absorption of harmful chemicals or substances, severe cuts, lacerations, abrasions, punctures, thermal or chemical burns, or extreme temperatures.

High-visibility vest includes ANSI-approved high-visibility vests that are marked with or made of reflective or high-visibility materials. The Conspicuity classes are Class 1, 2, and 3. All three classes require 360-degree visibility, meaning the wearer can be seen from all sides.

Class one vests are used when workers can give their undivided attention to approaching traffic, there is ample separation between the worker and vehicular traffic and vehicle speeds are 25 mph or less.

Class two vests are used to achieve greater visibility. They are recommended in inclement weather, when employees perform tasks that divert attention away from approaching traffic, vehicle

speeds are between 25 and 50 mph, or when workers are in or near the vehicle traffic space.

Class three vests are used when vehicle speeds exceed 50 mph, or when workers and vehicle operators have demanding task requirements. The wearer must be visible from one-quarter mile and must be recognizable as a person.

As far as **respiratory protection** is concerned, both OSHA and NIOSH require that a contractor's program be administered by a trained program administrator. A hazard analysis must be performed to determine exposure levels, and eliminating or controlling the exposure should always be considered before opting for respiratory protection. A written program, including employee medical evaluations, fit testing, training, selection criteria and identifying the program administrator is required.

Appropriate clothing includes OSHA standards that require shirts with minimum four inch sleeves, long-sleeved, heavy duty shirts for hot work or special conditions, pants with no cuffs and fire resistant clothing for working in hot environments. Appropriate head, eye, foot, cold weather and hot-weather clothing must also be considered. **act**

additional information

Additional information and a video are available from the **Specialized Carriers and Rigging Association**.

www.scranet.org



Wanted: new, used,

With orders for new cranes backlogged to late 2005 and in some cases beyond, the market for used cranes and related transportation equipment has never been more vibrant. Demand for cranes that are less than 10 years old and in good working condition is very high, as are their price tags.

"Right now, the market for used cranes is the best I've seen it in 10 years or more," says Tom McCallum, director of industrial crane sales and crane remarketing at Manitowoc. "Everyone is selling everything they can get their hands on."

As a service to its dealers, Manitowoc maintains a website allowing dealers to post the used cranes they have for sale. The website offers information about used cranes and links prospective buyers with the dealers that have them for sale.

"As an example of demand, there were 305 machines on the website listed for sale a year ago. Today there are 49," McCallum says.

Straight to work

Buying trends among used crane customers have also changed, with most seeking late-model, almost-new machines that they can take straight to the job site and put to work. "The customer is looking for a crane that can go to work as soon as it is delivered," McCallum explains. "In the past, buyers were looking for an inexpensive machine that maybe needed some work. Now they want a late 1990s or early 2000s model."

McCallum says that while the market for new and used cranes has improved significantly over the last year or so, it was right about the time of ConExpo in Las Vegas in March that the market exploded.

Denis Roberts, used crane manager at Tadano America, is also impressed with the demand for used cranes. "The market for used cranes is good in the United States, and actually, there's a good market for used cranes all over the world," he says.



Demand exceeds supply,
which has made the
used crane
market a hotbed.

ACT reports

After assessing the potential in the used crane market, Tadano America created Roberts' position in January 2005. On a limited basis, the company takes in used cranes as a trade for a new model, and also helps procure used cranes for customers who need certain machines.

McCallum, Roberts and others active in the used crane market say the demand is being driven by several factors, including:

- ③ manufacturer backlogs for new cranes – lead times as long as six months
- ③ high prices of new cranes
- ③ a shortage of new and used equipment in Europe and other parts of the world
- ③ a vibrant US economy that is being stimulated by new public and private construction
- ③ limited availability of new and used cranes in the 50 to 100 ton class
- ③ demand for bare rental cranes
- ③ a weakened dollar that makes used cranes a better deal for customers in Europe
- ③ internet marketing that allows for faster and more accurate searches for used cranes, leading to more "impulse" buying.

Mark Phillippi, asset manager at Terex Cranes, said that the main reason his company got involved

in the used crane market is the high demand for new cranes. "Virtually every manufacturer is working off a backlog – there are a lot of new crane deliveries," he says. "Production is stretched out so far that availability is driving the prices up of used cranes. Most customers can't wait six months for a crane. So they start looking for something used."

While few manufacturers are inclined to take in used cranes as trades on new ones, all seem to be willing to help their dealers try to move their used inventories. "We try to stay away from trades," Phillippi explains, "but as a service we do have a website listing for used cranes."

On the net

The internet has become a strategic sales tool in terms of used equipment, with prospective customers able to search for the class, size and even model year they want. Cranes are always available on e-bay.

Manitowoc's McCallum says his company's used crane website gets more than 1,000 hits a month. "I think the internet has a lot to do with the used crane market," said Jeff Faughnan, at California-based crane rental operation Sheedy Drayage. "Say I was looking for a Manitowoc crawler, I could go on the web and do a search. Before it was just word of mouth how you found a used crane. Now you can do a search and come up with a list of cranes with low hours."

Sheedy Drayage is located in San Francisco and the Port of Stockton and owns more than 50 cranes in the US. "We get a lot of inquiries for used cranes from brokers," Faughnan says. "We are not heavily involved in used crane sales, but we are seeing that demand for used cranes is up. Prices are up because demand is up."

With construction activity high, the bare rental market for cranes is also maturing. "The bare rental market is a very lucrative market with older type machines," says Faughnan. "We are getting a good

mixed review of inquiries for bare rental."

In 1994 Sheedy was contracted for heavy hauling and heavy lift rigging work on the Pagbilao Power Project in the Philippines. Sheedy's association with contractors in Manila eventually led to the establishment of a joint-venture company based at Subic Bay, which is now the largest heavy hauling, specialized transportation and heavy lift rigging company in the Philippines. This company is often the recipient of used machines from California-based fleets. "A lot of our used equipment will go over there," explains Faughnan. "Sometimes we will sell through an auction, but not that often."

Equipment auctioneers report that their activity in the crane sector continues to be strong, with availability the biggest problem. Auction sales are often a first barometer of what the market will bear. "We sell more used cranes than anyone," says Dennis Prevost of Ritchie Brothers auction company based in Vancouver, BC. "We are definitely seeing a comeback across the board on all different types of cranes."

In early July Ritchie held an auction in Maryland that attracted customers from around the country. Prevost says a 2001 Manitowoc 777 sold for \$785,000, a price he says people in the industry considered to be "huge." At that same auction, a 1997 Manitowoc 888 sold for \$930,000.

"That was an excellent result, showing that indeed the market is back, particularly for crawler cranes, and we're seeing the same type of strengthening in rough terrain and all-terrain cranes as well," says Prevost. "Good late-model cranes are in short supply. Whenever we get them in our auctions, the prices far exceed the sellers' expectations."

World price

Prevost attributes much of the success of selling used cranes, and all types of used construction

any crane

equipment for that matter, to the global nature of Ritchie Brothers. "We have customers who will travel across the continent to buy machines and we have customers who will travel from continent to continent," he explains. "That allows us to sell equipment for the global market price. A machine we are selling can be bid on by someone from Europe who is bidding against someone from the West Coast who is bidding against someone from the East Coast. Our market is worldwide and our auctions get world marketing pricing."

Crane brokers are also busy looking for cranes that fit the bill for rental houses, owner-operators and contractors. "I have discovered that there are really two buyers, two distinct species of buyers," explains Ken Day, owner of Crane Equipment Northwest, a brokerage firm in Poulsbo, Washington. "There's the people who are well-heeled and have plenty of money and are looking for very late-model cranes because they have a long wait to get a new one. And then there's what I call the 'bottom feeders,' the people who are always out kicking tires and looking for the best deal they can get."

Right now, the well-financed buyers are having a hard time finding the cranes they need. The machines with the bells and whistles are hard to find, Day says. Many of Day's clients entertain the idea of selling a crane or two in their fleets, but are reluctant to do so unless they can find a better replacement. "I had a client who wanted to buy a late-model machine and I found a seller who kept raising his price and raising his price and then finally admitted he didn't want to sell the crane because he couldn't find anything to replace it."

Day works both for sellers and buyers of cranes, and will even help negotiate trades. "I take a look at any deal that makes sense," he says. "Trades can benefit some people. They can offer good capital gains benefits."

While the demand for used equipment appears to be highest on the East Coast, West Coast and along the Gulf Coast, such is not necessarily the case in the North. Chip Laramie of Laramie Equipment in Detroit says he thinks the demand for used equipment is high, just not in Detroit. "Detroit hasn't rebounded as well as the rest of the nation," he says. "The cranes that are of interest are the ones the bridge builders would normally use. Bridge and highway construction is strong and the rest of the commercial and heavy industrial market [in Detroit] is rather soft. I don't know if anyone is buying, but they are asking if you have it."

Although the market for used cranes in the US is strong, it is not nearly as strong as it is in Europe, South America and developing countries, according to Roberts at Tadano America. He estimates that perhaps as much as 30% of the used cranes being sold in the US today are being shipped out of the country: "In Europe, the market is empty of used cranes."

Markets abroad

A weakened dollar against the Euro has led many foreign companies to the American market, looking for deals on used equipment, although Roberts says that really good deals are hard to find. He explains that the demand for really large cranes is especially high in foreign markets, especially in countries behind the iron curtain that are involved in massive infrastructure improvements. "People in markets outside the US are looking for 400 to 500 ton cranes," he says. "These cranes are going to really big job sites."

Roberts is optimistic that the new and used crane market will get even better over the next few years but said even if the economy were to take a nose dive, cranes will always be needed. "A crane is always needed to either take something down or put something up," he says. "If it's poverty or prosperity, you will still need a crane."

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ABOVE: The way things were. Forests of control levers are increasingly being replaced by compact, easy to use, multifunction joysticks



Penny + Giles is one joystick manufacturer that makes extensive use of the Hall effect in its joysticks

Staying in control

Modern equipment is increasingly being supplied with **electrohydraulic joystick controls** as standard, but what is the technology that lies behind them. **ACT reports**

Whether console or seat mounted, joysticks are becoming more common as the interface between the user and a crane's hydraulic system. They control functions such as slewing, hoisting and lowering. As is nearly always the case, the reason OEMs cite for making this switch is related to ergonomics and efficiency – to make the machine, whatever it is, easier to control with less effort, and hence less stress, on the operator.

There are three main operating principles that lie behind the joystick systems that are being fitted – potentiometer, inductive and Hall effect.

Potentiometer-based joysticks have been around for some time and have proven to be a flexible and efficient means of controlling a machine, and as a result have been used in a wide range of applications. This technology

offers two main benefits – linear output and versatility.

At its heart is carbon-based printed track technology without complicated electronics or circuitry. As a result, control paths can be developed for just about any desired control task. Inherently stable, this technology provides a reliable control solution that provides a high level of repeatability. There is only one potential drawback, and this is the fact that as a contact device, potentiometer-based joysticks have a long but limited life. This perhaps can make their use in high-vibration or high intensity applications undesirable.

Inductive joysticks are a non-contacting alternative. An outer wound coil is used with four smaller coils and a flux deflector on the end of the operating rod. As the handle of the joystick is moved, the flux deflector

causes varying levels of signal to be induced in the smaller coils. Processing these signals results in the generation of X-Y coordinates.

It is the processing required that is the major drawback to this system. The signals produced are not linear and, therefore, require considerable processing power from signal-conditioning electronics. As a result, this technology has been overtaken by other forms of non-contact device, the most frequent being Hall effect devices.

Long Hall

With an almost unlimited service life because of the absence of moving parts, Hall effect devices consist of a magnet and proprietary Hall sensors. A mechanical assembly allows the magnet to be moved back and forth past the sensors to generate a variable voltage output. This output is then amplified and can then be used how the control system designer wants.

The result is a compact assembly with a high degree of adaptability, and this is why such joysticks are increasingly being found in today's equipment.

One disadvantage of Hall effect joysticks, however, is their susceptibility to interference from other electromagnetic sources. Nevertheless, with appropriate shielding and good circuit design, they can be used in almost any environment.

To the average user, how a joystick works is probably less important than the simple fact that it works efficiently to allow precise control of complex operations with the minimum of stress.

Joystick manufacturers are working on the next generation of ever more capable control systems. These will offer additional communications options to control proportional and non-proportional hydraulic valves without the need for additional electronic interfaces and will be CAN bus capable to allow digital communication, which will, in turn, provide greater flexibility.

Manufacturers will be able to tailor control systems to precisely match the control demands – indeed this is possible now. The capabilities on offer, however, will be more efficient, use fewer parts, last the lifetime of the machine and give operators instant, precise control at their fingertips. **act**

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Industrial option

The popularity of rigger trucks has increased over recent years as the large capacity machines can often provide an ideal transport solution. **ACT** takes a brief look at these compact heavy-lifters

There are many options available to machinery movers, including yard cranes, jacks, hydraulic gantries, forklifts, but sometimes, forklifts can give the mover that special advantage of getting in and out of tight sites in little time. That is why, over the last 30 years or so, rigger forklifts have grown in both use and capacity. The forklifts, or rigger trucks, now tend to have very large capacities (30,000 to 200,000 pounds) and are built into a very compact frame.

Going back 30 years, most companies were blocking and jacking, then pulling machinery out of plants using a dolly. Back in those days most forklifts larger than 30,000 pounds were too big to be used as rigging trucks inside factories.

It was around that time that rigging companies started to modify stock forklifts to increase capacity. Taking that lead, forklift manufacturers also began to adapt their equipment for the machinery moving industry. Eventually some new manufacturers emerged that produced trucks tailor-made for machinery moving.

Today there are many models and attachments to choose from. Solid cushion-tired forklifts tend to be smaller and are used mainly indoors. Solid pneumatic-tired forklifts are slightly larger but they can run on softer rougher ground, and have a smaller pressure footprint.

Michael Salter, president of manufacturer Rigger Xtreme, says, "We have had some customers, who had just one crane, purchase a rigger forklift and find that they blow their competition out of the water. A job that would require three operators and a crane plus a



ABOVE: An additional mast and boom on its rigger truck allowed Erickson's to remove a clutch from a press where access and space was very limited



ABOVE: 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 inches

LEFT: Taylor Machine Works, based in Louisville, MS, produces the TR-120 Bulldog rigger truck, which, with all its counterweights installed, lifts 120,000 pounds

couple of days, can be shortened to two operators and a couple of hours. They simply drive into a plant, pick up the load, drive out, and place it on a flatbed. An additional bonus is the low maintenance required on a rigger truck compared to a crane."

Another advantage, according to Salter, is the variety of attachments that can be added to suit each job. Most riggers purchase a forklift with forks and a boom (or jib). Forks allow an operator to pick from the bottom, and the boom allows the operator to pick from the top.

Salter added, "No customer is alike, they all want different options. We have built some really unique attachments."

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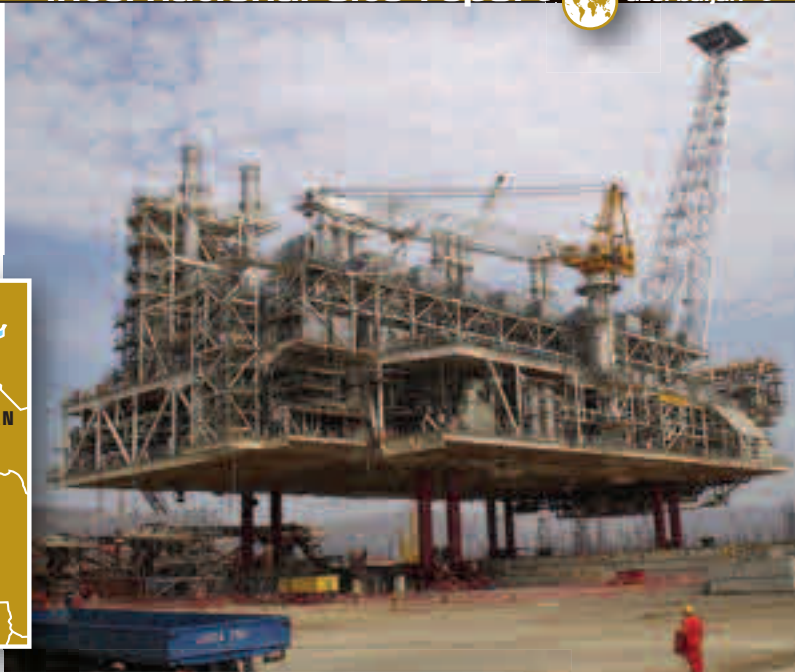
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The capital of Azerbaijan, Baku, situated on the western banks of the Caspian Sea, is one of Azerbaijan's largest cities. Not surprisingly the city's economy is based on oil. Azerbaijan has vast oil and natural gas reserves – oil reserves, mostly in offshore fields, are thought to be around one billion tonnes with gas reserves of around 500 billion cubic meters (17,000 billion cu ft). Only 10% of Azerbaijan's Caspian Sea reserves are estimated to have been tapped.



International lifting specialist, Mammoet, has completed a second platform push-up at an offshore yard in the Azerbaijan capital of Baku in eastern Europe.

ACT reports



The platform topside weighs 14,200 tonnes (31 million pounds) and will be used as a support platform

Mammoet developed its own push-up system and used it to lift the support platform to the required height of 12.5m (41 feet)

Platform push-up

The huge platform topside weighs 14,200 tonnes (31 million pounds) and will become a support platform for the 16,700 tonne (36 million pound) Central-Azeri topside that Mammoet transported in May, last year. The new platform will also support the 15,500 tonne (34 million pound) West-Azeri topside, which Mammoet is planning to transport in August this year.

To carry out the project, Mammoet used a new Push-Up system, developed in-house,

to raise the support platform to the required height of 12.5m (41 feet). In addition to the main push-up, the company installed a 1200 tonne (2.6 million pound) load-out frame using 48 axle lines of SPMT (self propelled modular transporter).

With the second platform push-up complete, Mammoet is now working on the next phase of the project – the load-out of the topside. The entire structure, including the load-out frame, will be loaded onto a barge and floated-out into the southern Caspian Sea. To get

the huge structure onto the barge, Mammoet has installed four 900 tonne (1.9 million pound) capacity strandjacks – two on each side of the load out frame. Mammoet is using its own 1,000 tonne (2.2 million pound) capacity computerized ballast system to control the ballasting operation.

Mammoet reports that it has been awarded three additional contracts in Baku for platform push-up and load-out operations for platforms weighing around 15,000 tonnes (33 million pounds) over the next two years.

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SC&RA's strength emanates primarily from the involvement of its members. This force enables us to remain a more vibrant, successful and respected organization than many other groups with far more members and resources.

What's the best way to become involved in SC&RA? Start by attending one of the Association's major events. Once there, you should make every effort to maximize your investment.

Through education sessions, committee meetings, product fairs or exhibit centers, receptions and recreational events, SC&RA offers attendees the perfect blend of opportunities for expanding their knowledge and, perhaps more importantly, their network of business contacts and friendships.

SC&RA goes to great lengths to book the most widely recognized, most credible speakers at all of its educational sessions. Whether they're our industry's leaders or pundits who appear on television and at the top of best-selling business book lists, these speakers will leave you with something to think about – sometimes long after the event has ended.

There's also much that can be learned about the industry and your Association by sitting in on committee meetings. Unless otherwise indicated in an event's program, these meetings are always open to all members.

While observing a committee meeting, you may even find yourself coming up with original ideas for dealing with pressing issues. That's the point at which many of SC&RA's leaders first decided to become more actively involved by joining a committee. Your Association can always use more good volunteers.

SC&RA also encourages you to take advantage of the many opportunities presented at the product fairs or exhibit centers. The Association sets aside enough time for you to visit every exhibit. Be an active participant. Introduce yourself, listen to what exhibitors say about how they can serve your company, and ask questions.

Stay open-minded, and you may discover invaluable products and services that you never even imagined existed. You won't find a better way to stay current on the new developments that are transforming your industry.

Regardless of the function, veterans of

SC&RA meetings naturally gravitate to people they've met at previous meetings. Speakers frequently comment about the sense of camaraderie that's readily apparent at your Association's meetings.

Often, friendships made during the meetings evolve into business partnerships, and vice versa. In other cases, members facing a problem might pick up the phone and get the advice they need from a colleague with a similar business thousands of miles away; those brief, crucial calls would never have happened if the members hadn't met at an SC&RA event.

With each SC&RA event you attend, your network should grow even larger and stronger. While nurturing old alliances, look to build new ones. For example, if you're attending one of the breakfasts during the Annual Conference, consider sitting at a table that includes several people you have never met.

Look for the "first-timer" ribbons at receptions and other functions, and then try to strike up a conversation. Maybe these conversations ultimately will even help your business. But that's really not the point.

By showing a genuine interest in new members, you undoubtedly will help make them feel better about their decision to join SC&RA. By taking this small step, you will have become more involved in your Association in a meaningful way. Moreover, those new members are likely to remember your gesture and make a similar effort when welcoming new members at meetings in years to come.

During the next several months, SC&RA will offer members several opportunities to become more involved with the Association by participating at events. Sign up now for SC&RA's Crane & Rigging Workshop, September 22-24, Hilton Americas, Houston, Texas, and the Financial Management Seminar, October 20-21, Lansdowne Resort, Washington, D.C.

You can find out more about these events and register online at www.scranet.org.

Joel Dandrea, executive vice president

Joined

SC&RA's 1,100 member companies in 46 countries

benefit in 10 major ways from their membership of the Association. If your company does not already belong here is what you're missing

1 Stay informed

The Association's weekly newsletter, two monthly magazines, special reports, educational seminars and the SC&RA web site (www.scranet.org) keep members aware of the latest industry and Association developments involving the economy, insurance, international trade, labor relations, legal affairs, legislation, management, regulations, risk management, safety and more. SC&RA monitors all the pertinent issues and lets members know when it is time to take action.

The SC&R Foundation, SC&RA's philanthropic arm, often sponsors research of vital interest to the industry. This important information would otherwise be unavailable to members.



2 Keep your operations safe

Safety is a top priority for SC&RA and its members. Among the newest of SC&RA's many training tools is the Safety First video series, which includes tips, industry best practices and how-to demonstrations. They can be used to supplement SC&RA's Safety Talks Manual.

Safety topics figure prominently in all major SC&RA meetings and most of its publications. In addition, SC&RA's Safety & Management Council keeps participants current on safety legislation and, in some cases, provides input on rulemaking and legislative initiatives; stays abreast of new methods; and shares how member companies deal with similar problems and challenges.



3 Receive quality services

SC&RA's most popular service has long been its insurance program. Working through Special Risk Services Group (SRS), SC&RA members can find the specialized business insurance they need. SRS offers the only insurance program endorsed by SC&RA.

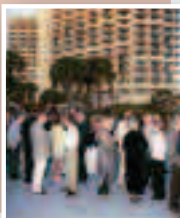
This exclusive program enables SC&RA members to obtain customized protection, including: workers' compensation; general liability; business auto; property and inland marine; product liability; and umbrella coverage. The risk management component helps members avoid injuries and property damage.

SC&RA also offers other services to assist members, for example, standard business forms for safety inspections and accident reports enable members to avoid huge printing bills.

4 Impact the decision-makers

Through SC&RA, members and staff interact with dozens of other organizations, including: the American Trucking Associations; the US Chamber of Commerce; and the Association of Equipment Manufacturers; the Crane Rental Association of Canada; the Federal Highway Administration; the Department of Labor; and OSHA. These alliances pave the way for developments that benefit the entire SC&RA membership.

SC&RA also participates in regular international exhibitions such as Bauma and ConExpo, where the Association stays alert for actions that could benefit or harm members. Often, the Association helps shape how issues develop.



6 Develop your leadership abilities

SC&RA offers dozens of committees and task forces on which members can serve. Getting involved in one of these groups gives them an opportunity to deepen their knowledge of the industry and sharpen their overall leadership skills. Plus, they'll be shaping the direction of your Association's programs and policies. Members interested in joining a committee are encouraged to attend a meeting during the Annual Conference. Most meetings are open to all members.



7 Sharpen your skills

SC&RA offers an array of special tools. These range from pocket-sized manuals for workers in the field and on the road to specialized financial reports and seminars for a company's top management.

SC&RA's free Financial Benchmarking Study, for example, lets participants learn how they compare to other SC&RA members. Participants also receive a 25% discount on registration fees for the Financial Management Seminar, which helps them interpret the survey and use its data to establish financial programs and controls in their own company.



up value

8 Attract customers, business partners and employees

The SC&RA Membership Directory lets members showcase their companies to prospective customers and identify suppliers of goods and services they need. Plus, members can readily locate companies around the world that might serve as suitable business partners. Additionally, SC&RA helps members reach prospects through heavily discounted display advertisements and articles in its official magazines.

Members wishing to recruit employees can post job listings at the Career Services section of the SC&RA web site. The *Moving the World* video portrays the challenges and opportunities in the industry to high school students and other prospective employees, as well as shippers, regulators and legislators.

10 Anticipate and prepare for your future

Each year, SC&RA and SC&R Foundation committees and task forces meet to make important decisions that shape the Association's actions for the coming year and beyond. These actions, in turn, shape the industry.

As it has for more than half a century, SC&RA will always serve as the voice of its membership. Legislators, regulators and enforcement officials continue to listen carefully because they've learned to trust and respect the Association.

9 Gain recognition

SC&RA's extensive awards program showcases members' commitment to safety, ingenuity, perseverance and altruism. Awards boost morale for winners and provide inspiration to other members. By enabling SC&RA's best and brightest to shine even more brilliantly, the awards speak volumes about the industry to government officials, customers and the general public.

In Addition, the SC&R Foundation awards scholarships to students preparing for careers related to the specialized carriers and rigging industry.

Recipients are children or grandchildren of an SC&RA member company employee or students who work for a member company.



If you want your company to belong to the SC&RA turn to page 37 and fill in the membership application form

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L	International Members	\$ 600
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Workers' compensation

The levels of compensation for workers continues to show positive signs of improvement, but, as **Kevin Cunningham** reports, the industry remains on the brink of change, and the next great "injury" may be just around the corner

With overall claims frequency still on the decline and loss costs and rates relatively stable, the state of the workers' compensation line nationwide continues to show positive signs of improvement. Nevertheless, the industry remains on the brink of change, anticipating that the next great "injury" may be just around the corner.

Industry experts continue to watch closely, taking a cautious approach when reviewing the market's outlook. The experts' concerns are: irrational pricing and reserving by some carriers; unabated inflation in the cost of medical care for injured workers; and poor progress in the war against employee and employer fraud.

Deficiency declines

An industry that is still feeling the effects of the collapses of Reliance, Legion, Fremont and Superior National, to name just a few failed workers' compensation carriers, knows that at any given time there are some competitors that will buckle under pressure and choose to compete by slashing prices and fiddling with reserves. Industry analysts, regulators and workers' comp writers continue to keep a watchful eye out for inadequate reserving practices and potential failures, even though players appear to be behaving.

According to a May 2004 study published by AM Best, *Insolvency Study, Property/Casualty U.S. Insurers, 1969 to 2002*, the primary cause of financial impairment for insurers in the 562 of the 871 companies analyzed was "deficient loss reserves/inadequate pricing," at 37.2%. Rapid

growth, which is closely related to deficient loss reserves, was the second-highest cause of impairment, at 17.3%, and alleged fraud was the third-highest identified cause, at 8.5%.

In January 2005, Weiss Ratings reported that the number of insurance companies to become insolvent in 2004 declined by 48%. "Insurers have been reporting robust profits for several quarters now, which reflects both an improved securities market and economic growth, resulting in fewer company failures compared to the numbers reported several years ago," commented Melissa Gannon, vice president of Weiss. According to Weiss, only 13 companies failed in 2004 compared to 25 in 2003. Of those that failed, three were life and health insurers and 10 were property casualty insurers, compared to four and 21, respectively, failures in 2003.

"Yes, we are seeing improvement in companies setting reserves" said Peter Burton, senior state relations executive for the National Council on Compensation Insurance Holdings. The NCCI estimated that the workers' comp reserve deficiency for private carriers declined to \$15 billion in 2003, down from \$18 billion in 2002 and \$21 billion in 2001. Burton, however, cautioned that there is more than one reason for carrier insolvencies. "The overall pricing that has been allowed to exist is inadequate," he explained.

"The deficiency has improved since 2001," said Jim Jinhong, vice president and casualty underwriting manager for workers' comp at Special Risk Services Group, LLC (SRS). "But just thinking that number (\$15 billion) is still out there along with the current rate of investment income, I think we will just need to be cautious in our underwriting discipline."

SRS provides workers' comp for the SC&RA Member Insurance Program in addition to general liability, auto, and umbrella through SC&RA member agents, providing SC&RA group buying discounts.

Jim Jinhong, who has more than 10 years of experience in the workers' comp field, said the lesson learned from the soft market days of the 1990s is that "you have to price for the exposure." He added, "In the '90s the industry didn't ... the industry just clearly focused on top line growth and forgot about the exposure it was pricing for."

Covering costs

Medical costs inflation has hit all US businesses in some way and the workers' comp system is no exception. While the industry has experienced continuous decline in claim frequency for workers' comp injuries, medical severity experienced double-digit increases during 2004, with indemnity severity experiencing significant increases as well, reported the NCCI.

"It's not a phenomenon (sic)," NCCI's Burton said. "The whole healthcare system is just getting much more costly. People are living longer and technology is being introduced to expand people's lives."

"The severity increases are clearly due to the medical costs," Jinhong added. "it's not that lost-time claims have increased or the indemnity side has increased, it's really medical."

Despite double-digit increases in medical severity, the workers' comp marketplace as a whole has improved in the last two years. For 2003, the combined ratio for workers' compensation insurance dropped to 109.5%, a decline from the 2002 ratio of 111% and 2001's 122% (1/9% due to Sept 11). Nevertheless, the workers' comp combined ratio still ranks well above the overall property casualty industry's 2003 combined ratio of 100.1%.



From the Fraud Wire:

Outrageous stories hit the headlines

➤ A Texas man hurt his shoulder so badly while working for an employee leasing firm that he had to leave work and collect workers' comp money until a suspicious Texas Mutual Insurance Company videotaped him moving a 500-pound entertainment center around. Thomas O'Laughlin was perfectly healthy, two doctors agreed at the trial. He pleaded "no contest" and now awaits sentencing.

➤ A California Department of Insurance, Fraud Division investigation allegedly caught a former Folsom, CA, prison correctional officer on surveillance video riding a jet ski, using a water slide, and doing back-flips off the jet ski while supposedly injured on a workers' comp claim.

Note: The Coalition Against Insurance Fraud contributed to this report.



Better results can be seen in the accident year combined ratio, which dropped from 125% in 2001 to 106% in 2002 and to 101% in 2003.

US workforces may be the safest they have ever been, thanks to technology and improved risk management practices, and this further aids the industry's results, according to Burton.

"Probably one of the best stories the workers' comp system can tell is that over the last multiple decades, work places are getting safer," Burton added. "If you were to go to any state and ask what their incident rate for lost work time injuries [was], almost every state will have a great story saying these are the lowest level we've seen in 20-25 years."

Reducing work place injuries has helped the industry mask all the other cost increases, including medical inflation, simply because fewer people are getting hurt.

Burton contends that loss costs and rates for the workers' comp industry are pretty flat on a national basis. "The barometer didn't really move," he said, "but if you look at each individual state, you're going to find some interesting development on a state-by-state basis."

Burton added that of the 33 states submitting the NCCI-generated data to state regulators, 19 have been for increases, one was for no change and 13 were for decreases. The NCCI submits workers' comp rates to state regulators in 33 states, including the District of Columbia, but does not submit rates for those that have independent bureaus or are considered monopolistic.

"We are filing for more increases than decreases and that's similar to what happened in the two previous years," Burton said. But when factoring in the larger and the smaller states the barometer for work comp rates remains relatively unchanged. "For example, in Oklahoma we filed for an 11.5% increase, and Illinois, which is our second-largest state, [we filed for] a one-tenth of 1% increase. So the numbers aren't huge."

Fraud impacts profitability

Investigators say it is tough to attach specific numbers to the impact of fraud on the workers' compensation system but the dollars behind the headlines of fake injuries and fabricated payroll records add up. One estimate, by the Coalition Against Insurance Fraud, claims that the industry dishes out at least \$80 billion a year to fraudsters.

"Workers' comp fraud is probably one of the more difficult areas to define," said Dennis Jay, executive director of the CAIF. "We've seen estimates from 3% to 30% having some element of fraud ... it's probably somewhere in the middle."

The CAIF is an industry-funded non-profit organization that consists of insurers, consumer groups and state agencies.

There are two primary instances of fraud: premium fraud by employers; and employee

KEVIN J. CUNNINGHAM is president and CEO of Special Risk Services Group, LLC (SRS). SRS is the exclusive program underwriter and administrator of the SC&RA Member Insurance and Risk Management Program, that offers insurance to SC&RA Members' agents and brokers. Contact SRS via e-mail: info@specialriskservice.com



fraud. Two states that have had higher incidences of fraud, perhaps due to an already troubled workers' comp system, are California and Florida, Jay said.

"It's usually that once there is a crisis with rates, that's when people tend to focus on fraud," Jay said. "It's somewhat of a vicious cycle because as higher rates push up, they cause more people to defraud. When rates go up, employers look to scale back benefits... maybe they have to defraud to get a better deal."

The most common type of premium fraud exists when employers tell insurers that their employees are working safer jobs than they actually are. "You might see a construction company list a large percentage of its roofers as sales people, which are lower risk professions," said James Quiggle, CAIF's director of communications. "Another very common scam is to artificially reduce the size of your payroll."

Quiggle added that premium scams tend to be lower in volume throughout the workers' comp industry than in other insurance lines, but they produce higher dollar losses.

Workers' compensation fraud remains especially widespread in the construction industry and in employee leasing and professional employment organizations.

"PEOs will do payroll processing, health insurance, personnel management and other insurance matters such as employment practices liability," Jay said. "PEOs are a wonderful concept and most act honestly, but some, in order to make their price competitive will cut corners. We've had three cases in the last two weeks where they took in premium money from employers and never paid the workers' comp premiums, or they bought from a bogus offshore company."

So are agents aiding their business clients in fraud tactics?

"Yes, there have been situations where an agent will help a client fudge on applying for coverage in order to keep the business," Jay said. The CAIF said agent fraud is actually on an upswing all across the country. "Most agents are trying to get the best deal for their clients", Jay said. "In days past when workers comp carriers did an audit and found more premium, it created a little bit of a culture of fudging."

Today, more insurers have adopted zero tolerance and are doing upfront audits, even dropping agents who are doing a little bit of fudging. "Fraud is something we will not tolerate," SRS's Jinhong said. **act**



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BEV O'DELL joined KHL Group about two years ago with an industry background of 13 years. She has worked on other North American lifting and transportation industry publications.



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51

equipment for sale or rent

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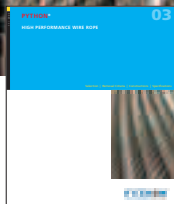
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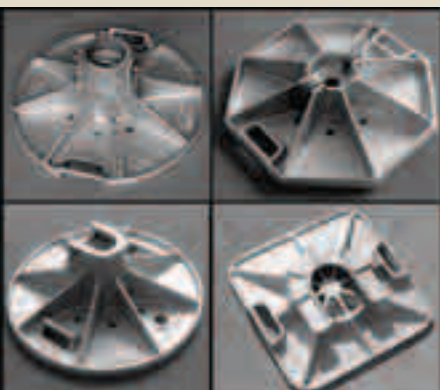
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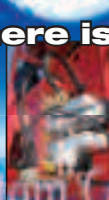
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80	Krupp KMK4070	1990
110	Krupp KMK 5090	1993
120	Krupp KMK5120	1995
130	Grove GMK5110	1995
150	Grove GMK5150B	1996
150	Demag AC395	1995
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200	Demag AC535	1998
200	Liebherr LTM1160-2	1997
275	Krupp KMK6275	1993
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Ton	Make/Model	Year
25	Grove TMS250A	1979
28	Grove TMS528	1984
50	Grove TMS475	1984
50	Grove TMS750B	1994
65	Grove TMS865	1980
65	Linkbelt HTC8665	1995
100	Grove TM9100	1996
120	Grove TM9120	1992

ROUGH TERRAIN

Ton	Make/Model	Year
15	Galion 150F	1992
18	Grove RT518	1979
22	Grove RT522	1984
30	Grove RT630	1989
35	Grove RT635C	1992
45	Grove RT745	1990
50	Grove RT750	1995
50	Linkbelt RTC8050	1996
60	Grove RT760	1994
65	P&H CN 165	1989
65	Grove RT865	1985
75	Grove RT875	1991
80	Grove RT980	1981
90	Grove RT990	1991
100	Grove RT9100	1995

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100	American 7510	1968
100	American 7670	1968
150	American 8450	1974
155	Manitowoc 3900T	1977
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46,000	Hyster H460B	1975
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Ton	Make/Model	Year
12	Grove IND68	1979
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8.5	Broderon IC80	1995-98
6	Grove AP206	1991

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Ton	Make/Model	Year
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75	Linkbelt LS138H	1996
75	Manitowoc 111	1998
80	Manitowoc M80W	1993
100	Manitowoc 3900	1965
150	Manitowoc 4000	1971-82
230	Manitowoc 4100	1974
300	Manitowoc M250	1993

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<p>6733</p>  <p>15 TON NATIONAL</p> <p>90 MACK RD690S: 300 hp, 5 spd, 50,080 lb GVW, 15 TON NATIONAL 500C crane, 72 ft hook ht, cap alert / overload shutdown, 22ft steel flatbed. \$44,500.</p>	<p>6718</p>  <p>11 TON NATIONAL</p> <p>2000 FREIGHTLINER FL112: 410 hp CAT C-12, 10 spd auto-shift, 81 GVW, 11 ton NATIONAL N205 crane, picks 3,400 lb at 50ft max reach, cap alert / shutdown, 24 ft wood flatbed. \$99,500.</p>	<p>6685</p>  <p>12 TON HIAB</p> <p>95 MACK RD690S: 300 hp, 7spd, 12 TON HIAB 250-3 crane, picks 2,090 lb at 51 ft max side reach, remote ctrls, 20 1/2 ft steel flatbed. \$71,500.</p>	<p>6522</p>  <p>HOOK LIFT</p> <p>99 GMC T6500: 210 hp CAT, Allison 6 spd auto, 25,740 lb GVW, with STELLAR SHUTTLE rolloff loader, lifts 16,000 lb on body, dump or unload body, 12 ft wood flatbed, 4 ft ramp. \$34,500.</p>	<p>6696</p>  <p>TIRE CRANE</p> <p>98 FREIGHTLINER FL70: 250 hp Cummins, 6 spd, 33 GVW, with 7 ton IMT 12916 CRANE/TIRE HANDLER, picks 8,000 lb at 16 ft max side reach, air comp, 2 hose reels, 15 ft flat / utility body. \$35,900.</p>
<p>6691</p>  <p>HEAVY SPEC</p> <p>3 IN STOCK!</p> <p>87 MACK RD685S: 285 hp, Maxitorque ext range 6 spd (6 fwd, 5 rev), tandem axle, 21 ft steel flat / dump bed. \$19,500 EACH</p>	<p>6687</p>  <p>13 1/2 TON FASSI</p> <p>94 WHITE / GMC W664: 330 hp, 8 spd +lo, 72 GVW, with 13 1/2 ton FASSI F330.23 crane, picks 2,370 lb at 59 1/2 ft max side reach, radio remote, 19 ft alum flatbed + 5 ft behind crane. \$74,500.</p>	<p>6625</p>  <p>6 1/2 TON HIAB</p> <p>96 GMC TOPKICK: 275 hp CAT, 8 spd +lo, +lo/lr, 56 GVW, with 6 1/2 ton HIAB 175 crane, picks 2,000 lb at 45 ft max reach, radio remote, 20 ft wood flat. \$49,500.</p>	<p>6619</p>  <p>4,400 GALLONS</p> <p>94 MACK RB690S: 275 hp, 7 spd, 56 GVW, 93 BOSTON STEEL 4,400 gal alum fuel tank, 3 compts (2,400, 1,200, 800), pump, meter, in-cab reg / preset, vapor recov, bottom load, Scully, 1 hose reel. \$42,500.</p>	<p>6661</p>  <p>10 TON USTC</p> <p>WE BUY BOOM TRUCKS</p> <p>98 FORD F800: Cummins, 210 hp, 5 spd, 2 spd rear, 33,000 lb GVW, 10 ton USTC 1000JBT crane, 96 ft hook ht, 18 ft steel flatbed. \$39,900.</p>
<p>6648</p>  <p>7 1/2 TON NATIONAL</p> <p>95 FORD LTS8000: Cummins, 275 hp, 8 speed +lo, +lo/lr, 64,000 lb GVW, with 7 1/2 TON NATIONAL N-95 crane, picks 2,350 lb at 33 ft max side reach, 16 ft wood flatbed. \$39,500.</p>	<p>6666</p>  <p>6 TON PALFINGER</p> <p>98 GMC C7500: 210 hp CAT, 7 spd, A/C, 33 GVW, with 6 ton PALFINGER PK14080 crane, picks 3,620 lb at 21 1/2 ft max reach, 22 ft steel flatbed. \$34,900.</p>	<p>6597</p>  <p>17 TON NATIONAL</p> <p>2001 STERLING L9513: 300 hp CAT, 8 spd +lo, 58,740 lb GVW, 17 ton NATIONAL 600C crane, 134 ft total hook ht, 2 section jib, cap alert / shutdown, 20 ft wood flatbed. \$79,500.</p>	<p>6579</p>  <p>13 1/2 TON ALTEC</p> <p>97 GMC C8500: CAT 3116, 275 hp, Allison 6 spd auto, 48,600 lb GVW, 13 1/2 ton ALTEC D945TR digger, rider seat, lower & upper ctrls, radio ctrls, 18" auger, 2 spd digger, pole claws, 15 ft utility. \$59,500.</p>	<p>6568</p>  <p>6 TON EFFER</p> <p>99 STERLING LT8513: CAT 3126, 8 spd +lo, +lo/lr, 58,000 lb GVW, 6 ton EFFER 120-4S crane, picks 1,095 lb at 48 1/2 ft max reach, 18 ft wood flatbed. \$59,500.</p>
<p>6519</p>  <p>- - 6 X 6 - -</p> <p>87 INT F1954 6X6: 210 hp, 5 speed, 2 speed transfer, all wheel drive, 46 GVW, 7 ton NATIONAL N85-H21 crane, picks 3,000 lb at 25 ft max reach, 12 ft steel flatbed, front & rear winch. \$34,500.</p>	<p>6542</p>  <p>5 IN STOCK!</p> <p>SHEETROCK</p> <p>2000 PETERBILT 357: 335 hp CAT, 8 spd +lo, +lo/lr, 65 GVW, 3 ton FALCI F240SE22 wall-board loader, picks 3,800 lb at 40 ft max reach, radio controls, 25 ft steel flatbed. \$89,500.</p>	<p>6340</p>  <p>12 1/2 TON USTC</p> <p>97 FORD LT9000 TRACTOR: Cummins, 310 hp, Allison 5 spd auto, 56,000 lb GVW, with 12 1/2 ton USTC 1250JBT crane, 57 ft hook ht, cap alert. \$49,500.</p>	<p>6446</p>  <p>MOFFETT FORKLIFT</p> <p>97 FORD LN78000: Cummins 8.3L, 275 hp, 8 spd +lo, +lo/lr, 24 ft van body, open sides w/ curtains, 59,400 lb GVW, with 2 1/2 ton 95 MOFFETT M5000 forklift, Kubota diesel power. \$42,500.</p>	<p>6286</p>  <p>14 TON ALTEC</p> <p>94 GMC TOPKICK: 275 hp CAT, Allison 6 spd auto, 47,220lb GVW, 14 ton ALTEC D3055 DIGGER, 55 ft hook ht, 2 spd digger, joystick ctrls, pole claws, 16 ft utility body. \$49,500.</p>
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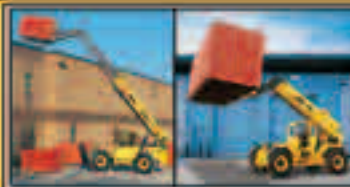
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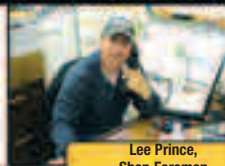


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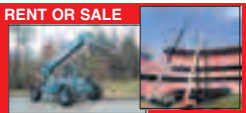
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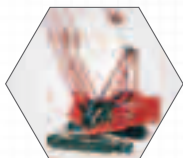




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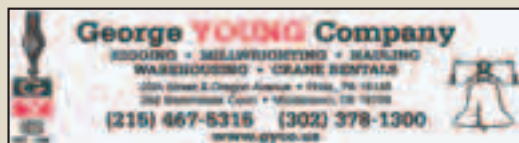
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CONTROLLER – PA Plan, direct and manage accounting and finance organization to include budgeting, monthly reporting, audit, metrics, SOX, and business planning. B.S required plus 10 yrs. exp. in mfg. environment. Strong cost background required.

REGIONAL SALES MGR. - TOWER CRANES WEST COAST - Manage the sale of Potain Tower Crane product line for West Coast region. 6 to 8 yrs. of sales exp. with construction equipment, preferably Tower Cranes. B.S preferred coupled with strong negotiating skills.

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SR. MATERIALS & WELDING ENGINEER – PA Provide Materials & Welding Engineering technical support, problem solving, failure analysis, development of new material specifications, and engineering drawing reviews. Welding, fabrication and testing experience required. New Product Development exp. a plus. Interface with outside suppliers, laboratories, technical organizations and experts in the field of materials and heavy welding fabrication. B.S. in Welding Engineering or related field and 7-10 yrs exp. in heavy manufacturing is mandatory.

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