WELCOME TO THE DIGITAL ISSUE

Thank you for downloading this electronic version of *International Cranes*. It is identical to the printed *IC*, cover-to-cover, editorial and advertising, but it is now all on your computer screen.

BUT THE DIGITAL *IC* OFFERS FAR MORE:

- With a simple click you can turn pages
- Click on the contents page and be transferred straight to the chosen editorial section
- Click on advertisements to go direct to advertisers' websites
- Word-searchable, giving you even faster access to the information you need.

khl GROUP
www.khl.com

MORE THAN A MAGAZINE!

INFORMATION LITERALLY AT YOUR FINGERTIPS

Try clicking your way through this issue. The information made available to you could be surprising!

DID YOU KNOW THAT YOU CAN UTILISE THIS DIGITAL MAGAZINE IN MANY MORE WAYS THAN THE TRADITIONAL PAPER VERSION OF THE MAGAZINE.

SEARCHING

By clicking on the search button at the top of your screen (usually the binoculars icon) you can search the whole magazine for keywords.

SEARCHING ARCHIVED MAGAZINES

if you have Adobe Reader version 6 or 7 you can also search across all the digital magazines that you have saved over the months!

DIRECT ACCESS TO A WHOLE WORLD OF ADDITIONAL INFORMATION

But perhaps the most powerful information source the e-magazine provides is the direct click-through to advertisers' web sites. Just click on any advert in this magazine and you will be taken directly to that company's web site where there will be a mass of additional, useful information at your fingertips.

khl GROUP
www.khl.com

SEPTEMBER 2008
www.craneworld.com
A KHL Group publication

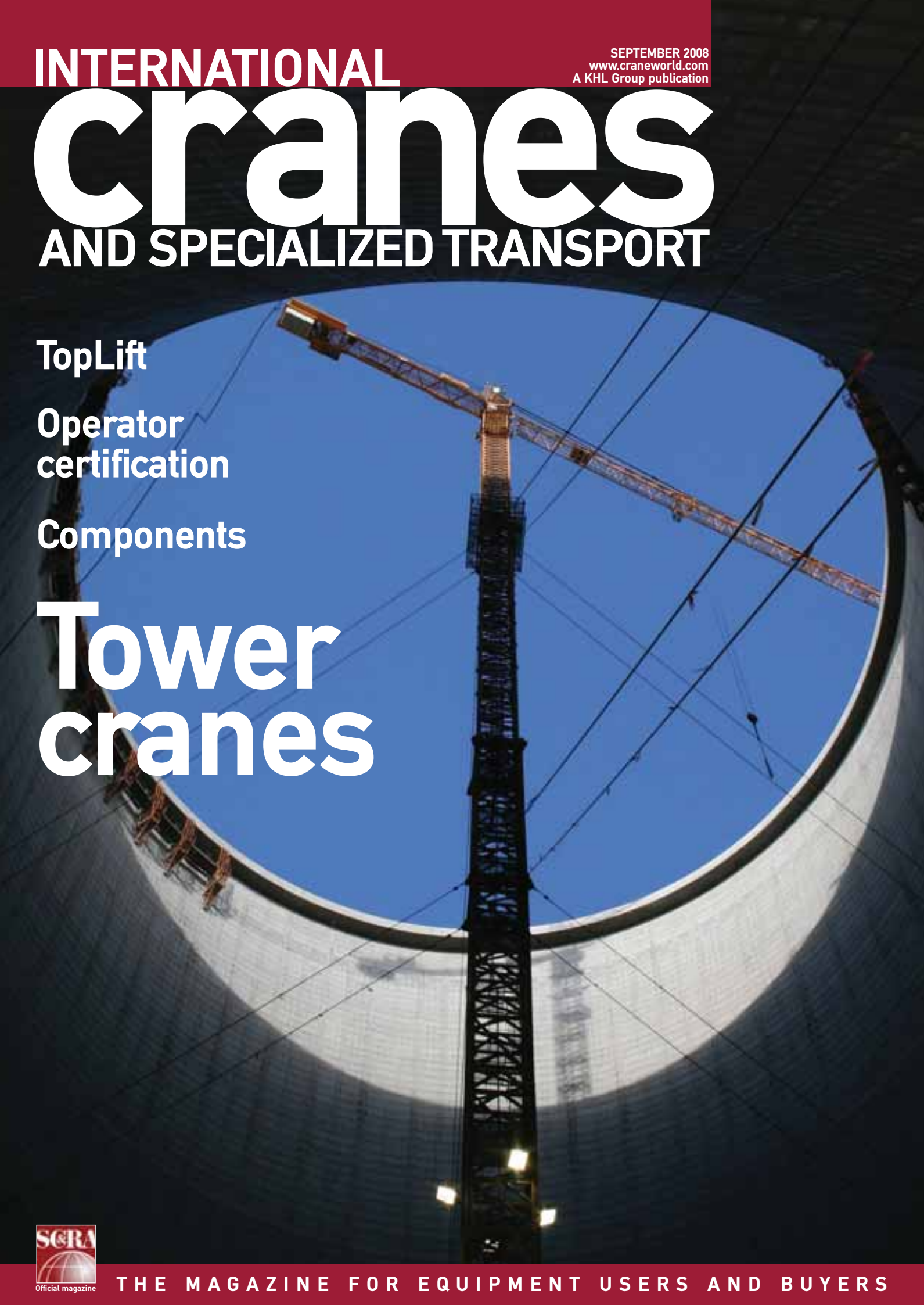
INTERNATIONAL cranes AND SPECIALIZED TRANSPORT

TopLift

Operator certification

Components

Tower cranes



Official magazine

THE MAGAZINE FOR EQUIPMENT USERS AND BUYERS

Maximum productivity, minimum footprint

INTERNATIONAL
cranes
AND SPECIALIZED TRANSPORT
Volume 16 ■ Number 12 ■ SEPTEMBER 2008

Chosen as the official magazine of the SC&RA (Specialized Carriers & Rigging Association)

European partner: ESTA

COMMENT

Demand for electrical power around the world continues to rise, especially in China and India. Construction of new power plants and expansion of existing ones, plus wind turbine erection, constitute a large part of the world's crane activity. This work is often done using large crawler cranes but there are applications in power plant construction for large tower cranes.

Aside from the main turbine hall, a primary feature of many power plants is the group of giant parabolic cooling towers. These vast concrete chimneys are often constructed using specially designed tower cranes. Due to erection and dismantling requirements they have unusual design features, some of which could be useful elsewhere. For details of tower cranes used in cooling tower construction see the feature starting on page 35.

Continuing the energy theme is the feature on components in this issue starting on page 19. Rising oil prices and increased fuel cost increases the economic dimension of the need to consume less energy. Manufacturers of cranes and specialized transport equipment are under increasing pressure and obligation to develop products that are more economical. That is directly in terms of the amount of diesel they burn to operate and, indirectly, for example, in terms of manufacturing processes and component sourcing that has minimal environmental impact.

Another highlight of this issue is the feature on operator certification. It reflects the growing concern surrounding crane safety in light of the unusually high number of crane related fatalities, especially in the US, this year. Learn more about this vital area of the industry on page 63.

Finally, it is time again for the TopLift competition. See page 52 for the annual *IC* contest where you vote for a favourite lifting job of the year drawn from projects in the magazine over the last 12 months. Please help us celebrate industry success by entering your choice on the form provided on page 54 and returning it by e-mail to toplift@khl.com, by fax to +44 (0)1892 786257, or by post, to the *IC* office by 31 October at the latest please.

Alex Dahm
Editor

CORRESPONDENCE IS WELCOME AND SHOULD BE SENT TO:
The Editor, *International Cranes and Specialized Transport*, Southfields, Southview Road, Wadhurst, East Sussex TN5 6TP, UK.
Tel: +44 (0)1892 784088
Fax: +44 (0)1892 786257
e-mail: alex.dahm@khl.com

CRANE PORTFOLIO

worldcranemarket
www.worldcranemarket.com

worldconstructionweek
www.worldconstructionweek.com

KHL CONTACTS

UNITED KINGDOM
KHL Group
Southfields, Southview Road,
Wadhurst, East Sussex TN5 6TP, UK.
Tel: +44 (0)1892 784088
Fax: +44 (0)1892 784086
e-mail: cranes@khl.com
www.khl.com

USA OFFICE
KHL Group USA LLC
3726 E. Ember Glow Way,
Phoenix, AZ 85050, USA.
Ph: +1 480 659 0578, Fax: +1 480 659 0678
e-mail: trevor.pease@khl.com

CHINA OFFICE
Beijing Representative Office
Room 768, Poly Plaza, No.14, South Dong Zhi Men Street, Dong Cheng District, Beijing, P.R. China
Tel: +86 10 6553 6676, Fax: +86 10 6553 6690
e-mail: cathy.yao@khl.com

UK/NORDIC NATIONS
John Austin, advertisement manager
UK Head Office
Tel: +44 (0)1892 786220
e-mail: john.austin@khl.com
GERMANY/SPAIN/AUSTRIA/SWITZERLAND/CENTRAL EUROPE
Mike Posener, UK Head Office
Tel: +353 98 567 30, Fax: +44 (0)1892 786258
e-mail: mike.posener@khl.com
THE NETHERLANDS/LUXEMBOURG
Arthur Schavemaker
Tel: +31 (0)547 275005, Fax: +31 (0)547 271831
e-mail: arthur@kenter.nl
FRANCE/BELGIUM
Hamilton Pearman
Tel: +33 (0)1 4593 0858, Fax: +33 (0)1 4593 0899
e-mail: hpearman@wanadoo.fr
ITALY
Fabio Potestà
Tel: +39 010 570 4948, Fax: +39 010 553 0088
e-mail: info@mediapointsrl.it
KOREA
CH Park
Tel: +82 (0)2 730 1234, Fax: +82 (0)2 732 8899
e-mail: femads@unitel.co.kr
TURKEY
Melih Apa
Tel: +90 (0)322 454 06 03
Fax: +90 (0)322 453 12 76
e-mail: makina@makina-market.com.tr
CHINA
Miss Li Hanbing
Tel: +86 10 64001036, Fax: +86 10 64017647
e-mail: lhb@cm1981.com.cn
JAPAN
Yuko Ishihara
Tel: +81 (0)3 3261 4591, Fax: +81 (0)3 3261 6126
e-mail: lshihara@media-jac.co.jp
USA/CANADA
Bev O'Dell
Tel: +1 (816) 886 1858, Fax: +1 (816) 886 1884
e-mail: bev.odell@khl.com
Pat Sharkey
Tel: +1 (515) 573 8684, Fax: +1 (515) 573 4991
e-mail: pat.sharkey@khl.com

Printed by: Garnett Dickinson Print, UK

International Cranes and Specialized Transport (USPS 017 158) is published monthly by KHL Group and distributed in the US by DSW, 75 Aberdeen Road, Emigsville, PA 17318-0437. Periodicals postage paid at Emigsville, PA. Postmaster: Send address changes to *International Cranes and Specialized Transport*, c/o PO Box 437, Emigsville, PA 17318-0437.

Published by
khl GROUP

ISSN: 1747-700X

MEMBER OF

KHL TEAM

TADANO

The Power of TADANO

The Global Design and Quality Solution

TADANO LTD.

Tokyo Office: International Division
4-12, Kamezawa 2-chome, Sumida-Ku,
Tokyo 130-0014, Japan
Phone: 81-3-3621-7750
Fax: 81-3-3621-7785
E-mail: tdnihq@tadano.co.jp

Beijing Office
Jing Guang Centre,Room No.2905,
Hu Jia Lou,Chao Yang Qu,
Beijing, China
Phone: 86-10-6597-3210
Fax: 86-10-6597-3220
E-mail:beijing@tadano.co.jp

Middle East Office
P.O.Box 18302, LOB15-323,
Jebel Ali Free Zone,
Dubai, United Arab Emirates
Phone: 971-4-8871353
Fax:971-4-8871703
E-mail: tadano@tadano.ae

TADANO FAUN GmbH
Faunberg 2, P.O.Box 100264,
D-91205 Lauf a.d.
Pegnitz, Germany
Phone: 49-9123-955-0
Fax: 49-9123-3085
E-mail: info@tadanofaun.de

TADANO FAUN HOLLAND B.V.
Antennestraat 6,
3903 LZ Veenendaal,
The Netherlands
Phone: 31-318-546 700
Fax: 31-318-54 22 82
E-mail: info@tadano-faun.nl

TADANO AMERICA CORPORATION
4242 W.Greens Rd. Houston,
Texas 77066 U.S.A
Phone: 1-281-869-0030
Fax: 1-281-869-0040
E-mail: sales@tadano-cranes.com

TADANO ASIA PTE LTD.
11 Tuas View Crescent,
Multico Building, Singapore
Phone: 65-6863-6901
Fax: 65-6863-6902
E-mail: Tdn-crane@tadanoasia.com

TADANO SOUTH CHINA CO.,LTD.
Room 1803, 18/F.,
Seaview Commercial Building,
21-24 ConnaughtRoad West, Hong Kong
Phone: 852-2544-9310
Fax: 852-2541-5828
E-mail: hiwa@tadanosc.com

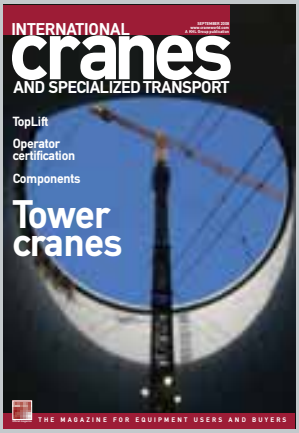
TADANO KOREA CO.,LTD.
RM 302, Koram Venture Town,
907-1, Daechi-Dong,
Gangnam-Gu, Seoul, Korea
Phone: 82-2-714-1600
Fax: 82-2-3274-1304
E-mail: tadano@korea.com

TAIWAN TADANO LTD.
4F, No.50.Sung Chiang Road,
Taipei, Taiwan
Phone: 886-2-2523-1388
Fax: 886-2-2523-3988
E-mail: tadano@ms18.hinet.net

www.tadano.co.jp **www.tadanofaun.de** **www.tadanoamerica.com**

CONTENTS

ON THE COVER



Construction of concrete cooling towers at power plants often requires a special kind of tower crane. See the feature starting on page 35

SUBSCRIPTIONS

International Cranes and Specialized Transport is a monthly publication with a worldwide circulation of more than 18,000. The annual airmail subscription rate for non-qualified readers is £125 (US$250). Reduced rates are available to manufacturers, agents and distributors – details on request. Free subscriptions are given on a controlled circulation basis to readers who fully complete a Reader Registration Form and qualify under our terms of control. The Publisher reserves the right to refuse a free subscription to non-qualified readers. *International Cranes and Specialized Transport* is published on the 15th of each month.

All subscription correspondence should be directed to Hayley Coulson at the UK address. Please include the address label from a recent issue with all correspondence and allow three months for changes to be effective. KHL also publishes *International Construction, Demolition & Recycling International, Construction Europe, International Rental News, Access International, American Cranes & Transport, American Lift & Handlers, International Construction China and International Construction Turkey*. Call +44 1892 784088 for details.

BPA WORLDWIDE

NEWS HIGHLIGHT

■ CKV Heavy Lifting And Assembly Ltd. in Turkey has expanded its fleet by adding four new all terrain cranes.

The new Liebherrs are the thrust of CKV's continued investment drive to improve its crane fleet according to a master plan instigated in 2003. The new cranes will update and expand the fleet to help cater for increasing demand. Liebherr-Werk Ehingen in Germany supplied two units each of the Liebherr LTM 1100-5.2 and LTM 1200-5.1 to join the CKV fleet.

Manitowoc backlog and earnings leap

Second quarter 2008 net sales in Manitowoc's crane segment increased 32% to US$1.06 billion, compared with $805.1 million in the second quarter of 2007. Operating earnings of $167.0 million were 39% higher than the same period in 2007. Crane margins increased to 15.7% from the same period in 2007 "due primarily to improved volumes and product mix," according to the company.

"The value of the globalization of our crane business was particularly evident during the second quarter as international activity generated strong sales and earnings growth," said Glen Tellock, Manitowoc Company president and CEO.

"Crane backlog, as of June 30, 2008, stood at $3.52 billion – an increase of 70% over the same period in 2007. The increase reflected higher demand in each geographic region as well as for aftermarket parts and services.

It also indicated continued demand for our high-capacity crawler, tower, and mobile cranes driven by unabated strength in our global infrastructure and energy markets," Tellock continued.

For the Manitowoc group of companies net sales were $1.3 billion, up 28% from the second quarter of 2007.

DOUBLE-DIGIT RISES AT PALFINGER

Knuckle boom crane manufacturer Palfinger Group's revenue of €423.5 million (US$631 million) in the first half of 2008 was 24.3% above the €340.6 million ($508 million) in the same period of 2007, writes Patrick Hill. EBIT (earnings before interest and taxes) rose to €59.6 million ($89 million), 16.9% greater than the €51.0 million ($76 million) of the same period of 2007.

Second quarter revenue was €214.5 million ($320 million), up 2.7% from €208.9 million ($311 million) in the first quarter. EBIT of €30.0 million ($45 million) for the quarter was 1.4% greater than the €29.6 million ($44 million) of the earlier period.

The company forecasts double-digit revenue growth throughout the remainder of 2008. It cited leading indicators of reversal of the trends in currently weak markets, including Spain, Great Britain, Italy, and the US. Palfinger Group 2007 sales were €696 million ($1.038 billion).

New Terex Cranes UK centre

Terex Cranes held an event to mark the opening of its new UK headquarters on 8 August.

Commenting on the new facility, Barry Barnes, Terex Cranes UK managing director, said, "In addition, our improved service, parts storage, delivery, and used crane display areas will make it easier to do business with Terex Cranes."

Terex Cranes, which has been doing business in the UK and Ireland for almost 40 years, chose the Long Crendon location north west of London for its easy access to a motorway, other major roads and airports. It has workshop, training and office facilities.

Doug Friesen, the new Terex Cranes Germany managing director and vice president, who replaced Alexander Knecht (*IC* August 08 News

Gaus moves Grove for Rhenus

German rental company Gaus used a 100 tonne all terrain crane to position 180 precast concrete elements on the construction of a new facility for the Rhenus logistics company.

The four axle Grove GMK4100 was on site in Bingen, Germany working for main contractor B.F.M. It was used to place 136 struts, 36 panels and 18 frost protection panels.

The concrete struts, which were used in the foundation as well as the main building, were 16 m long and weighed 21 and 28 tonnes. To place these elements, the GMK4100 worked with 27.8 m of main boom and positioned the loads at radii between 8 and 12 m.

For the panels, which weighed 14 tonnes, the main boom was extended to 31 m and the loads were positioned at 16 m radius. For the 3.5 tonne frost protection elements the main boom was set at 48 m and the elements were placed at a 36 m radius.

Wm. O'Brien Plant Hire in Ireland has purchased an 800 tonne capacity Terex AC 800 wheeled mobile crane which will mainly be used for erecting wind turbines.

"We see wind energy as an area that has huge potential growth over the next few years and after considerable research we decided to invest heavily in this area. The Terex AC 800 was the most capable crane for this type of construction and we are pleased with this significant addition to our fleet," said Finbarr Warren, O'Brien Plant Hire managing director.

p6), gave a speech at the event. Friesen said that high on the agenda in his new role is to reduce delivery times for new cranes. Terex Corporation order backlog at 30 June 2008 was more than US$4 billion. Friesen commented that "there are some slippages" in the crane production and said that he will apply his experience in car manufacturing to improve delivery times.

Zoomlion exports 600 tonne crawler

Chinese manufacturer Zoomlion has sold a 600 tonne capacity QUY600 lattice boom crawler crane to a customer in India.

Essar Group took delivery of what is the largest new crane exported from a Chinese manufacturer on 30 June. The QUY600 was first presented at the Bauma China construction equipment exhibition in Shanghai, November 2006 (IC December 2006, p6). It was the largest crane at the exhibition and is the largest of its type built by a Chinese manufacturer.

In the two years since its launch Zoomlion said it has kept on upgrading its crawler crane technology. In 2007 the QUY200 crawler crane was launched in the US market. Zoomlion said it is developing a 1,000 tonne capacity crawler crane and that 180 to 350 tonne capacity all terrain mobile cranes are ready for export to overseas markets.

Essar Group has a range of businesses in sectors that include construction, steel, shipping and energy.

■ The first luffing jib tower crane from Chinese manufacturer Zoomlion has been put to work on the Expo 2010 project in Shanghai.

The Zoomlion TCR6055-32 was completed and delivered to the customer in May. It is the biggest tonnage tower crane with luffing jib in China, according to the manufacturer, which also said that demand is increasing in the country for this type of crane.

Capacity is 32 tonnes and the maximum working radius is 60 m. Jibs are available in 5 m increments from 30 to 60 m. It is designed according to the European FEM standard, Zoomlion claimed.

Zoomlion quoted a delivery time of about three months for the TCR6055-32.

Bok Seng Logistics in Singapore used a pair of Liebherr LTM 1500 telescopic mobile cranes for a series of lifts on a new elevated approach road in Yishun leading to the Tampines Expressway.

More than 100 beams, weighing up to 80 tonnes and up to 46 m long, were placed by Bok Seng in a series of tandem lifts.

Bok Seng was started in 1975 as a civil contractor by current managing director Henry Ng and his father Bok Seng. Revenue has increased from S$10 million to more than S$50 million. It has a fleet of Liebherr mobile cranes and has ordered two LTM 1100-5.2s for a 2009 delivery.

NEWS HIGHLIGHT

■ UK mobile crane rental major Ainscough used a 1,000 tonne telescopic crane to help demolish Britain's first pre-stressed concrete bridge. Demolition contractor Cuddy Group completed the £220,000 (US$440,000) contract to demolish the 40 x 10 m Abertillery Foundry Bridge in the Welsh town of Abertillery. Cuddy built a platform with load bearing capacity to support the main lift crane. An access ramp for the crane was built with 400 tonnes of granite. Over five months the work included removal of the concrete bridge deck and ten support beams lifted out with the crane. A 100 tonne capacity support crane and three excavators were also used. A new steel bridge will replace the concrete one.

HSE reports on collapse

The UK's Health and Safety Executive (HSE) has reported on the 2007 Liverpool crane collapse and written to crane rental and supply companies in Great Britain about tower crane safety.

HSE asked them to take forward certain actions that arose from the HSE investigation into the collapse of a luffing jib tower crane in the city, that killed one person and injured another. Issued on 16 July, The Report on technical aspects of HSE's investigation into the collapse of a luffing tower crane at a Liverpool construction site on 15th January 2007 sets out what HSE said was the most likely explanation for the collapse.

The report goes on to outline what action is required. The first of nine action items was that, "From our investigation, it would appear that better protective devices to prevent luffing ropes from coming off their pulleys would significantly reduce the potential for further events, particularly where wind and operating conditions provide potential for slack rope conditions to arise. And alternative or additional precautions may also be required."

An inquest on 8 July 2008 into the worker's death returned a verdict of accidental death. At the time of writing in mid-August the HSE investigation was continuing into the collapse of the tower crane on a construction site at Colquitt Street in Liverpool city centre.

■ The full report can be downloaded from http://www.hse.gov.uk/construction/pdf/craneaug08.pdf

NEW ESTA AWARDS DURING INTERMAT

The ESTA Awards of Excellence 2009 will take place in Paris on the evening of 23 April at the Hilton Roissy.

The awards dinner, which next year coincides with the Intermat exhibition, has established itself as the largest crane and heavy haulage event in Europe. They are run jointly by ESTA and International Cranes and Specialized Transport magazine.

The 2009 event will have a new safety category and will also be making a special effort to recognise the performance of smaller companies across Europe.

"Everyone working in the heavy haulage, mobile crane, truck-mounted access platform and equipment rental sectors is welcome at the event, as well as the European associations and the manufacturers," said ESTA secretary Gino Koster.

"The awards and the dinner are a marvellous opportunity to meet old friends and business colleagues from all around Europe. They also give everyone in the industry a chance to publicise their successes and to promote good practice and higher standards," Koster continued.

The 2008 event in June attracted almost 400 senior people from 14 countries. Award winners included Mediaco, Wagenborg Nedlift, BMS, Mammoet and TLW Transports Leclerc. Sponsors included Kobelco, Liebherr, Manitowoc, Tadano (Waterland Trading) and Terex.

ESTA – the European Association of Heavy Haulage, Transport and Mobile Cranes – is the pan-European association for national trade associations representing mobile crane rental, heavy haulage and abnormal load transport companies.

The association's primary objective is European harmonisation of rules and regulations and its goal is to be the number one European representative of heavy haulage, abnormal load and mobile crane rental companies. It strives to improve the image of the sector, and lobbies for the best possible investment climate for business.

■ Further information is available at www.khl.com

■ Details of how to enter for the 2009 ESTA Awards for Excellence will be available on the ESTA web site www.esta-eu.org. For further information, contact Gino Koster at ESTA at: secretary@esta-eu.org, or Graham Anderson of KHL Group at: graham.anderson@khl.com

Wolffkran upgrades 180 B luffer to 224 B

Tower crane manufacturer Wolffkran in Germany has launched the Wolff 224 B luffing jib tower crane.

It is an improved version of the established 180 B. Changes entailed the "complete re-engineering of the hoisting winch and its jib system," according to Wolffkran.

The new 224 B has 8/16 tonne (single/double fall operation) hoisting capacity over the 6/12 tonnes of the 180 B. Single-fall load capacity is 33% greater. Spooling capacity of the hoisting winch is increased so that a 600 m hook path is possible in single fall operation, or 300 m with two falls. A 75 kW hoist is available instead of the 60 kW hoisting gear.

Moving the hoisting gear from the jib foot to the jib section, with the rope reeved through the jib to the jib top, means the load-sensing pin is in the second section of the jib instead of the jib head, which means easier servicing and helps reduce installation costs.

Jib length can be altered in 5 m steps from 30 m up to 60 m, 5 m longer than the 180 B. Capacity is 8 tonnes at 26.5 m radius with 60 m jib and 1.6 tonnes at 60 m. In two-fall configuration the 16 tonne maximum is available with 50 m jib to 16.5 m radius and 3.7 tonnes at maximum radius.

ZOOMLION

Zoomlion Tower Crane

TC series
New flat-top
New luffer

"Our service is always far beyond our promise"

Come to see our new luffer at

bauma China 2008

Changsha Zoomlion Heavy Industry Science & Technology Development Co., Ltd.
Address: No.361 South Yinpen Road, Changsha , Hunan , P.R.China 410013
Tel: 0086-731-8928075, 8923809, 8923811
Fax: 0086-731-8928278
E-mail:intl@zoomlion.com

www.zoomlion.com

Ready for action

Whatever you're planning, we're there for you.

By all means

The new Terex® Demag AC 300/6

What makes this 300-tonne crane so valuable for you:

- Total system length 125.7 meter (412 ft)
- Superlift attachment for additional increase in lifting capacity
- Fast and simple set-up of the jib and the fully automated counter-weight system
- Powerful engines delivering 448 kW for the road and 205 kW for crane operation

TEREX®

Terex Demag GmbH · Zweibrücken, Germany · 00 49 (0) 63 32 / 830 · www.terex-demag.com · info@terex-demag.com

Essex revenue leaps

Rental revenue at US crane rental house Essex Crane Rental Corp. was up 34.6% to US$15.8 million for the second quarter of 2008 from $11.7 million in the second quarter of 2007.

Total revenue, including revenue from rentals, repair and maintenance, and transportation services (but excluding used rental equipment sales), rose 28.7% to $20.2 million from $15.7 million in Q2 2007.

The increase in rental revenue was attributed to an increase in utilisation and rental rates. The average monthly revenue rate in Q2 2008 increased 35.7% to $21,303 from $15,694 for the same quarter in 2007.

As a result of the strong revenue growth and expense control, rental EBITDA, excluding a $650,000 one-off charge, increased by 40.2% to $11.0 million from $7.8 million in the second quarter of 2007.

For the first half of 2008, total revenue, which included revenue from rentals, repair and maintenance, and transportation services (but excluded used rental equipment sales), increased 23.8% to $37.4 million from $30.2 million in the first half of 2007.

CRANE BY PLANE

Parts of a 1,250 tonne capacity crane were moved by air to complete a bridge installation in Sweden.

Havator Group is responsible for replacing the existing bridge, weighing 200 tonnes, with a new one weighing 320 tonnes. The new Nyköping railway bridge spans the river Nyköpingsån. It is 51 m long, 8 m wide and 9 m tall and was installed on Monday 11 August.

The 60 tonne superstructure of the Terex Demag CC/PC 6800 lattice boom crane arrived at Skavsta Airport aboard an Antonov 124 heavy lift transport aircraft. The Ukrainian-built AN124 is one of the world's biggest cargo aircraft and has a maximum payload of 120 tonnes.

Other parts of the crane were transported by road to the bridge site. Total weight of the crane is 1,200 tonnes and was moved from the Terex Demag factory in Zweibrücken, Germany.

"Through this special transport, the Havator Group plans to ensure that this complex project keeps to the timetable. We are transporting it this way rather than by road to ensure that we can keep to the timetable. The roads on the continent are busy during the holidays" explained Lars-Olof Carlsson, Havator project manager.

Terex to acquire Fantuzzi

Port equipment manufacturer Fantuzzi Industries S.a.r.l in Italy will be acquired by Terex Corporation for €215 million (US$315 million). Fantuzzi revenue in 2007 was about €447 million ($655 million).

Subject to regulatory approval the transaction is anticipated to close in the fourth quarter of 2008.

"This acquisition provides us with an important growth opportunity in the intermodal transportation area of infrastructure," said Ronald DeFeo, Terex chairman and chief executive officer. "The acquisition is an excellent fit with our strategy of expanding our market presence in related product areas and is a natural extension of our Cranes business," DeFeo continued.

A second Liebherr LHM 500 mobile harbour crane has been installed at the Port of Hamburg for cargo handling company Wallmann & Co.

The new LHM 500 has a lifting capacity of 140 tonnes and a maximum radius of 51 m. At full reach it can lift up to 42.2 tonnes. The machine has 10 axles and 80 industrial truck tyres. The latest addition brings the number of Liebherr mobile harbour cranes at the Port of Hamburg to 10.

NEWS HIGHLIGHTS

■ UK haulage company Hallett Silbermann, based in Hertfordshire, has taken delivery of three new Fassi hydraulic truck loader cranes.

The F660 AXP.26 and two F235 AXP.24 models are mounted on Volvo trucks. The 63 tonne-metre F660AXP.26 is the largest in Hallett Silbermann's fleet. Maximum safe working load is 16 tonnes and at the 16.1 m maximum reach it lifts 3,100 kg. The two F235AXP.24s are mounted on Volvo FE 6 x 4 rigids. Load moment rating is 20 tonne-metres and maximum safe working load is 5.15 tonnes. At the full reach of 12.7 m capacity is 1,345 kg.

■ Mobile crane hire business Wollongong Cranes has taken delivery of a new Tadano ATF 65G-4 All Terrain crane from Australia's home of Tadano cranes, James Equipment.

The ATF has hit the ground running, according to James Equipment, as its new owners continue to provide lifting solutions throughout the Illawarra region in NSW.

"The ATF 65G-4 has a very good lifting capacity in its class and James Equipment had one available for us when we needed it," said Peter Sergi, owner and manager.

bauma China 2008

Main booth:
Indoor 3406, Outdoor D08

The essence of SANY brand lies in its high reliability

Leading innovative products of 900 tons

- Modularization design, convenient maintenance
- Large undercarriage, better stability
- LEBUS drum design, extended service life of steel wire rope
- Automatic slewing slip function, improved working efficiency
- Various safety devices design, safer and more reliable operation
- Quick Delivery
- Parts and professional services all over the United States.

Product series:50t、80t、100t、150t、200t、250t、320t、400t、900t

SANY

QUALITY CHANGES THE WORLD

三一重工股份有限公司

SANY Industry City, Changsha Economy Development Zone, China
Tel: 0086-731-4031642 Fax: 0086-731-4031527

www.sany.com.cn

Long range

Danish loader crane manufacturer HMF has launched a new range and is looking to expand further into the international market. EUAN YOUDALE reports

Here the patented HMF EVS (electronic stability system) is working integrated with the RCL (rated capacity limitation) system, in Switzerland, as well as the HMF radio control system offering Total Crane Control (TCC). It provides constant monitoring of vehicle stability and stops the lift if the machine becomes potentially unstable. Electronic sensors monitor the inclination of the vehicle as well as informing the crane safety system about other parameters, including speed, load and dynamic data. The operator is informed exactly how far the load can be moved via a display on the radio control

NEW SERIES

HMF's new series of mid-range loader cranes is a range of models rated between 13 and 24 tonne-metres.

Four new models led the way earlier this year. At the lower end, the HMF 1300 has a maximum lifting capacity of 2.83 tonnes. At full reach, its six hydraulic extensions offer lifts of 340 kg. Topping the series is the 3.75 tonne capacity HMF 1730, which can lift 580 kg at full reach. All the machines have six hydraulic extensions, reaching 17.2 m.

Later this year, HMF will launch the second half of the series, which offers eight hydraulic extensions at 21.7 m full reach. The 3.83 tonne capacity HMF 1800, at the lower end, can lift 280 kg at full extension, compared to the series-topping 5.27 tonne capacity HMF 2400, which can lift 500 kg.

The series is available with a single or dual link-arm system and a wide hexagonal boom, made of ultra-high tensile steel. It provides "great strength both to the side and vertically," said the company. Outriggers can be fixed, manual or hydraulic swing-up.

None of the hydraulic hoses are visible, including the stabiliser hoses, which are fed through the stabiliser beams. In the case of the hydraulically extendable stabiliser beams, the internal hose is routed through nylon drag chains.

The complete unit is just 820 mm wide added the company, "which saves space on the overall platform length between the driver's cab and the platform body."

The new series will complement the rest of HMF's knuckle booms with ratings between 0.5 and 72 tonne-metres.

HMF, based in Århus, Denmark, is adding 3,600 square-metres to its more than 30,000 square-metre Hojbjerg facility. It will house a new automated factory and painting facilities, and form part of a larger plan to improve manufacturing. "This will include the design and manufacture of all main core components, including base, column and arm systems, as well as state of the art painting, assembling and testing of all HMF units," says Søren Them Kjær, HMF export manager. The expansion will allow an increase in production of more than 50%, according to requirements.

"HMF is transferring a major part of its yearly profit into research and development. Priorities do, of course, lie with what products are most requested from the market and what represents most value in return on investment," adds Kjær.

>

A 72 tonne-metre capacity HMF Thor loader crane lifts food factory equipment, destined for Russia, at the Port of Århus. The model is the largest in the HMF range and this one is owned and operated by Klaus Hundberg of KH Lifting. The company has five cranes in its fleet and is a good example of the small operators that traditionally make up a majority of the Danish loader crane market

Demand

The new 13 to 24 tonne-metre range of knuckle boom cranes represents that demand as mid-range cranes attract around 50% of HMF's market, says Kjær. It will also play a part in the company's efforts to expand its global presence, alongside its three international divisions, HMF UK, HMF Ladekrane in Germany and HMF Sweden. "It is part of an overall strategic plan covering the future of HMF, which will secure and develop our market position on established markets and attract future business partners and customers worldwide."

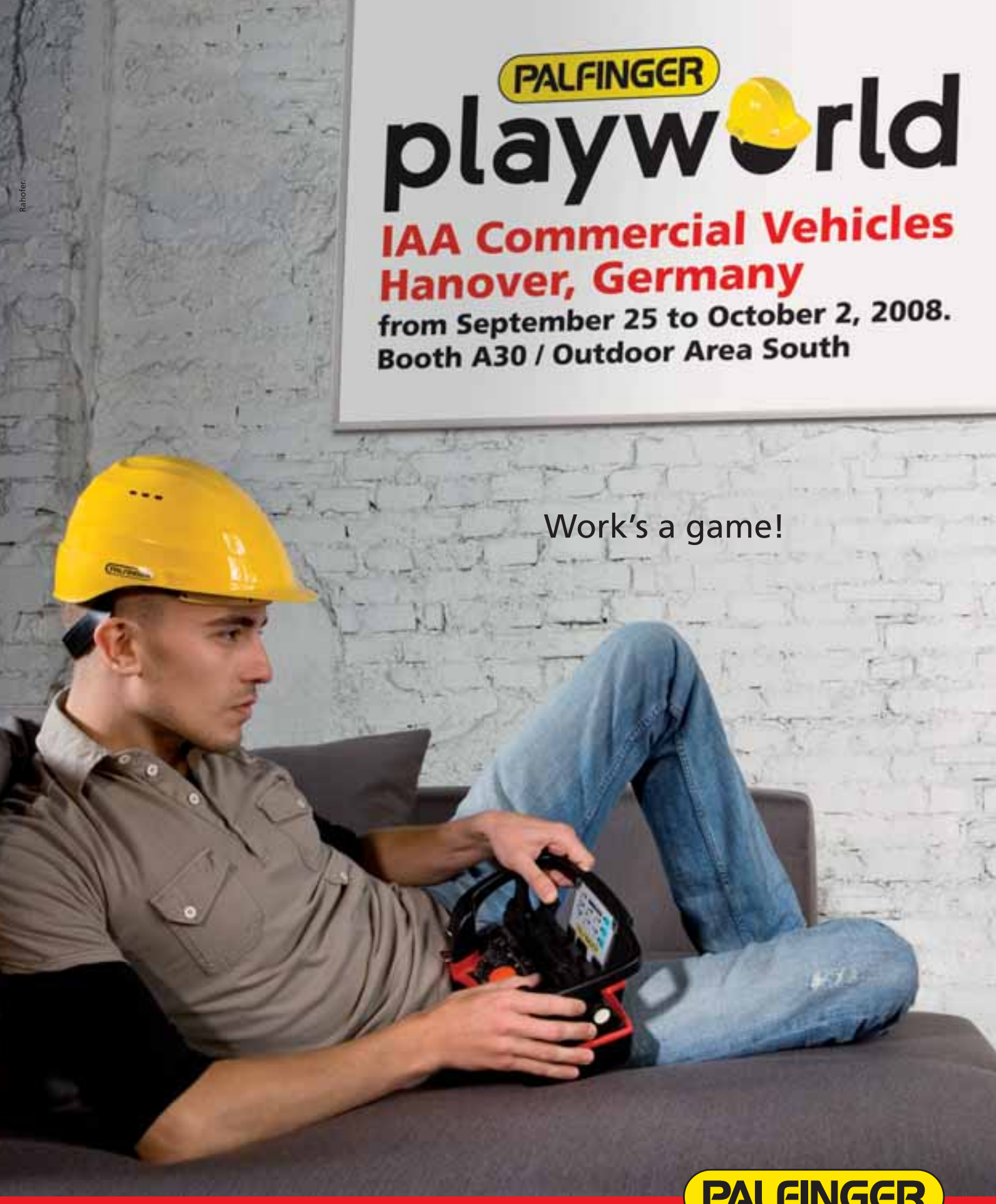
Kjær adds that it is difficult to pinpoint HMF's position in the global market. "The output by number and the actual turnover related to this specific business segment are not corresponding and, therefore, highly misleading when trying to understand the size of activity by company. Today there is no doubt which companies are in the top three. Then there is a group of manufacturers or brands fighting to be number four. On the manufacturing side, where HMF controls 100% of all production processes involved in the manufacture of its loaders, it is number four in the world. When comparing it to other Italian brands using subcontractors for components, parts and, in some cases, the entire crane, this picture may vary."

Modern trends

Historically, the Danish transport industry is based on small and flexible operators, but that is changing, says Kjær. "The market is turning towards large and more sophisticated cranes for many different end applications. This demand is founded in a modern building industry and infrastructure, including advanced architecture and industry requirements, such as large bridges and other areas, which has put considerable pressure on the suppliers of highly advanced building, lifting and transportation equipment."

Kjær adds that the European and world markets are reflected in Denmark. "More and more products are manufactured centrally and distributed worldwide accordingly. Also, new infrastructure, as well as higher labour costs in many countries worldwide, is requiring faster and efficient handling and lifting. At the same time, we, at HMF, are happy to see that most countries now, not just the CE members, will require loaders and other equipment to comply with strict safety norms and regulations."

While the economic downturn experienced in Europe will affect HMF, as it has other manufacturers, the massive demand for cranes and the resultant long lead times have proven a hindrance to some extent. "In a way we will be looking forward to a more normal market demand situation which will allow HMF and our distributors to forecast better and fulfil end customer demand better. However, the past 20 years of loader crane activity is showing growth rates of, on average, 15% growth per year. We see no signs that this growth rate will start to decline with new business segments, such as the booming windmill industry worldwide," adds Kjær. ■



Rahofer.

Discover for yourself the comfort and safety of PALFINGER products at the IAA 2008. PALFINGER PLAYWORLD lets you experience just how fun and safe it is to operate our innovative lifting, loading and handling solutions. More info at **www.palfinger.com**

PALFINGER AG · 5101 Bergheim/Salzburg, Austria · E-Mail info@palfinger.com · www.palfinger.com

Simple. All wheel steer.

HTT-8690 Truck Terrain Crane
81.6 mt

HTT-8675 Series II Truck Terrain Crane
70 mt

Link-Belt HTT's ... incredible on the road and on the job.

Steerable all-wheel axles and super single tires, along with a big, wide cab, full power latching boom, counterweight flexibility, big engine and transmission power ...

THINK CRANES. THINK LINK-BELT.

Link-Belt
CRANES

LINK-BELT CONSTRUCTION EQUIPMENT
2651 Palumbo Drive | Lexington, Kentucky, USA | www.linkbelt.com

T113-08

Cranes down again

The mainstream markets stabilised in August. Crane shares, however, kept falling due to company-specific issues and cooling expectations for the construction industry. CHRIS SLEIGHT reports

Shares in crane manufacturers fell again in August at a time when the mainstream markets stabilised. Between weeks 29 and 334 *IC*'s Share Index lost another 10.46% of its value to finish the period at 407.9 points. This was the lowest the Index has been since September 2006 and, at that time, of course it was on its way up, not down.

But while crane shares were falling in August, the world's main share price indicators held their ground. The FTSE 100 managed a 0.93% rise, while the Dow lost just 0.58% and the Nikkei 225 was down 1.08%.

So what was happening in the crane industry but not the wider markets? There are a few answers to this question, none of which are particularly to do with cranes specifically.

First, is Manitowoc, which fell 11.56% over the five week period. Not the biggest drop, but odd considering its half-year results were solid, and the other US company in the *IC* Index rose 1.82% in the same period.

Manitowoc's fall seems to stem from the news in early August that it had accepted a US$ 120 million cash offer for its shipbuilding business from Italy's Fincantieri. Although this will give the company a one-off lift this year and help to finance its US$ 2.1 billion acquisition of UK kitchen equipment maker Enodis, the feeling on the markets seemed to be that the divestment would lower the company's earnings.

The Japanese manufacturers saw some of the heaviest losses in July and August, with Hitachi losing 16.45% of its value between weeks 29 and 34 and Tadano falling 14.71%.

One key reason was a news statement from the Japanese Construction Equipment Manufacturers Association (CEMA) saying it saw a slowdown coming in the next six months for its member's products. CEMA said it saw demand falling from recent breakneck rates in Russia and India as the effects of the global credit crunch spread out from the US and parts of Europe. This, combined with weak sales at home, meant it cut its forecast for the fiscal year to March 2009 to 1.9% growth from the previous estimate of 8.5%.

Although CEMA statistics show strong growth in crane exports in the year to date, these only account for about 15% of the total. Other more mainstream products like excavators look weak, and Japanese sales of construction equipment components – obviously a leading-edge indicator of finished equipment sales – also look weak.

Currencies

Another reason for the fall in shares of export-orientated companies like Japan's was the strengthening of the US Dollar. Although its relationship with the Yen was fairly benign in August, the Dollar gained a massive 6.59% against the Euro and 6.54% against the Pound.

These rises seemed to be linked to the continued slide in oil and other commodity prices from the record highs seen earlier in the summer. It is however a volatile relationship, and, as the northern hemisphere winter approaches, oil prices could rise again, pushing the Dollar back down.

AUGUST *IC* SHARE INDEX

STOCK	CURRENCY	PRICE AT START	PRICE AT END	CHANGE	% CHANGE	PRICE 12 MTHS AGO	12 MTH % CHANGE
IC* Share Index		**455.55**	**409.10**	**-46.45**	**-10.20**	**719.75**	**-43.16**
Dow Jones Industrial Average		11497	11430	-66	-0.58	13851	-17.48
FTSE 100		5342	5391	50	0.93	6600	-18.32
Nikkei 225		12804	12666	-138	-1.08	17964	-29.49
Hitachi Construction Machinery	YEN	3040	2540	-500	-16.45	4980	-49.00
Konecranes	€	24.40	22.60	-1.80	-7.38	31.75	-28.82
Kobe Steel	YEN	280	258	-22	-7.86	501	-48.50
Manitowoc	US$	27.51	24.33	-3.18	-11.56	82.00	-40.66
Palfinger	€	16.47	14.66	-1.81	-10.99	38.70	-24.24
Tadano	YEN	979	835	-144	-14.71	1936	-56.87
Terex	US$	47.32	48.18	0.86	1.82	90.96	-47.03

**IC* Share Index, end April 2002 (week 17) = 100*

Palfinger 4 for 1 stock split in week 27 2007

Manitowoc 2 for 1 stock split in week 37 2007

EXCHANGE RATES – US$

CURRENCY	VALUE AT START	VALUE AT END	CHANGE	% CHANGE	VALUE 12 MTHS AGO	12 MTH % CHANGE
YEN	106.75	108.35	1.60	1.50	120.97	-10.43
€	0.6307	0.6723	0.0416	6.59	0.7230	-7.02
UK£	0.5004	0.5331	0.0327	6.54	0.4859	9.71

Period: Week 29 – 34

Increase life with

E-ChainSystems®

Lower cost and longer life have been achieved with igus® E-ChainSystems® for all kinds of Ship-to-shore cranes. Over 350 times worldwide. What's next? New generations of polymer E-Chains®, Chainflex® cables – from fibre optical to 6/10 kV cables – and accessories for faster, longer, yet more reliable cranes. Plus a standard Condition Monitoring System. Reduce your costs, increase service life.

... with lattice girder

... with double trolleys

... with rope driven trolley

... with double girder

● plastics for longer life®

igus®-cranes.com

igus® GmbH Spicher Str. 1a D-51147 Cologne phone +49-2203-9649-0 fax +49-2203-9649-222 cranes@igus.com

Please phone our offices:

Austria	+43-7675-4005-0	France	+33-1-49840404	Netherlands	+31-346-353932	Spain	+34-93-6473950
Belgium	+32-16-314431	Great-Britain	+44-1604-677240	Poland	+48-22-8635770	Sweden	+46-42-329270
Brazil	+55-11-35314487	India	+91-80-25727106	Portugal	+351-22-610 90 00	Switzerland	+41-62-3889797
Canada	+1-905-7608448	Italy	+39-039-5906-1	Singapore	+65-64871411	Taiwan	+886-4-23581000
China	+86-21-51303100	Japan	+81-358-192030	South Africa	+27-31-4614824	USA	+1-800-5212747
Denmark	+45-86-603373	Mexico	+52-722-2714273	South Korea	+82-32-8212911		

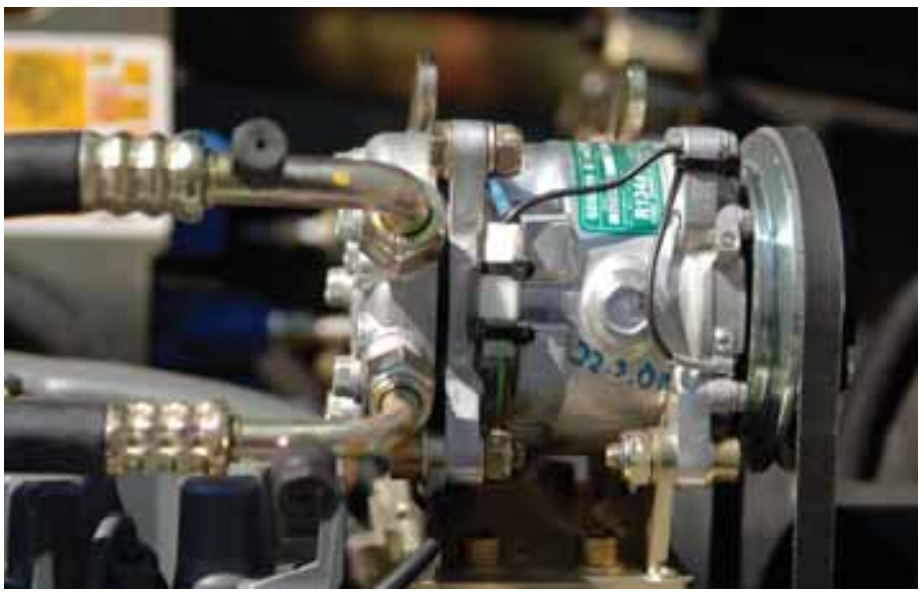
The ZF TC Tronic HD includes a hydrodynamic torque converter which helps to allow smooth starts and manoeuvres, especially on heavy vehicles up to 250 tonnes

Driving forward

In light of rising oil prices, driveline design to power cranes more efficiently, on and between jobsites, is becoming increasingly important. EUAN YOUDALE and CHRIS SLEIGHT report

Operators of road-going cranes, in particular, have always paid close attention to fuel consumption and, in response, manufacturers are continually updating their equipment.

Liebherr manufactures most of the engines for its mobile and crawler cranes. These are four- and six-cylinder inline and six- and eight-cylinder V-engines, producing 197 to 680 hp (147 to 507 kW). Exceptions include the LTM 1030-2.1 and LTM 1040-2.1 all terrain cranes, which use 278 hp Mercedes engines, while the 1,350 tonne capacity LR 11350 lattice boom crawler crane has a 870 hp Cummins. Transmissions are supplied by ZF.



"Customer demand for more fuel efficient cranes is not new," says Wolfgang Beringer at Liebherr-Werk Ehingen. "An improvement was made by the fully electronic engine control by data-bus systems, which much improves the communication between engine and transmission. A further improvement was the introduction of the ZF AS-Tronic drive with dry clutch, which is more efficient than a torque converter. And, with double the number of gears, 12 instead of six, the cranes require less fuel, as the engine always runs at its optimum revolution speed. So 15 to 20% fuel savings were realised."

Beringer adds that the Liebherr LTF 1035-3.1 and LTF 1045-4.1 telescopic cranes on standard commercial trucks are "excellent alternatives in the taxi crane class," as they use serial truck chassis. Fuel consumption is less than all terrain cranes and they have on-road tyres. "Moreover, the new LTF 1035-3.1 and LTF 1045-4.1 feature a separate superstructure engine, the output of which is matched to the requirements of crane operation. As a consequence, operation of the crane superstructure also results in reduced fuel consumption."

While truck-mounted cranes on serial >

chassis are the more economical in terms of fuel consumption, Beringer adds that the load capacity of this type of crane is limited to 60 tonnes. "For crane rental companies, the all terrain cranes are and will be number one, due to their diversity of applications."

Beringer adds that although customers naturally demand more economical cranes, "I think they are also aware that there are technical limits."

Quick change

According driveline components manufacturer ZF, the advantages of its AS Tronic automated manual transmission come from its intelligent shifting strategy, which lets the engine run at the most economical speed range and reduces fuel consumption, according to the company. "Quickly changing gears reduces engine idling and shorter shifting times means shorter interruptions of tractive power. The AS Tronic shifts each gear reliably and

Deere's PowerTech Plus and PowerTech E engines can now be used with 100% bio fuels (B100), provided they meet the requirements of standard EN14214

SOFTWARE SAVINGS

Computer software will play a vital role in the bid to reduce crane fuel consumption. Hiab's Pro and HiPro crane control systems were designed to help satisfy demand for lighter cranes able to deliver the highest possible lifting capacity. The delivered payload can be increased by up to 20% and have the potential to reduce fuel consumption by up to 40%.

Most modern cranes have a pump that delivers a fixed flow of oil and, in many situations, a large part of the oil circulates directly back into the tank.

If a customer chooses a fixed pump for a 166 Hi Pro crane, the oil flow in the hydraulic system is 70 to 90 litres per minute. The oil flow requires the truck's diesel engine to use three litres of fuel per hour. Often, however, the crane is not used at its full capacity. It may only be turned 90 degrees – from the loading dock to the truck's bed and back, and with 60% speed.

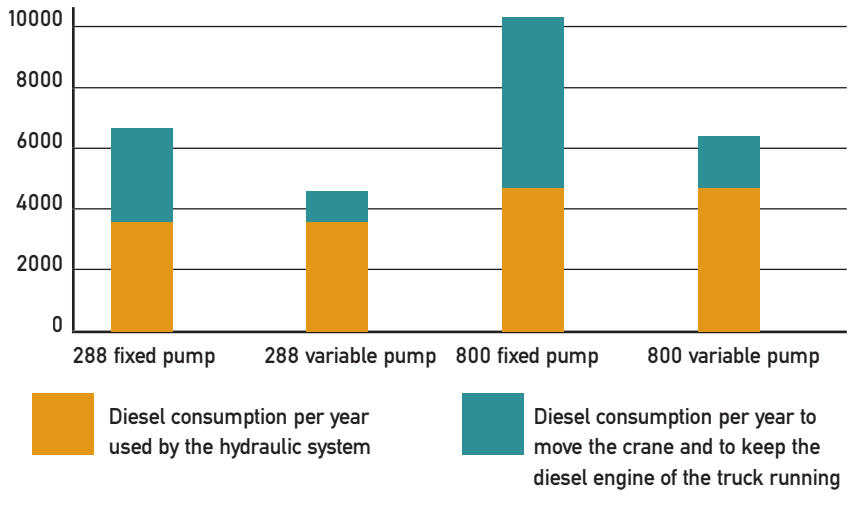
"This would need only 25 litres of oil per minute so at least 50 litres of oil is circulating in the system in vain. The excess energy used converts to heat in the control system and, since the oil temperature must be kept below 70 degrees, an oil cooler is needed," explains Lars Anderson, Hiab R&D manager, structural mechanics.

The Pro and HiPro control system use variable pumps to adjust the necessary lifting and lowering or moving speed at any given time.

According to Anderson, replacing the standard fixed displacement pump with a variable displacement pump in a truck with a Hiab XS 288 Hi Pro crane, which normally, uses about 7,000 litres of diesel a year would result in a 32% fuel saving, or 2,200 litres. The savings would be even higher in an 800 Hi Pro crane using 10,000 litres a year with a potential 4,000 litre reduction.

Installing a variable pump for a new crane or retrofitting an older unit costs between €1,000 and €2,000 (US$1,500 and $3,000). This, Anderson says, would pay for itself in oil savings in 18 months for a 288 HiPro and six months for an 800 Hi Pro.

Diesel consumption per year for an averagely used Hiab 288 HiPro and Hiab 800 HiPro using a fixed or a variable LS compensated pump



correctly. This conserves the entire driveline and increases the life of the components," says the company.

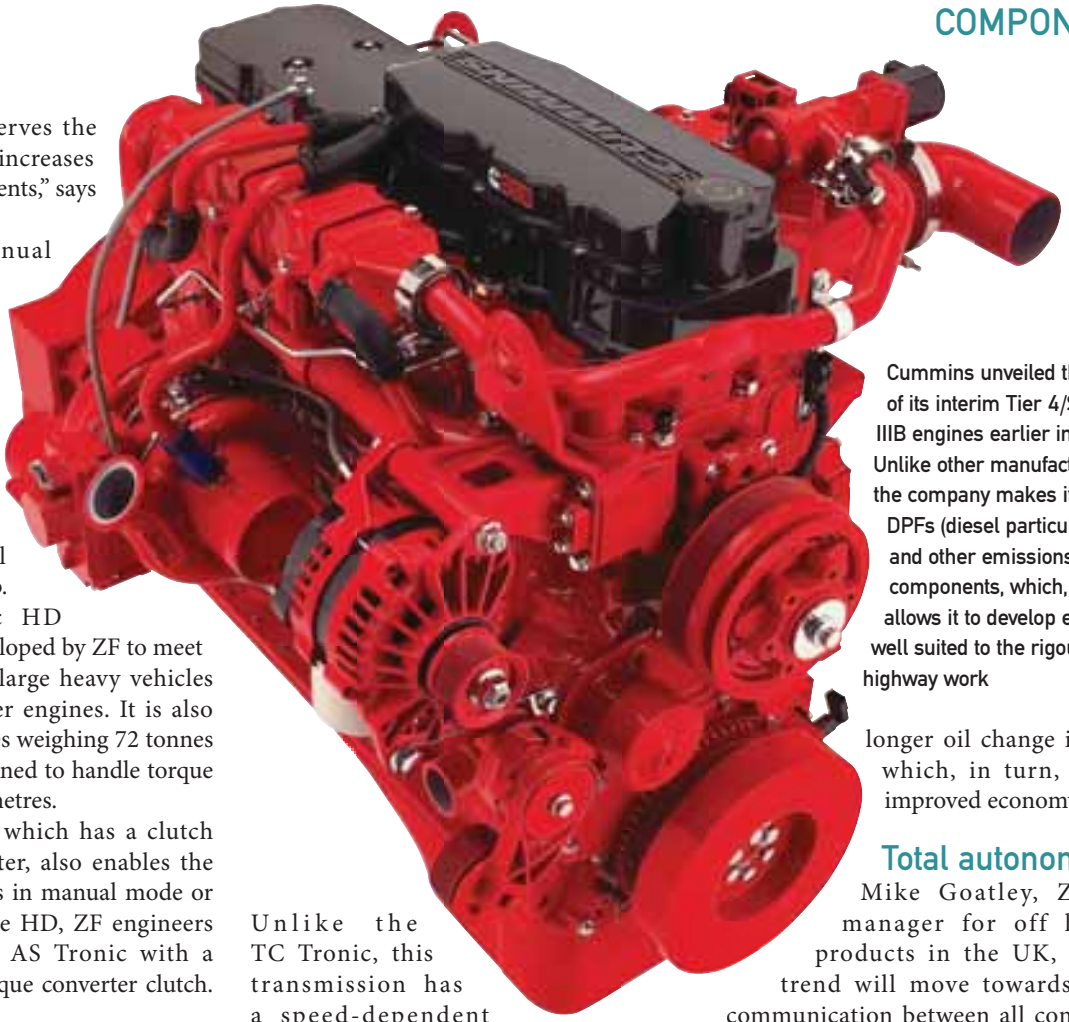
Overall, the manual transmission adds considerably to the service life of the clutch, adds the company, as does the advantage of having fewer mechanical parts on the inside of the transmission and no mechanical connections to the cab.

The TC Tronic HD (heavy duty) was developed by ZF to meet the requirements of large heavy vehicles with high horsepower engines. It is also aimed at mobile cranes weighing 72 tonnes and more and is designed to handle torque up to 3,500 Newton-metres.

The HD version, which has a clutch and a torque converter, also enables the driver to engage gears in manual mode or automatically. For the HD, ZF engineers have combined the AS Tronic with a further developed torque converter clutch.

Unlike the TC Tronic, this transmission has a speed-dependent secondary retarder, the ZF-Intarder, instead of a primary retarder. The latter is particularly suited for brake operations at speeds higher than 25 km/h. In addition, the HD variant does not require an additional external oil tank. As the primary retarder has become obsolete, it was possible to integrate the oil supply required for the hydrodynamic torque converter into the housing. Upon request, this tank can be filled with 26.5 litres of ZF-developed Ecofluid M oil. It makes the final oil fill easier and offers higher mileages and

Cutaway ZF AS tronic type 16 AS 2602 IT automated manual transmission with integrated retarder (intarder). This transmission is fitted to all terrain mobile cranes and has 16 forward speeds plus two reverse.



Cummins unveiled the first of its interim Tier 4/Stage IIIB engines earlier in 2008. Unlike other manufacturers, the company makes its own DPFs (diesel particulate filters) and other emissions control components, which, it says, allows it to develop engines well suited to the rigours of off-highway work

longer oil change intervals, which, in turn, leads to improved economy.

Total autonomy

Mike Goatley, ZF sales manager for off highway products in the UK, says the trend will move towards greater communication between all components of the driveline, including the engine, transmission, axles and brakes.

"As a complete driveline supplier, ZF is now working on systems where the entire driveline is operated automatically – transmission shifts, braking functions, diff locks etc. This allows for the driveline to achieve maximum efficiency with no driver input."

Crane manufacturer Manitowoc uses a number of engine builders for different crane models but Mercedes and Cummins predominate. "There are many factors we consider when specifying an engine or driveline component for a crane. These factors include performance, service, availability, and customer preference," says the company.

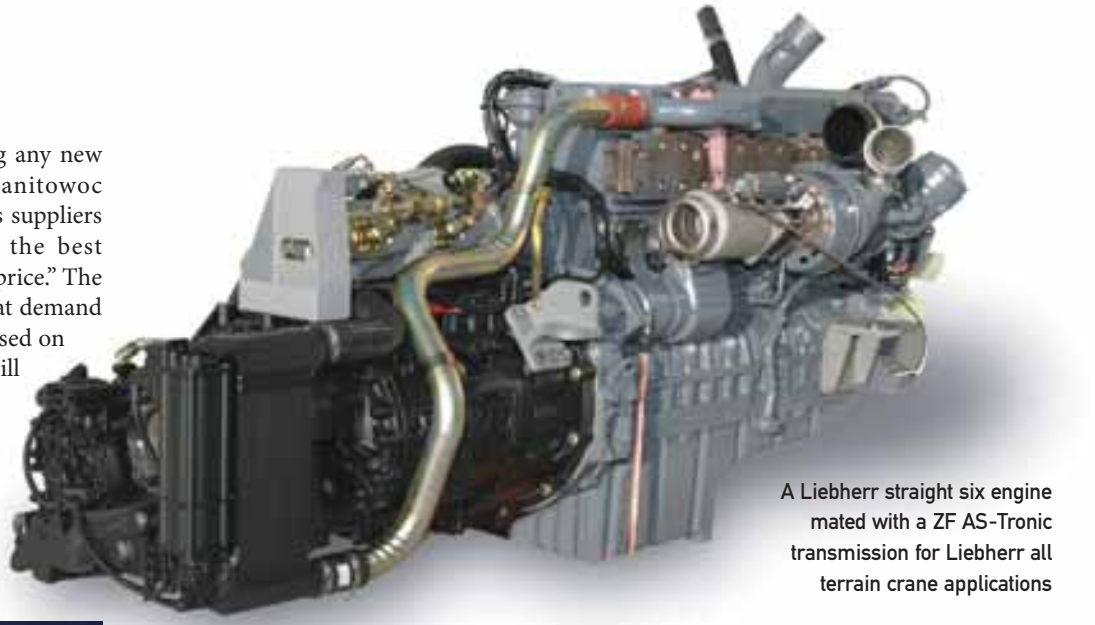
Despite increased fuel costs in the US, >

Manitowoc says it is not making any new demands of its suppliers. "Manitowoc maintains good relations with its suppliers and works with them to get the best matched components at the best price." The company adds, "We don't feel that demand for specific cranes is changing based on their fuel efficiency. Cranes are still specified by customers based on their reach and capacity."

Nevertheless, fuel efficiency is on the company's mind and it points out that the design of crane components, other than the driveline, can also reduce fuel consumption. "Improved aerodynamics certainly helps fuel economy in both on-highway and off-highway cranes."

Speaking about the future, the company adds, "It is our view that cranes will at some stage incorporate alternative fuels and power sources, but the component manufacturers must first perfect these technologies before they can be incorporated into our crane designs."

Liebherr LTF 1045-4.1 truck mounted crane has separate engines in the chassis and in the superstructure for road travel and crane operations, respectively



A Liebherr straight six engine mated with a ZF AS-Tronic transmission for Liebherr all terrain crane applications

Power germination

A few years ago biofuels looked like the answer or, at least, part of the answer, to dwindling oil reserves and rising fuel prices. The idea was to grow sugar crops such as sugar beet and sugar cane and starchy plants like corn and maize to produce ethanol by fermentation, or to grow oily crops like soybeans and rapeseed to provide a diesel-like fuel oil.

As a result, many manufacturers now rate their engines to accept a certain proportion of biodiesel. Most will accept fuels that are 5% biodiesel (B5) and many will go further. John Deere, for example, >

INSIDE EARTH MOVING_

HBS_Avantgarde technology

HBS designs and produces valves and hydraulic components highly innovated for every type of employement from the earth movement to lifting systems.

Application fields:

CRANES / EARTH MOVING EQUIPMENT / TELEHANDLERS

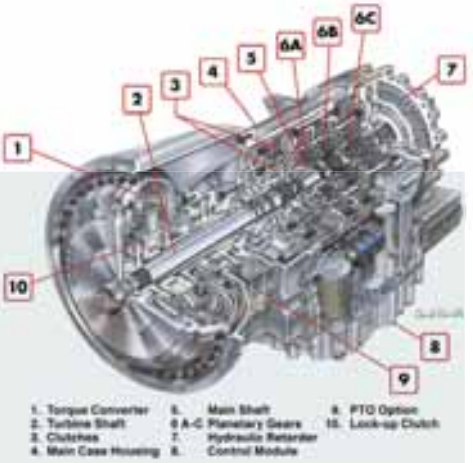
TRUCK - MIXER PUMPS

www.hbs.it

HBS OLEOIDRAULICA

HBS Srl_Hydraulic Valves
Via Mastroppa_4/6
46040 Monzambano (MN)_Italy
Tel:+39 0376 800200_Fax: +39 0376 800410
Mail: hbs@hbs.it

AUTOMATIC AND AMT DIFFERENCES



Today, the term 'automatic' is often used to describe any two pedal set up. But there are significant differences between a fully automatic and an automated manual transmission (AMT) that can affect performance, fuel efficiency and reliability in crane applications.

A key differentiator between a manual or AMT and a fully automatic transmission is that the manual or AMT transmission engages different sets of gears to achieve the various gear ratios, while in an automatic transmission, a single, very sophisticated set of gears produces all the different gear ratios.

The other technology is the torque converter. This device evolved from the fluid flywheel and is filled with automatic transmission fluid. It is this fluid that transmits the engine torque to the transmission. The torque converter can either multiply the torque generated by the engine or operate as a fluid coupling by disconnecting the engine from the wheels or allowing the engine to turn slightly faster. The torque converter is the key to the fully automatic and provides many of the benefits such as reducing shock and strain on the entire driveline, including the engine. It is also highly efficient when it is multiplying torque using a component called a stator. For example, modern automatic transmissions from suppliers such as Allison Transmission has a lock-up clutch that provides a direct connection from the engine to the transmission, thus eliminating wasted energy and maximizing fuel economy.

The torque converter also provides the performance difference between a fully automatic transmission and an AMT. With an AMT, every time a shift occurs, the clutch separates the engine from the transmission. Therefore, at every shift, there is a loss of power, momentum and speed, not ideal on slippery ground. With a fully automatic, the engine and the transmission are always connected leading to more efficient use of engine power, thus providing faster acceleration and improved productivity, according to manufacturer Allison.

says fuels up to B20 can be used with all of its Stage IIA/Tier 3 engines, while at Perkins the company's aim is to certify all of its engines up to B100.

The reason for this apparent caution is that biodiesel is not a like-for-like substitute for petroleum diesel. With repeated exposure biodiesel can damage seals and gaskets and it can also degrade crankcase oils. It can also degrade, especially if stored incorrectly, and delivers slightly different performance from petroleum diesel.

Just as the industry is adapting to this legislative change, however, the rationale behind biofuels is questionable. One problem is that land previously used for food crops is turned over to cultivate bio fuel crops, which has contributed to the worldwide rise in food prices.

Another concern is that forested areas have been cut down to plant bio >

HIGH PERFORMANCE IN FLUID TRANSMISSION_

HBS TRANSMITTAL_Avantgarde technology

The HBS TRANSMITTAL swivel joint due the high performance and reliability are strongly recommended for power fluid control and transmission.

Application fields:

CRANES / **TRUCK-MIXER PUMPS** / **DRILLING**
DEMOLITION SHEARS / **TELEHANDLERS**

www.hbstransmittal.com

HBS TRANSMITTAL

HBS Srl_Hydraulic Swivel Joint Branch
Via Mastroppa_4/6
46040 Monzambano (MN)_Italy
Tel:+39 0376 800200_Fax: +39 0376 800410
Mail: hbs@hbs.it

Top Performance

- Lifting and moving heavy loads
- Fast and simple self-assembly system
- Technical components -
  simple to understand and easy to reach
- Made in Germany

SENNEBOGEN 5500 Star-Lifter

Crawler Cranes	HD Crawler Cranes	Telescopic Cranes	Truck Cranes	Harbour Cranes
80-180 t	30-180 t	8-80 t	35-40 t	45-180 t





SENNEBOGEN Maschinenfabrik GmbH
Hebbelstrasse 30
94315 Straubing / Germany
Tel.: +49 (0) 9421/540-144/145
e-Mail: cranedivision@sennebogen.de
www.sennebogen.com

SENNEBOGEN®

fuel crops, which is hardly a positive environmental step.

Controversial

Even without these problems, biofuels are not carbon neutral, because they require machines and chemicals to cultivate, which means extra energy and extra carbon dioxide emitted into the atmosphere. It is a controversial argument, and one that engine manufacturers are quite wisely steering clear of, preferring to fall into line behind government policies.

Whether or not biodiesel becomes a fuel of the future remains to be seen but, as long as oil prices stay high, there are likely to be more hybrid drive systems developed and fitted into construction machines. Hybrid drive systems include electric motors and, usually, batteries plus the diesel engine.

The diesel engine is used to charge the batteries for the electrical system and to drive the machine, according to load and speed. There are also systems that capture the energy used in braking to charge the electrical system – harnessing more 'free' energy that would otherwise go to waste. These systems are expensive compared to traditional diesel-only powertrains, but persistently high fuel prices have made them more economically viable.

HYBRID FOR HEAVIES

A hybrid power system for heavy vehicles and construction equipment is claimed by manufacturer Volvo to give fuel savings of up to 35%. Lower maintenance costs are also claimed as a result of reduced wear on the braking system.

The design uses I-SAM (Integrated starter, alternator, motor), a combined starter motor, drive engine and generator. It operates with an automated mechanical transmission, an electronic control unit, a conventional diesel engine and batteries that are charged by braking energy. The linked electric motor and diesel engine are claimed to have more capacity than series hybrids.

I-SAM can start and accelerate heavy vehicles without using the diesel engine, which reduces noise.

Volvo is also helping to develop a new type of battery. Effpower, based on proven lead-acid technology, has doubled the power, Volvo claims, while manufacturing costs "can be significantly reduced compared with alternatives."

Experience the Progress.

Experience the Progress with Liebherr: Crawler Cranes featuring high capacities, impressive boom configurations and a new standard in safety. Advanced Technologies are our Business.

Liebherr-Werk Nenzing GmbH
P.O. Box 10, 6710 Nenzing
Tel.: +43 50809 41-473
Fax: +43 50809 41-499
www.liebherr.com

LIEBHERR
The Group

Of space and time

In October the Technik Museum Speyer in Germany will open a new hall fully dedicated to space travel. The highlight will be the Russian Buran, the equivalent of the US Space Shuttle. Moving the spacecraft over water and land to its new home in the south of Germany, was a major challenge. Heavy transport specialists Kübler tackled the job, as GINO KOSTER reports

Discharging the Buran and later loading it in Rotterdam

Barging via the River Rhine

The Technik Museum Speyer includes a range of mankind's extraordinary technical achievements, all original and in one-to-one scale. A Jumbo jet aircraft is just one example.

Work is ongoing to finish an extension dedicated to space travel. The highlight will be the Buran, the prototype 002 Russian spacecraft OK-GLI that travelled to space 25 times before landing in Bahrain, the Middle East, for the final time.

Spedition Kübler was instrumental in its transport from the beginning. In 2003 it helped transfer ownership to the museum on paper. Once that was settled about three years later, after clearing ownership claims through the courts, Kübler also got involved in moving the 36 m long, 25 m wide and 17 m tall Buran to its new home in Germany.

Before Kübler could take over in the Port of Rotterdam, the Netherlands, the Buran had to be transferred from its intermediate storage location in the port area of Manama, the capital of Bahrain, on to a barge. Loading was performed by two crawler cranes lifting in tandem. A ship with onboard cranes loaded the spacecraft once alongside. To facilitate easier handling and shipping both wings and the tail were separated from the main body.

Bridge clearances had to be carefully checked

>

RIGHT: The Buran rolls on land loaded on 16 lines of Scheuerle Intercombi hydraulic modular trailer

LEFT: Preparing the Buran to be unloaded by means of roll-off. Scholpp provided a 300 tonne crane to assist in unloading the tail and both wings, plus assisting with laying the ro/ro ramps

The Kübler crew negotiating a 90 degree corner

Sea transfer

A long sea journey followed, taking the ship and its precious cargo via the Red Sea, Suez Canal, Strait of Gibraltar and the Channel to the Port of Rotterdam. There the ship moored at the heavy lift and project cargo facilities of Gevelco. Two 75 tonne capacity Takraf shore cranes were used in tandem to unload the Buran on to the quay. Specialists from the museum cleaned the Buran spacecraft and prepared it for its next and final inland journey along the River Rhine to Germany.

In the meantime, Kübler Spedition had mobilised its Mercedes-Benz Actros SLT 4160 8 x 6/4 heavy-duty ballasted tractor together with 16 lines of Scheuerle Intercombi hydraulic modular trailers. Once the tractor and trailer were onboard the main and central 11 m wide barge, the loading process commenced.

The 36 m long and about 6 m diameter main fuselage of the Buran spaceship was lifted, again in tandem, on to the awaiting trailer. This was followed by the 10 m wide wings that were positioned to the left and right of the hull, supported by elephant feet positioned on the left and right side-pontoons.

The 25 m wide Buran, loaded on the barges, was manoeuvred upstream by a heavy pusher boat. Both were operated by van der Wees Transporten in Dordrecht, the Netherlands. Shipping up the River Rhine took some six days. The many bridges on the route had to be carefully checked for sufficient height clearance.

Road restrictions

Due to the physical restrictions of the roads leading to the Technik Museum Speyer, a discharging location was found in the Naturhafen of Altrheinarm, close to Speyer. A detailed and well prepared programme was planned following the arrival of the transport in the port Friday evening. A temporary road connection was built out of aluminium road panels through the forest.

On the evening of its arrival, after a 300 tonne telescopic crane from Scholpp was moved in, both wings, measuring 15.80 x 9.80 x 1.00 m, weighing 15 tonnes, plus the tail wing, measuring 12.80 x 5.80 x 0.60 m and weighing 15 tonnes, were discharged and loaded on to trailers.

The following day a double set of 12 m ramps was laid out for the Buran, loaded on the Scheuerle trailers, to roll off the barge, headed by the Mercedes-Benz Actros. The final 4 km journey to the museum was planned for a Sunday.

Impressive dimensions

The load was 48 x 9 x 9.5 m (LWH) and weighed 155 tonnes. After passing through a narrow stretch of forest road, the Buran arrived in the streets of Speyer. About 15,000 spectators gathered to witness the transport's final stage. They were controlled by the police and the German THW.

The 10 m width of the wings meant that traffic signs had to be removed temporarily. Despite the enormous dimensions of the loads in comparison to the relatively small city roads, the convoy made its way to the museum as planned and without problems. The loads reached the museum well within the permitted timeframe.

All loads were discharged at the museum, while the exhibition hall was completed. Once ready, Kübler provided a 5-bed-5 Scheuerle modular trailer with hydraulic gooseneck to manoeuvre all parts and, finally, the Buran itself in to the new hall. Following the successful transport operation by Kübler Spedition, the Russian spacecraft will be put together again and completely restored. The new hall opens 3 October 2008 and will show other space related material. ■

Buran enters its final destination

Reel-O-Matic's Re-Reever

"You'll believe it when you re-reeve it."

Reel-O-Matic's tension controlled pay-out and take-up Re-Reeving Machinery handles reels and weight capacities to your specifications. Includes free wheel capability, choice of drive systems and easy reel engagement.

Reel-O-Matic's Model RR5

Easy to Load and Transport

Reel-O-Matic's Re-Reeving machines are available up to 50,000 lbs capacity. Tension controlled, Pay-Out and Take-Up system. Your choice of drives available: Gas, Electric, and Diesel.

CONEXPO RUSSIA

Visit us at booth: 11420

REEL-O-MATIC

Reel-Neat

Call Today and let Reel-O-Matic save you time and money.

1-405-672-0000 or visit us on the web at www.reelomatic.com

INTELLIGENT ENGINEERING YIELDS

Lift Systems is proud to announce the development of our NEW Self-Contained Wedgelock System. Our design and engineering staff have proven once again their dedication to innovation for you, the customer, through in-house engineering, manufacturing, and testing skills. Our NEW Self-Contained Wedgelock System eliminates 350 mechanical components on a four-point system versus our previous system design, resulting in an even more reliable redundant safety feature. Currently we are engineering a field retrofit saving you valuable transportation costs.

PREVIOUS DESIGN

Contact us today for more information!

NEW DESIGN

PATENT PENDING

New Models Recently Developed and in the Field!

MODEL 4240SCTI
- 100 Tons to 27'
- Self-contained Compact Design
- Integral Drives Standard
- Pendant Control
- Radio Remote Optional
- CARL System Optional (Synchronizes Lift, Travel, and Side Shift with 1 Lever Control

MODEL 34PT10060WT Wedgelock Power Tower
- 1000 Tons 31'
- 600 Tons to 40'
- Add Risers and Stingers for a Maximum Height of 55'

OPTIONS: CARL System – Synchronizes Lift, Travel, and Side Shift with 1 Lever Control
- Changeable Power – Diesel to Electric in less than 1 Hour • Integral Drives
- Fully Powered Side Shift

LIFT SYSTEMS... Global Leaders in Specialized Lifting Equipment!

LIFT SYSTEMS, INC.

Lift Systems, Inc.
1505 7th Street • East Moline, IL 61244
TEL: +1 (309) 764-9842 • Fax: +1 (309) 764-9848
WEB: www.lift-systems.com • Email: liftit@lift-systems.com

RIGGERS™

EZ600-33

Contact us today about our newest and currently most popular model!

- 1380 Tons First Stage Capacity on Four Legs
- 700 Tons to 33' on Four Legs
- CARL Control System Standard (Synchronizes Lift, Travel, and Optional Side Shift)
- Integral Drives Standard
- Large, Stable Bases and Header Plates
- Quiet Electric Power
- Self Contained Hydraulics

OR Upgrade your current Gantry System with a C.A.R.L. Retrofit.

All Riggers Manufacturing and Lift Systems' gantry systems can now be upgraded to be controlled by the newest, most advanced, hydraulic technology available, proving once again our dedication to innovation. Portable pendant controls and large display screens give your operator the most critical lift information and optimal viewing location possible at the same time. CARL can synchronize your system to extend, retract, and travel within tight tolerances with 1 lever control. Re-certifications and refurbishments are also available to make your system like NEW!

ISO 9001 REGISTERED

CE

RIGGERS™ MANUFACTURING COMPANY

Riggers Manufacturing Company
PO Box 506 • Dixon, IL 61021
TEL: +1 (815) 288-7626 • Fax: +1 (815) 288-7634
WEB: www.riggers.com • Email: riggers@riggers.com

POWERFUL PERFORMANCE

ARCOMET GOES EAST

SINGAPORE - KOREA - HONG-KONG - ...

ARCOMET

Head-office - BELGIUM - T +32 (0)11 450 950 - mail: arcomet@arcomet.com - **WWW.ARCOMET.COM**

Cool towers

Special tower cranes for cooling tower construction are in demand as the call for energy around the world rises rapidly. HEINZ-GERT KESSEL reports

With two climbing cages the Wolff 180B is climbed to a free standing tower height of 126.7 m. The application of heavy TV33 base tower sections lead to a very rigid tower combination reducing bending deflection

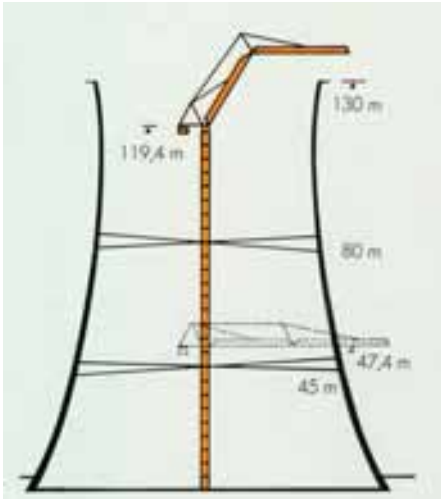
Cooling towers at electrical power generation plants are used for re-cooling the cooling water of high-performance steam power plants. A steady increase in the capacity of power generation plants means a commensurate rise in demand for cooling capacity.

In humid climates natural draught towers are used where the diameter and height of the structures are directly related to the power plant's efficiency. In general, their hyperbolic reinforced concrete design characterises the skyline of a power plant. At the beginning of the last century concrete cooling towers had a height of 35 m, while now they are generally 160 to 200 m tall and 90 to 130 m in diameter. On the drawing board are designs up to 230 m tall and 164 m diameter.

Cooling tower projects call for sophisticated crane solutions and are a real challenge in several ways. Natural draft cooling towers take the form of a single-shell rotation hyperboloid. A central tower crane with long jib is needed to cover the base diameter of the shell. When dismantling the crane after toping out the cooling tower, the same crane must pass through the narrowest diameter of the structure.

The increasing size of cooling towers exceeds the capabilities of ordinary free standing tower cranes, which means special >

For the placement of pre-cast X-shaped 115 tonne pillars at the base of a cooling tower in France, Potain developed a circular rail-travelling 120 tonne portal crane with 36 m span and 30.5 m height, where the feet are made up of standard crane sections. Today, this pre-cast erection work at cooling tower basements is generally done using large capacity mobile cranes



The drawing of the Peiner SKK140 indicates the benefit of the articulated jib crane, working firstly with the full outreach while, later on, standing with the main crane structure in the wind shadow

extreme free standing tower solutions or tie in systems are needed. Rope guyed towers are usually used because the cooling tower diameter is so large. Due to the shell thickness of just 160 to 200 mm, however, the method of anchoring the guy ropes is a challenge in itself. The aim is to minimise the number of guy levels and to guy to floor level instead of to the shell whenever possible.

During the high-rise construction process the tower crane is the only hook serving the site. The crane needs fast working speeds, fast climbing equipment with a minimum number of climbing steps to minimise the number of times the progress of the concrete structure is interrupted during construction.

The concrete shell is usually erected on site so the tower crane has to offer enough capacity to lift typical concrete buckets. In addition, it must be able to dismantle the self-climbing framework after topping out of the cooling tower. In the 1970s and 1980s tower cranes with concrete delivery placing booms were used to pump concrete. Ideas in the 1980s to build the shell out of pre-cast elements required a load moment that would demand uneconomically large tower cranes. The diagonal supports at the cooling tower base are not normally placed by the central tower crane if they are delivered as pre-cast elements.

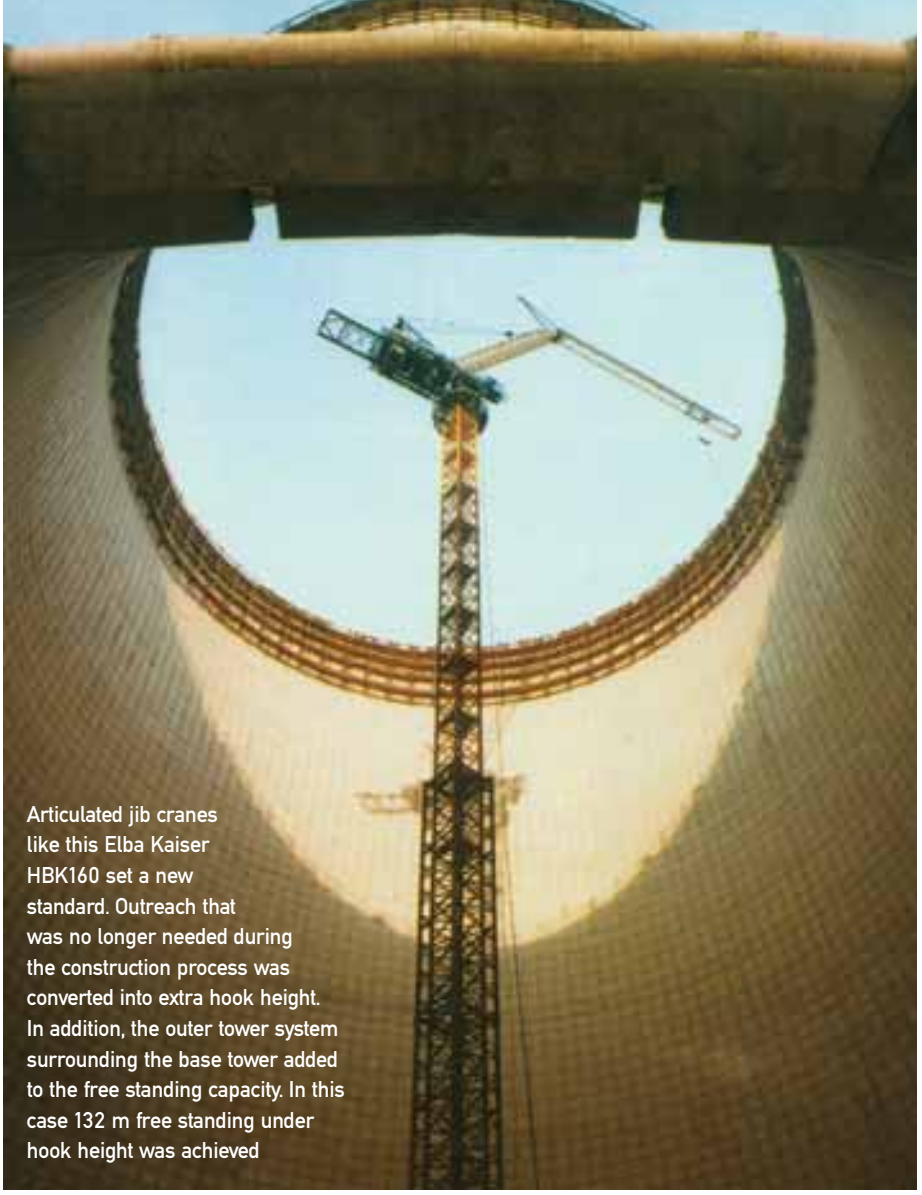
The height of the crane is such that it is exposed to extreme wind conditions. The way to work is with as much as possible of the crane in the wind shadow of the rising shell and find the most economic tower composition for the crane.

Special solution

Construction of hyperbolic concrete cooling towers always calls for special tower crane solutions. It sometimes leads to unique machines manufactured for a single project or, at least, cranes built from standard modules with substantial modifications. An early creative example is the double boom Baltkran manufactured in the 1950s to raise cooling towers at power stations in the former Soviet Union. The bottom-climbing crane was erected in the centre of the cooling tower and had two saddle jibs with two hooks. It also had two trolleys carrying scaffolding, including three horizontal work platforms, as access to the shell framework.

In 1965 Schwing developed its KTK H series of saddle jib climbing cranes. For a nuclear power station in Hungary, with a cooling tower of 100 m diameter, a special extended version of the Schwing KTK 80/95 was built. Instead of the conventional 40 m jib a 54 m one with three sections was developed. The two extensions each carry an A-frame connected by an individual set of pendants to the tower head. This arrangement allowed jib sections to be folded down to let the crane pass through the narrowest part of the cooling tower when climbing down at the end of construction. Maximum under hook height of the crane was 135 m. Anchoring of the mast with the shell was by multiple ropes fixed to a complicated framework surrounding the crane tower every 29 m.

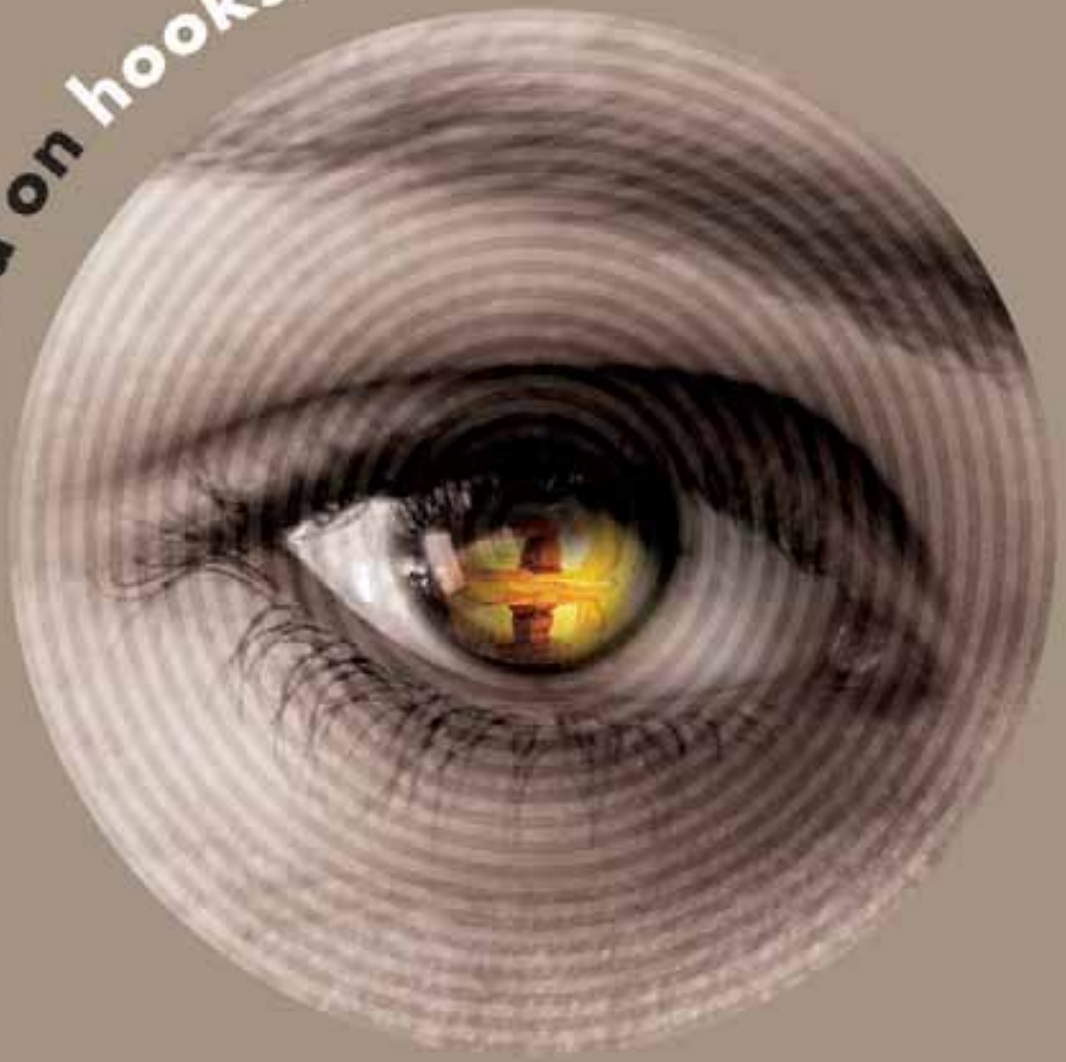
At the beginning of the 1960s Kaiser developed the articulated saddle jib HBK >



Articulated jib cranes like this Elba Kaiser HBK160 set a new standard. Outreach that was no longer needed during the construction process was converted into extra hook height. In addition, the outer tower system surrounding the base tower added to the free standing capacity. In this case 132 m free standing under hook height was achieved

Wilbert WT205L e.tronic luffing jib crane with 4.9 tonnes capacity at 42 m outreach being installed with 159.45 m maximum under hook height as a free standing crane for a cooling tower project in Germany with the help of the all new Grove GTK1100 mobile crane

Focused on hooks...



FORJAS IRIZAR®

Manufacturers of Original Offshore & Lifting Forgings

- *Large & heavy steel parts for offshore & lifting applications*
- *From 1 ton to 1.000 Ton loading capacity*
- *Special hooks, blocks, swivels, chain links & other customized large forgings*
- *Own fabrication & pull load tests up to 1.500 Ton*
- *Your forge & machining shop & lab for worldwide oil & gas industry*

FORJAS IRIZAR SL

Head Offices: Hiribarren 26 P.O. BOX 8
20210 Lazkao (Gi) SPAIN
Phone : +34 943 880 936
Fax: +34 943 889 372

UK Agent: David Salmon
Phone : +44 777 168 4522

www.forjas-irizar.com

LINDEN COMANSA AMERICA

Linden Comansa America LLC

Tel +1 704 588 7729 Fax:+1 704 588 3986
mdobbs@lindencomansaamerica.com
www. lindencomansaamerica.com
11608 Downs Rd. Pineville North Carolina 28134 (USA)

COMANSA

Construcciones Metálicas COMANSA S.A.

Tel. +34 948 335 060 Fax. +34 948 330 810
comercial@comansa.com / www. comansa.com
Pol. Urbizkain, Ctra. de Aoiz nº 1
31620 HUARTE - PAMPLONA (SPAIN)

COMANSA JIE

Hangzhou Comansa Jie Construction Machinery CO. LTD.

Tel: +86 571 8299 5555 / Fax: +86 571 8299 6555
andy.huang@comansajie.com.cn
www.comansajie.com.cn
Jingjiang, Xiaoshan, Hangzhou P.C. 311223 (CHINA)

series tower cranes. In the late 1970s it was a design feature also found in the Liebherr HC-K series and in the Peiner SKK140. Today the concept is revived in the Chinese-built DZQ200 and ZTQ240. The articulated saddle jib crane offers advantages for cooling tower construction:

To increase concrete delivery, Elba-Kaiser developed concrete distribution equipment connected with cooling tower cranes, like this early version for a HBK150.1

- Thanks to the articulated jib the crane can simply climb back down through the cooling tower when construction is finished and dismantling can be done as easily as erection at the lowest climbing stage.
- Compared to conventional saddle jib cranes fewer tower sections and less anchorage is needed because the upper part of the cooling tower can be reached by articulating the jib up to its steep angle position.
- In the articulated working condition only a minimum of crane components are exposed to the wind so the anchorage-free tower height is increased.
- The load is always being efficiently moved horizontally the same as it is with a conventional saddle jib tower.

In Europe articulated saddle jib crane manufacturing has ceased but this crane type is still built in China by, for example, Zhengzhou Kerun under the name DZQ200 with 8 tonne maximum capacity. Capacity is 3.5 tonnes at the maximum radius of 58 m

- Most of the outreach variation is done by the trolley instead of the luffing jib mode so the articulated jib crane works faster than any conventional luffing jib crane.

Despite these advantages, articulated jib cranes have been a rarity on recent cooling tower projects due to their expensive design, limited maximum outreach of 60 m and the fact that they cannot be converted into a low cost standard crane after the cooling tower project is finished. >

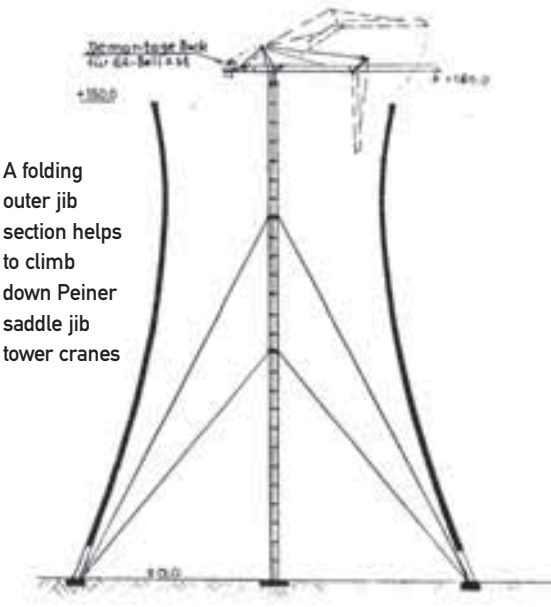
For the Potain MD series a working platform with a parallelogram-like holding device was developed to disconnect and fold jib sections on the standing crane

Tower milestone

Elba Kaiser articulated jib tower cranes set milestones in cooling tower construction. Lots of concrete is needed for large cooling tower shells, especially in the base. To deliver this Elba Kasier developed an articulated concrete delivery boom with 63.3 m maximum outreach for the cooling tower of the Mühlheim-Kerlich power plant in Germany. It rotates around the base tower section of an HBK150.1.

In the 1980s an HBK160 was delivered with a free standing under hook height of 132 m thanks to the application of external tower sections at the base. it allowed construction of a 90 m diameter and 120 m tall cooling tower without anchorage.

For France, Peiner delivered this specially modified SK500 with folding outer jib



A folding outer jib section helps to climb down Peiner saddle jib tower cranes

For the construction of a super-sized cooling tower in the former Soviet Union, with a lower diameter of 164 m, a height of 180 m and an upper diameter of 100 m, Elba Kaiser developed a new multiple crane concept. First, two travelling HBK160s were erected inside the cooling tower operating on a circular track up to 100 m height. One of the cranes had additional concrete boom at the machinery platform, moved by the crane's lifting hook to the required position. It allowed the concrete capacity to be increased up to 50%. At the construction height of 100 m the concreting crane was dismantled. The second crane was relocated to the centre of the cooling tower where it operated stationary with only two guying levels with a tower height of 168 m and an under hook height of 194 m.

Larger diameter cooling towers led to

For large diameter cooling towers, instead of one central crane, two had to be used, as demonstrated by the Potain series 8000 cranes. The cranes were installed at the edges of the shell and both the jib and the counter jib had to be dismantled in the air to allow the cranes to be climbed down inside the finished cooling tower

a renaissance of saddle jib tower crane application in the early 1980s. Jib length of more than 60 m and increased tip load capacity for concrete delivery can be realized. To dismantle the long jib of the crane stationary inside the cooling tower, however, demanded special features.

French cool

Peiner delivered an SK500 to construct four cooling towers in Cruas, France. By means of three sets of eight anchoring ropes a 167 m final hook height was realized. At the maximum radius of 66.8 m a 5.2 tonne lifting capacity and a maximum hoisting speed of 180 m/min allowed fast concrete delivery.

To climb down again after topping out, the basic jib had to be raised by the hoisting winch to an angle steep enough to allow the outer jib to swing down with the aid of a second A-frame without touching the cooling tower shell. To keep the crane balanced during that procedure, counterweight blocks had first to be lowered by an assistance winch system.

In 1962 Peiner presented additional dismantling devices consisting of two A-frames mounted at the back and the front of the tower head to fold down the jib and counter jib after the crane had climbed high enough over the cooling tower shell.

At the end of the 1970s Potain delivered a number of 8000 series cranes for cooling tower construction at nuclear power stations. To bring down the saddle jib cranes with long jib arrangements, a special derrick was attached to the front trolley, moving into the back of the jib tip section to be dismantled. The jib section is lowered to the ground using the crane's hoisting rope.

For jib removal, counterweight also has to be dismantled to keep the crane in balance. As soon as enough jib sections are dismantled to swing the jib down inside the edge of the cooling tower, additional A-frames connected with the tower head are used to fold down the remaining jib and, if required, even the counter jib at the back of the machinery platform.

The crane can then climb down while removing its tower sections through the winch hoist on the machinery platform and the hoisting line reeved over a pulley at the A-frame held by the tower head. Potain >

Guy anchorage of the Liebherr 280 EC-H

has developed an additional trolley-like working platform for the MD series with a parallelogram-like holding device for the disconnection and folding of jib sections which are then lowered by the crane's own hook.

In Germany

Most large scale cooling towers in Germany are built with a special version of the Liebherr 280 EC-H crane. The jib has to be lowered section-by-section after the cooling tower has topped out, before the jib is short enough that the crane can climb down again inside the cooling tower. In this case jib sections are prepared with an A-frame on each section that has to be dismantled in the air to lower it down on an assist rope. Next, the jib section is folded down before being lowered by an equaliser beam attached to the crane's hook.

Flat top cranes are simpler to de-rig than cranes with pendant jibs. 1976 Linden Alimak invented a jib section dismantling device consisting of a carry cradle with counterweight in the form of a three-armed lever. It was attached to the hook block and moved under the jib where it acts like a derrick frame at which the front jib section is connected before been lowered hanging at the cradle.

A 165 m high cooling tower with 104 m diameter built for the Lethabo power station in South Africa with the help of an Elba Kaiser HBK160 articulated jib tower crane

BKT discussed a hydraulically operated luffing device for the outer half part of flat top saddle jib cranes. This concept has yet to be realized. It would require careful adaptation of the jib design considering the effect of high wind loads on the raised jib end.

The growing number of top slewing luffing jib crane applications are providing advantages, especially, for medium sized cooling towers:

- The reliable crane design allows conversion of no-longer-required outreach in hook height and, therewith, reduce the required tower height dramatically.
- Most of the crane structure is covered by the growing shell to extreme heights, leading to a reduced wind load on the crane and adding to the free standing height of the crane tower. When exaggerating the wind exposition of a crane it is assumed that wind will blow at 15 degrees into the shell. It should be remembered that at the highest crane position only the boom of the luffing jib crane is exposed to the wind when topping out the cooling tower.
- The crane can be easily climbed down through the narrow part of the cooling tower by luffing the jib.

A disadvantage of the design can be the slower working speed than a saddle jib crane and, in cases of a narrow cooling tower diameter, the dismantling of the jib in a steeper position than normal. It may be a sound alternative to use a long boom saddle jib upper crane at the beginning of the cooling tower construction before changing over to a luffing jib upper crane on the same tower.

Cooling towers are tall structures and this causes difficulties for anchoring the crane. To reduce impact on the concrete pouring the number of anchor cables should be kept to a minimum. Until the 1980s they were connected horizontally to the cooling tower shell, reducing the required tension force.

In that case, however, the forces transmitted to the shell must be kept within tight limits because the drying time of the concrete must be considered. This explains why cable stays leading vertically to the foundation of the cooling tower, which are generally used today, have less impact on the construction process but require high tension forces, stronger ropes and, generally, separate foundations. To avoid any impact on the concrete shell construction process a free standing tower system is preferred.

For the giant lignite-fired power plant Neurath, Germany, Liebherr provided a special version of its 280 EC-H with 192 m hook height and 70 m jib with 3 tonne tip load capacity, assembled on a stationary 500 HC undercarriage. To reduce the required rope anchors to two levels a combination of 500 HC and 256 HC towers is used

With the help of an equaliser beam, lifted by the crane hook, the fold-down jib section is attached by the rigger standing safely on a purpose-built platform inside the jib section

Real jib shortening started with the folding of the jib head section after removal of the top chord connecting bolt

After removal of the bottom jib connection bolts, the fold-down jib section is trolleyed inwards over the cooling tower and lowered to the ground

Current towers

It used to be that an expensive outer tower system surrounding the standard tower was employed. Nowadays different tower systems can be combined for impressive heights by using adapter frames. Wilbert, for example, rigged a WT205L e.tronic with 42 m jib on 112.95 m free standing tower for an impressive maximum under hook height of 159.45 m. Reaching the full height with the assistance of a mobile crane offers the benefit of no interruptions >

The last jib section being dismantled before the crane can climb down inside the cooling tower

For the cooling tower project at the Belchatow plant in Poland, a Linden 8000S with the extraordinarily large 5.5 x 5.5 m square tower system is in use. The crane uses the same climbing cage to reach 198 m under hook height and only needs two rope anchorage levels, one at 108 m and one at 160 m. The crane is shown with balance weight to insert another tower section. Thanks to the tower system, the Linden 8000S can be climbed with 16m tower height, reducing the required mobile crane capacity for the large capacity tower crane that has 10 tonne maximum load at 58m radius

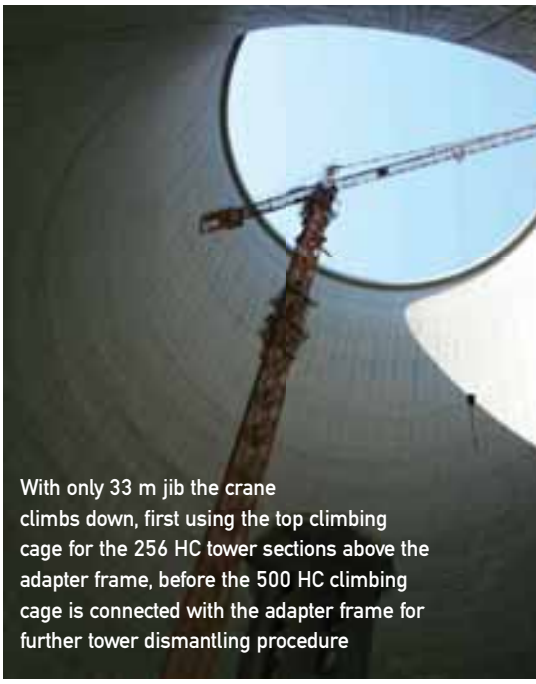
by the climbing procedure during the entire construction period of the cooling tower shell.

In addition, the most economic tower system combination can be used because there is no need to consider a climbing cage application. In this case Wilbert, for example, combined three tower sizes using two adapter sections to reduce the square size from 3.3 x 3.3 m to 2.4 x 2.4 m and then to 2 x 2 m for the remaining third of the crane tower.

To avoid long hook falls and to minimise the amount of crane structure exposed to wind at the beginning of the construction project, the crane can be climbed in steps to the final height. In general, for each change in the tower system another climbing cage must be used. This usually means that the crane has two climbing cages. In the first construction period the crane is raised by the climbing cage jacking the large base tower sections. The upper crane is resting on an adapter frame fitted with base standard tower elements surrounded by the corresponding climbing frame to be jacked.

When the maximum free standing height for the base tower system is reached, the upper climbing cage is used to climb the crane higher on standard tower sections. Following this principle Wolff is raising a Wolff 180B with 50 m jib at a cooling tower construction site at Boxberg in Germany to a free standing tower height of 126.7 m. In this configuration the free standing Wolff 180B luffing jib crane will offer the impressive under hook height of 165 m at 35 m radius. The strong TV33 with 3.3 x 3.3 m square tower system is used as a base.

Special foundation requirements were avoided thanks to the 12 x 12 m stationary undercarriage loaded with 300 tonnes of central ballast.



With only 33 m jib the crane climbs down, first using the top climbing cage for the 256 HC tower sections above the adapter frame, before the 500 HC climbing cage is connected with the adapter frame for further tower dismantling procedure

Franc Jost has just finished a conceptual study for his all new Jost flat top luffing jib tower crane JTL 208.12 for a cooling tower project with 150 m shell height. The relatively low moment forces created by the light weight 200 tonne-metre class crane upper with moving counterweight system means that a combination of six TH20.4 and 12 TH20.3 tower system (2.24 x 2.24 m) is claimed to be sufficient for the free standing version.

In addition, the hydraulically operated luffing rams and the jib geometry add to the wind resistance of the unique crane >

design. The economic way to use free standing standard upper tower cranes for cooling tower construction is restricted to about 150 or 170 m cooling tower height. Luffing tower cranes are used to convert outreach into lifting height as soon as the maximum free standing height is reached.

To construct taller cooling towers of about 180 m and ones with a larger base diameter, generally, a saddle jib crane with 70 m jib is used, requiring special de-rigging devices. By combining different tower systems in this case it may be possible to reduce the required anchor cable levels from three to two for cranes with an under hook height of 190 to 200 m.

For a power station under construction in Datteln, Germany, Wilbert supplied a WT300 e.tronic with an all new anchoring system. First, the flat top crane is working as a free standing unit with 70 m radius up to 63.23 m hook height to serve the large base diameter of 126.8 m. Then the jib is shortened using a mobile crane to 45 m and the crane climbs up to 99.82 m hook height free standing.

Wilbert WT300 e.tronic flat top tower crane with 70 m jib to serve the 126.8 m diameter base of a new cooling tower for a power plant in Datteln, Germany. The crane is freestanding on a combination of 2.4 x 2.4 m and 2 x 2 m tower systems. It will reach 190.6 m under hook height when topping out the cooling tower

Liebherr 180 HC-K articulated saddle jib climbing crane on its first job; construction of the 150 m high cooling tower in Gösgen, Switzerland in 1976. Note the horizontal rope anchoring system that had to be used at three levels

Two anchoring levels have to be rigged to reach the maximum under hook height of 190.6 m. In contrast to ordinary rope systems Wilbert uses a strand jack anchorage system with eight strands connected with jacks anchored at the foundation of the cooling tower. Before the WT300 is climbed down inside the 74.36 m narrow upper shell, Wilbert will use its new jib self-dismantling device to shorten the saddle jib.

Larger future

To build larger structures it might be that multiple tower crane concepts may become necessary. As an example, three self climbing luffing jib climbing cranes could be placed on the edge of a triangle-like tower system. These would be connected by horizontal bracing beams to gain extreme free standing tower heights and, at the same time, provide coverage of the large ground diameter of more than 160 m. ■

This Wilbert WT205L e.tronic was rigged directly to the maximum free standing height of 112.95 m tower height for a cooling tower project in Germany with the assistance of a Grove GTK1100

SOMETIMES INNOVATION COMES IN A COMPACT PACKAGE.

PowerCat moves loads on unpowered skates up to 25 tons.

PowerCat

® Made in Germany PowerCat.biz

A 50 kg tool that is easily moved to site and attached instead of a towbar.

Push and pull function with 4 speeds
240 V/ 50 Hz or 110 V/60 Hz versions available.

Designed, manufactured and guaranteed by:
Klaus J. Scholpp – Lifting Consultant GmbH
Gerokstrasse 8
D 70188 Stuttgart
Germany
See more at **www.powercat.biz**
Dealer inquiries welcome!

Chile gets tallest in the South

A pair of luffing jib tower cranes is vital to the construction of South America's tallest tower. *IC* reports

Liebherr top-slewing luffing jib tower cranes work on the 694,000 square metre Costanera Center in Santiago, Chile

What will be Latin America's tallest tower, the Torre Gran Costanera, is under construction using a pair of luffing jib cranes.

The Liebherr luffers are two of 14 from the German manufacturer helping to construct the US$500 million, 694,000 square metre Costanera Center in Santiago, Chile. Centrepiece of the project is the 70 floor, 300 m tall Torre Gran Costanera.

Project owner Cencosud purchased 12 of the 14 cranes from Maquinarias Cruz del Sur SA (MCS), Liebherr distributor in Chile since 2003. MCS has a rental division that supplied the other two units.

The project includes: two hotels, two department stores, office accommodation and a shopping mall with more than 300 shops and a food court.

Initially, Cencosud considered using three tower cranes for the Torre Gran Costanera, explains project director Bernado Hopp but, Liebherr demonstrated that with the correct deployment, two cranes could be just as effective.

According to Hopp the joint decision to use Liebherr HC-L luffing jib cranes for the tallest tower was made to save space. Hopp adds, that their small slewing radii and raised jib angles of 15 to 70 degrees, even when out of service, make the cranes particularly advantageous on sites where space is restricted and there are several cranes with overlapping slewing areas.

Lifting at speed

Both luffing jibs are Liebherr HC-L models. One, a 335HC-L, was anchored to the outside of the tower and will climb to its full height. It has a 55 m jib with 5,500 kg tip load, and a maximum hoisting speed of 170 m/min.

The second, a 224HC-L, is in the elevator shaft and will eventually be dismantled and removed using the 335HC-L. Jib length is 55 m, tip load is 3,200 kg and the maximum hoisting speed is 240 m/min.

Hopp says that the lifting speed was a vital factor on such a large project "because >

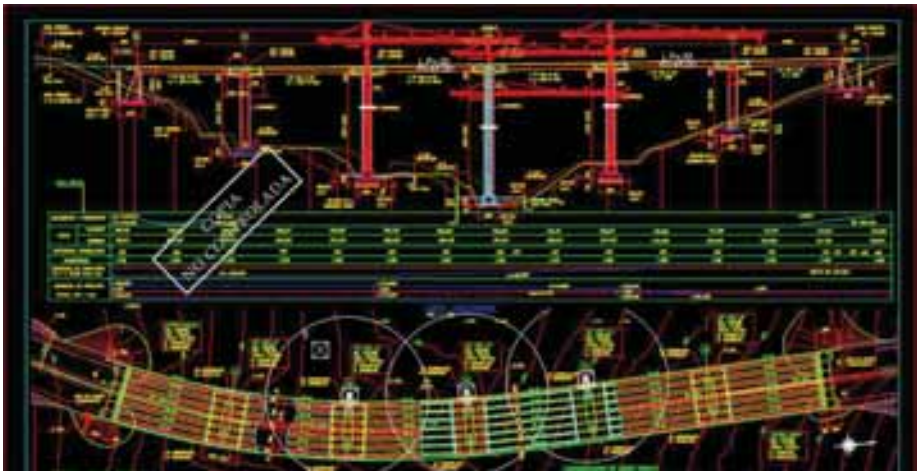
a crane with even a slightly slower lift speed or lower lift capacity would eventually lead to a much longer construction period on such a tall tower."

Lifting speeds and jib lengths were also important factors in selecting the cranes for the other elements of the project. Seven are top slewing models, designed for high load capacity at full reach. Three are 200 EC-H10 Litronic models, with jib lengths of 60 m, tip load capacities of 2,650 kg and a maximum hoist speed of 100 m/min. Two are 200 EC-H10s, with a 55 m jib length, a 2,850 kg tip load, and a 100 m/min hoist speed.

The remaining two cranes are 154 EC-H10s, one with a 55 m jib, the other a 60 m jib, and 1,850 and 1,400 kg tip loads, respectively. Both units have a maximum hoist speed of 100 m/min.

Buy-back option

The three other cranes belonging to Cencosud are 90 EC-B6 flat tops with 50 m jibs and 1,500kg tip load. Maximum hoisting speed is 70 m/min.



One of the two Liebherr cranes supplied from the MCS rental fleet is a flat top 99 EC with 50 m jib, 1,600 kg tip load and 103 m/min hoisting speed. The second rental unit is a top slewing 98.3 HC with 50 m jib, 1,500 kg load at jib end and 114 m/min hoist speed.

Chief executive officer of MCS, Raul Montt, says that the two rented units are on the shopping mall construction, which will be the first element of the project to be completed. As soon as the construction work is done, they will be removed.

Montt says that a buy-back option included in the contract for the 12 cranes could see the two luffing jib cranes being re-exported, as their size would give them a limited market in Chile. The other 10 units will join the MCS fleet.

Montt adds that the longest unscheduled shutdown of a crane would be no more than 45 minutes. Routine maintenance on the cables, pulleys, gears and other moving parts is every 200 hours, to help ensure continual functioning at 100 % efficiency.

MCS also uses the Austrian Save A Life (SAL), safety system in which a safety harness is used to bring an operator to ground if they get into difficulty. ■

TRUST THE WORLD'S **STRONGEST** SLINGS TO LIFT THE MOST **DEMANDING** LOADS.

SLINGMAX® RIGGING SOLUTIONS

Whatever lifting job lies ahead - whether at a construction site, logistics center or even offshore - there's one way to make sure all goes well ... use Twin-Path® K-Spec® slings with Dyneema®, the world's strongest fiber™.

Weight-for-weight, Dyneema® high performance polyethylene fiber is 15 times stronger than steel. Its superior strength-to-weight ratio makes it ideal for a wide range of applications. Twin-Path® K-Spec® slings with Dyneema® are a fraction of the weight of similar diameter slings from steel wire.

They are also less than half the weight and bulk of equally strong polyester or nylon slings.

Find out more about Twin-Path® K-Spec® slings with Dyneema® by calling 1-800-874-3539 or visiting **www.slingmax.com**.

WITH Dyneema®

TopLift

The tenth annual TopLift contest is here. *International Cranes and Specialized Transport* asks readers to pick their favourite from a selection of 10 lifting projects

ENTRY 1

Tower test

EQUIPMENT USER: Sarens Transrig
LIFTING EQUIPMENT USED: 8 SMLTs
LOCATION: Norway

Sarens Transrig in Norway loaded out the 10,700 tonne topside of the first Aker H.6-e drilling rig, Aker Spitsbergen in Norway using 448 lines of SPMT. Immediately after the load-out, the barge was positioned in an 8 SMLT (Sarens Modular Lifting Tower) set-up and the module was lifted to a height of about 34 m. The hull was then brought under and the deck was mated with it.

ENTRY 2

Bridging Spain

EQUIPMENT USER: Abnormal Load Engineering (ALE)
LIFTING EQUIPMENT USED: HLS200 strand jacks
LOCATION: Albacete, Spain

ALE was tasked with lifting the 500 tonne arched centre section of the Vicaria Bridge. The operation was carried out using an auxiliary steel structure comprising beams supported over each transverse girder of the lateral spans. Four 200 tonne capacity HLS200 strand jacks were installed on the auxiliary sections for the 40 m lift.

ENTRY 3

Crane forest

EQUIPMENT USER: Mammoet
LIFTING EQUIPMENT USED: PTC 1 and MSG II gantry system
LOCATION: Rabigh, Saudi Arabia

Mammoet installed an 880 tonne regenerator on a 15 m-high foundation, using the MSG II gantry lifting system (in yellow). On the same site, the 1,600 tonne capacity PTC 1 lifted a VDU column weighing 825 tonnes onto a 26 m pedestal.

ENTRY 4

Stallion power

EQUIPMENT USER: Meade Crane Services
LIFTING EQUIPMENT USED: Grove GMK6300
LOCATION: National Museum of Ireland, Dublin

The world's largest Viking ship, the 13 tonne *Sea Stallion* from Glendalough, was lifted into the museum's courtyard.

For this Meade chose a Grove GMK6300, with 100 tonnes of counterweight, a 23 m main boom, 45 m luffing jib and a Modulift spreader system.

ENTRY 5

Landmark lift

EQUIPMENT USER: Kran Waryło
LIFTING EQUIPMENT USED: Liebherr LTM 1500-8.1
LOCATION: Szczecin, Poland

The original spire, sitting atop the 111 m high Church of Saint Jakub, was destroyed in 1943 during the Second World War. More than 60 years later Kran Waryło replaced the 24 tonne spire using its 500 tonne capacity Liebherr LTM 1500-8.1. Boom length for the job was 57.7 m, with a 63 m lattice jib.

2008

carried out over the last year. To register your vote, please complete the form on page 54 and fax or post it to us. Alternatively, e-mail your vote to: toplift@khl.com

ENTRY 6

Tough terrain

EQUIPMENT USER: Tecmaco Integral
LIFTING EQUIPMENT USED: Terex Demag CC 200, Liebherr LTM 1120
LOCATION: San Juan, Argentina

The world's highest wind turbine was placed at Veladero's mine in the Cordillera de Los Andes, 4,200 m above sea level. Temperatures can hit -35°C at night, while winds reach 150 km/h. A Terex Demag CC 200 crawler erected the turbine.

ENTRY 7

New generation

EQUIPMENT USER: Ainscough
LIFTING EQUIPMENT USED: Liebherr LTM 1500
LOCATION: Somerset, UK

Ainscough used a 500 tonne capacity Liebherr LTM 1500 mobile crane to erect the first wind turbine in the UK county of Somerset. It was rigged with 135 tonnes of counterweight and guyed main boom for the tower sections, the heaviest being 53 tonnes. A 42 m luffing fly jib was added to lift the 2 MW turbine's 51 tonne generator to 65 m.

ENTRY 8

Shipyard success

EQUIPMENT USER: Yantai Raffles Shipyard
LIFTING EQUIPMENT USED: Fixed dual-beam gantry
LOCATION: China

The world's first fixed dual-beam gantry crane set a world record when it lifted a 20,133 tonne launching barge to a height of 30 m at the Yantai shipyard in China, according to its owners Yantai Raffles Shipyard (YRS). It took place during an official launch of the 20,000 tonne capacity gantry, named *Taisun*, this year.

ENTRY 9

Platform power

EQUIPMENT USER: Aguado
LIFTING EQUIPMENT USED: Manitowoc Models 1800 & 7000
LOCATION: Cabezuela Bay, Cadiz, Spain

Rental company Aguado used a Manitowoc Model 18000 to help construct an offshore platform. It carried out 10 major operations, the largest of which was a 350 tonne lift of three turbo-generators. It was rigged with 61 m main boom, 48 m luffing jib and Max-Er attachment, with 210 tonnes of counterweight. It was supported by a Manitowoc 7000.

ENTRY 10

High living

EQUIPMENT USER: Fagioli
LIFTING EQUIPMENT USED: Lifting towers, box girders, skidding tracks
LOCATION: Spain

Fagioli lifted the 1,300 tonne living quarters of a concrete offshore Adriatic LNG receiving and re-gasification terminal into position, using two towers, two box girders and two skidding tracks. The 180 m long, 88 m wide and 47 m deep terminal will be the first of its kind in the world. Once constructed, the casting basin was to be flooded and the terminal transported by sea from Spain to Italy 15 km from the Po river.

TopLift 2008 voting form

Select your favourite lift from this year's entries by ticking one of the entry boxes and then fax, post or e-mail your entry with your full name and address details as requested at the bottom of this page

ENTRY 1
Tower test
EQUIPMENT USER:
Sarens Transrig

ENTRY 2
Bridging Spain
EQUIPMENT USER:
ALE

ENTRY 5
Landmark lift
EQUIPMENT USER:
Kran Waryto

ENTRY 8
Shipyard success
EQUIPMENT USER:
Yantai Raffles Shipyard

ENTRY 3
Crane forest
EQUIPMENT USER:
Mammoet

ENTRY 6
Tough terrain
EQUIPMENT USER:
Tecmaco Integral

ENTRY 9
Platform power
EQUIPMENT USER:
Aguado

ENTRY 4
Stallion power
EQUIPMENT USER:
Meade Crane Services

ENTRY 7
New generation
EQUIPMENT USER:
Ainscough

ENTRY 10
High living
EQUIPMENT USER:
Fagioli

YOUR DETAILS

Your name: _____

Company name: _____

Country in which you are based: _____

Tel: _____

Fax: _____

e-mail: _____

FAX: +44 (0)1892 786257
E-mail: toplift@khl.com
POST: TOPLIFT 2008
International Cranes and Specialized Transport
Southfields, Southview Road, Wadhurst,
East Sussex TN5 6TP, UK

NOTE: To ensure a fair competition all entry forms must be completed in full. Employees of the companies entered in TopLift 2008 are *NOT* allowed to vote.

CLOSING DATE FOR ENTRIES: FRIDAY 31ST OCTOBER 2008

... building World's future

Road equipment · Concrete · Lifting, transport and handling equipment
Quarries, mining and recycling · Earthmoving · Temporary works equipment
Auxiliary equipment for construction

www.anmopyc.es

ICEX

España

Fondo Europeo de Desarrollo Regional

Western wonder

Business is booming in Perth, Western Australia, to the benefit of local crane companies. Two of these are D&G Hoist and Crane Hire and Northern Suburbs Crane Hire, tower and mobile crane rental houses, respectively. *IC* contributor RICHARD KRABBENDAM reports

Potain tower cranes from D&G Hoist and Crane Hire's fleet at work in the city of Perth, Australia

Former New Zealander Gino DeCesare founded D&G Hoist and Crane Hire back in September 1998 with long-time friend David Keating. The pair started out with a self-erecting Potain HD-40 tower crane, offering a maximum capacity of 4 tonnes and a 35 m jib.

Since then the company has increased its turnover to about AU$35 million (US$30.4 million) and has 89 employees. D&G Hoist's success is based on the constant investment of new cranes and selling machines that are more than five years old. In this way, they have been successful in keeping overheads and maintenance costs to a minimum, while supplying their customers with the latest cranes that are no more than 2.5 years old. Due to the young age of the fleet the cranes have very little downtime.

Potain appointed D&G as its official importer for Western Australia (WA) 10 years ago and the company recently sold its 100th crane. Seventy of these cranes are owned and operated by D&G itself, while 20 of them were sold directly to their customers along with additional services. They include servicing, erection and dismantling and, in some cases, supplying the operator. Some 10 cranes have been sold outside Australia, with one of them going to the Maldives.

Competitive

D&G is also the authorised Potain distributor for Australia's Northern Territories. Initially, Potain supplied the familiar hammerhead tower cranes to Australia but, to be competitive with local tower crane manufacturing giant Favco, D&G also offers luffing jib tower cranes.

Favco continues to produce mainly diesel driven tower cranes, while Potain models are fully electric. In cases where

Gino DeCesare, co-owner of D&G Hoist and Crane Hire and Northern Suburbs Crane Hire with one of Northern Suburbs' Terex Demag all terrains

the main power supply is not sufficient, D&G can provide diesel generators. Electric cranes have less environmental impact at the point of use and are gradually becoming more popular. Main advantages are less noise and pollution, no refuelling is needed and there is less maintenance, according to D&G.

The most popular Potain tower cranes in the D&G fleet include the MR-615; MCR-225, with a 14 tonne capacity and 55 m jib that can lift 2.15 tonnes at the tip; and the MR-295 H-20, with a 60 m jib and 20 tonne lift capacity.

Big share

Gino DeCesare estimates that the company has an 80 to 90% share of the Perth tower crane rental market and claims it is the biggest of its kind in Western Australia. D&G's main competitor is Perth-based Toms Cranes, which operates Favco towers.

The utilisation rate of D&G's rental fleet is about 80% with average rental periods ranging from 8 to 24 months per unit, DeCesare says. In addition to the Potain dealership, D&G has a licence for Preston work platforms and has between 50 and 60 units. The company also imports concrete buckets from Italy as an additional service.

A major contributor to D&G's success is the hands-on approach of DeCesare and Keating. Their goal is to supply the best service to their clients and keep the cranes running. This explains why so many luffing jib cranes are now used in Perth, with their advantage over hammerhead cranes. In constructing high-rise buildings with a limited site area, the luffing jib can access narrow spaces between buildings more easily then a hammerhead tower crane.

Expansion

In 2003 Keating and DeCesare acquired mobile crane rental business Northern Suburbs Crane Hire to meet the increasing need to erect and dismantle their own rental tower cranes.

The D&G philosophy has been incorporated into Northern Suburbs, with old cranes being sold off and replaced with the newest and latest Grove and Terex Demag models. Again, this approach means low overheads, low maintenance costs and satisfied customers, DeCesare explains.

Northern Suburbs' 16-strong fleet includes a 220 tonne capacity Grove GMK6220, a 160 tonne Demag AC 160-2, two 130 tonne capacity Grove GMK5130s, three 80 tonne Demag AC 80s, two 55 tonne Grove GMK3055s, a 130 tonne Grove GMK5130-2, a 100 tonne Grove GMK4100, a 55 tonne Tadano and three Australian manufactured Franna pick-and-carry cranes. The largest and newest addition to the fleet is a new 350 tonne capacity Terex Demag AC 350 all terrain.

Prices of machinery have drastically increased, says DeCesare. "Two years ago we bought a 15 tonne Franna pick and carry crane for AU$200,000 (US$175,000), now that same crane is costing AU$300,000 (US$262,000)."

Despite the price increases, Northern Suburbs Crane Hire replaced all its cranes with new ones in the three years from 2003 to 2006, creating a fleet with an average age of two years, which is based at the company yard in Malaga, just north of Perth.

Transport services for Keating and DeCesare's equipment are subcontracted to local transport companies but, the author speculates, the next phase of expansion could see D&G Hoist & Crane Hire adding a transport division in the near future. ■

One of Northern Suburbs Crane Hire's Terex Franna pick-and-carry cranes at the depot in Malaga

A range of tower and mobile cranes owned by Gino DeCesare and David Keating's two crane companies


Steel wire rope:
in our genes
BRIDON, the world leading specialist in the manufacture of wire and rope solutions, delivering reassurance through four generations of experience.
Our superiority relies on continuous innovation, quality assurance and technical expertise throughout the organisation and along the supply chain.
Advanced DNA for your system.
The Difference is
BRIDON
www.bridon.com
USA
Tel: 1 800 521 5555
Email: marketing@bridonamerican.com
United Kingdom
Tel: +44(0)1302 322300
Email: sales@bridon.com
Germany
Tel: +49 211 687 82211
Email: info@bridon.de

The toe coupling of the PowerCat is attached to a set of skates

Moving made easy

The PowerCat is an innovative new product from Lifting Consultant GmbH, in Germany. It is designed to move loads where a forklift or other conventional towing device is less practical. *IC* reports

In the smaller rigging category, machinery moving is predominantly done using hydraulic jacks, skates and forklift trucks. But there are situations in which their weight, size or, even, their availability, means that such equipment cannot be used.

To solve the problem, Klaus Scholpp at Lifting Consultant GmbH in Germany developed the PowerCat. It is a simple, versatile, efficient and small tool, attachable to a set of skates, that can push and pull 25 to 55,000 pounds (11.3 to 24,948 kg), Scholpp explains.

Numerous tests were carried out with a range of prototypes, many of which were discarded, explains Scholpp. The new MTC 25 model, now available to purchase, underwent more than three years of rigorous testing by professional riggers and, even then, improvements were needed, adds Scholpp.

"With a mere 50 kg dead weight PowerCat is a midget compared to the loads it can push and pull. And it is easily transported in a van. Compare this to a forklift truck, which needs a truck and/or trailer, not to mention the investment. I am so convinced of the design and craftsmanship of PowerCat that I grant a 24 month warranty."

Continuous operation

PowerCat has a high performance electric motor, with a deadman switch, that is rated for continuous operation under full load. There are four pre-selectable speeds from 2 m/min to 9 m/min, with torques ranging from 268 Nm to 1,123 Nm. It has forward and reverse and there is a push and pull function.

The 160 mm diameter drive wheels are fitted with high performance tyres for maximum grip. The toe type coupling device can be changed and it is height adjustable to give the best fit for existing skates and loads. Powercat moves loads on unpowered transport skates up to 25 tonnes. ■

SPECIFICATIONS

OVERALL LENGTH	1,890 mm extends 500 mm
WIDTH	620 mm
HEIGHT WITHOUT TRANSPORT DOLLY	250 mm
WEIGHT	50 kg
ELECTRIC DRIVE	240 Volts/50 Hz Power input 8 Amps, typically 1,050 Watts
4 PRE-SELECTABLE SPEEDS	from 2 m/min to 9 m/min
TORQUE RANGE	from 268 Nm to 1,123 Nm

Clear concerns

Major tower crane accidents in the US this year and four in the UK since 2000 have prompted fresh calls for more wide-ranging certification. EUAN YOUDALE looks at the levels of certification required for crane operators in both countries

The issue of certification was at the top of a list of items under discussion at a meeting between officials of the White House Office of Management and Budget (OMB) and industry representatives in the US.

At the White House OMB offices, the National Commission for the Certification of Crane Operators (NCCCO) appealed to the OMB to approve authorisation of the consensus document developed by the OSHA Crane and Derricks Advisory Committee (C-DAC) in August 2004. The appeal was coordinated by the Specialized Carriers & Rigging Association (SC&RA), which believes that new rules based on the C-DAC suggestions would provide a badly needed revision of the current crane requirements developed almost 40 years ago.

Industry professionals feel the current standard is not adequate or user-friendly. Before the meeting Doug Williams, president of Buckner Companies, said the existing standard is challenging to use because it references a number of other standards, whereas the standard proposed by C-DAC is all-inclusive and clearly spells out requirements. The masses of smaller businesses in the industry simply lack the resources to research and interpret the requirements scattered over many documents, according to Williams, who served on C-DAC.

At the meeting Graham Brent, NCCCO executive director, noted that 21 of the 23 members of C-DAC supported the operator certification provisions and pointed out that they had already been unanimously approved by OSHA's Advisory Committee on Construction Safety and Health (ACCSH).

Reluctant to train

"Much of the industry that uses cranes already certifies their operators," Brent said, "but some employers are reluctant to do so for fear their lack of training will result in their failing tests." In many cases a stated opposition to certification masked an underlying reluctance to train, Brent said. "A federal requirement would bring those employers who are reluctant to train and test their employees into line with industry standards."

He noted that an additional six states had enacted crane operator certification requirements in the four years since the C-DAC report was completed. At least six more states and several cities had introduced legislation or were in the process of drafting it.

"It's clear that nationwide mandatory crane operator certification is coming," Brent said. "The only remaining question is: Will this be a state-by-state (city-by-city, county-by-county) process, or a national programme that will be uniform for employers everywhere?" Did it really make sense, he asked, for each state, county or city to repeat the work that C-DAC had already done.

While certification provided the proof that training had been effective

MANDATORY TRAINING

In light of the recent high incidence of crane-related accidents across the US, construction contractor Flintco, Inc. has a mandatory training programme for all its employees serving as signal persons and riggers. Using what Flintco says is one of the top three ranked safety programmes in the country helps complement the company's efforts to keep employees safe.

The first half of 2008 saw an increase in crane-related accidents and fatalities in the US over previous years. During the first six months there were 170 crane-related accidents resulting in 87 fatalities, according to Flintco.

Comparing this with numbers from 1999 – 110 crane accidents and 51 fatalities – the increase in crane accidents and fatalities is alarming. To avoid adding to these statistics, Flintco is taking steps to ensure proper training and certification of all ground personnel working with crane operators.

Of the 15 US states that require licensing, nine require or recognise National Commission for the Certification of Crane Operators (NCCCO) certifications for employees either operating cranes or working on the ground in tandem with operators. Oklahoma may soon follow suit, but Flintco is taking an industry lead by providing signal person and rigger training.

"Flintco is leading the way in signal person and rigging training," said Mark Grimes, division president of Oklahoma City. "We actually started the programme in August of 2007 and have been perfecting it since then. We already have 43 employees that have completed the programme and 19 employees of subcontractors that are buying into the training."

On completion of the programme, employees are trained to American National Standards Institute (ANSI) and Occupational Safety and Health Administration (OSHA) specifications.

SEPTEMBER 18-20, 2008
SHERATON CENTRE TORONTO HOTEL
TORONTO, ONTARIO, CANADA

Specialized Carriers & Rigging Association

2008 CRANE & RIGGING WORKSHOP

IN COOPERATION WITH
CRANE RENTAL ASSOCIATION OF CANADA

Specialized Carriers & Rigging Association

CRANE RENTAL ASSOCIATION OF CANADA
LOCATEURS DE GRUES

60 Years of Excellence 1948-2008

SC&RA'S WORKSHOP IS *THE* CRANE AND RIGGING EVENT OF THE YEAR!

Bring your crane operators, top sales personnel and safety directors. Sessions include:

- Guidelines for Canadian Safety Programs
- Do You Know Your Slings?
- Tower Cranes: Assembly, Disassembly and Jumping
- Preparing for Tandem Lifts
- Working in the Wind
- Ground Bearing for Mobile Cranes

PLUS MANY MORE...

2008 Exhibitor Space is limited. Call (703) 698-0291 to reserve a booth today!

Visit www.scranet.org to register.

Ferrari®

CERTIFIED QUALITY MANAGEMENT SYSTEM ISO 9001:2000
SINCERT DNV

F.lli Ferrari Corporation S.p.A.
Via Pasubio, 3
42022 Boretto (RE) Italy
Tel. +39 0522 48.63.11
Fax +39 0522 48.63.30
E-mail: marketing@flliferrari.it
www.flliferrari.com

TRUCK CRANES FROM 1 to 90 Tm.

(specifically, that crane operators have the requisite knowledge and skill to operate a crane safely), Brent pointed out that C-DAC contains no restrictions on where or how employers source that training.

"Employers are free to train their own employees or hire in trainers of their choice," Brent said. "For those that choose to outsource this process, NCCCO lists on its web site more than 100 training schools nationwide offering crane-specific training, in addition to numerous trade association chapters and union locals.

Setting the pace

In contrast to the US, the UK has a more advanced certification scheme for construction equipment operators on jobsites. Operators are required to carry a red or blue card to show that they have completed the Construction Plant Competence Scheme (CPCS) and, in August 2008, the scheme's requirements were updated. To receive the initial red card, applicants have to carry out a theory and practical test, which, together form the CPCS Technical Test. The theory test has to be passed before the practical test can be taken. The former consists of machine category specific questions designed to check an operator's knowledge of relevant health and safety issues, their role and responsibilities on site, the use of the machine and its operator's handbook. Questions are asked verbally by an approved tester at an official CPCS test centre and the session is recorded.

Once the red card has been received, the operator can work towards an NVQ (national vocational qualification), which, once passed, will entitle them to a red card. Since the beginning of August machine categories have been placed together, meaning the operator of one machine does not have to take a second NVQ to receive a red card to operate a similar machine.

The Construction Plant-hire Association (CPA), along with the Construction Federation (CF), was instrumental in devising the CPCS industry scheme, which is self-regulatory, rather than being set in law.

Improved safety

Colin Wood, CPA chief executive, was also involved with the scheme's predecessor, the Certificate of Training and Achievement (CTA), launched in 1985. "Everyone felt there was a need to sharpen up training and competence and it's definitely improved over the last 25 years. Before that operators were unregulated and could drive machinery without certification. It was a bit like driving a car without a driving licence. Since then there has been a marked decrease in accidents. We are confident that the level of training and testing is now sufficient to provide the level of safety needed on sites."

Speaking about other parts of Europe, Wood adds, "The Dutch have a very advanced scheme, as does France and Germany. But, there are some new members of the EU that could do with an operator's certificate scheme. They will have training in all these countries but it may not be as regulated as it should be."

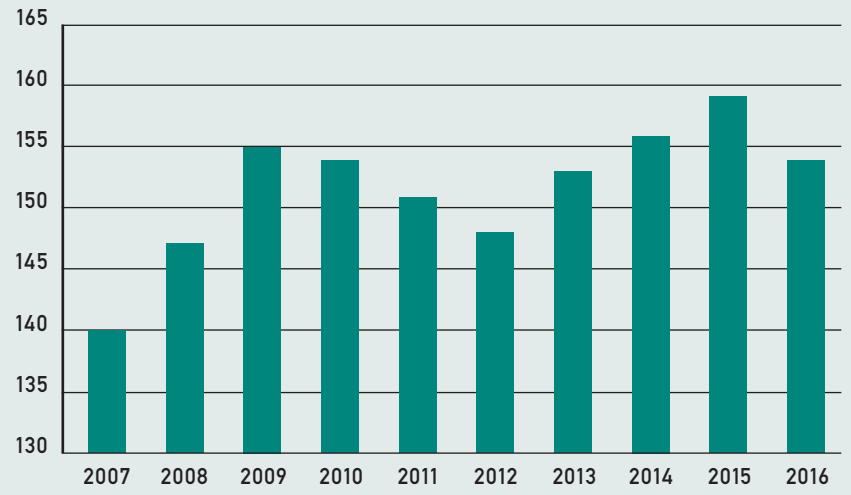
In such a regulated country as the UK, it may be surprising to learn that the drivers of mobile cranes on UK roads were still able to do so with a standard driving licence until the early 1990s, says Wood. They are now required to hold a LGV 2 (light goods vehicle) licence.

The CPA continues to close the gaps in safety and training by producing a wide-range of industry best practice guides, including May's Safe Use of Top Slew Tower Cranes, produced by the association's Tower Crane Interest Group (TCIG) in partnership with the Health and Safety Executive (HSE).

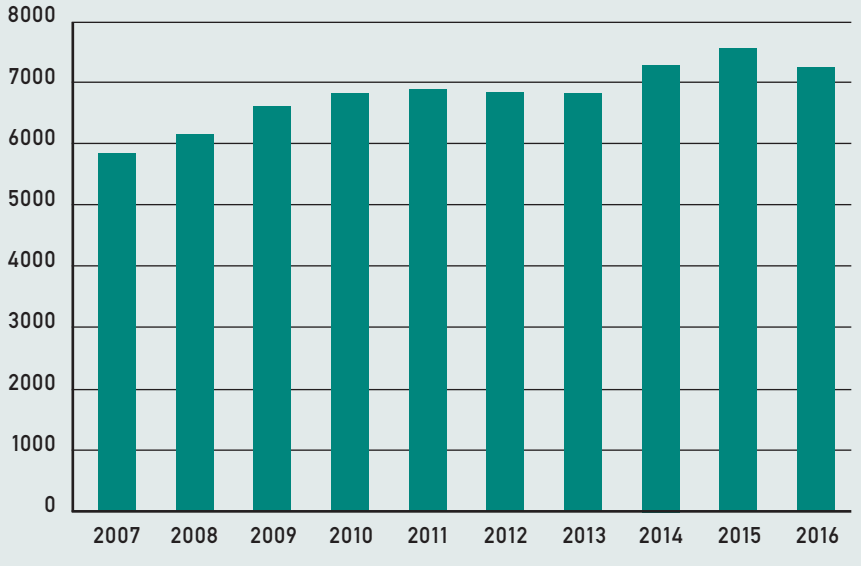
Bridging the gap

Industry groups continue to produce forecasts that substantiate the view that Canada will need to increase the supply of crane and heavy equipment operators and their certification over the next two decades, writes GERRY HUGHES, executive director, Operating Engineers Training Institute of Ontario

CRANE OPERATOR RETIREMENTS



CRANE OPERATORS: TOTAL EMPLOYMENT



Growth in construction has been steady for ten years. According to the Construction Sector Council (CSC), national employment in the entire construction industry rose by 39% from 2002 to 2007. Put in perspective this means that, while the total Canadian labour force increased by 1% annually, the construction labour force increased by 4 to 5% annually. Growth in construction could potentially be greater since Canada expects to be a major supplier and exporter of raw material and energy.

A study completed by the CSC in May 2008 reports that between 2008 and 2016, 162,000 new workers will be required to replace retirees, and an additional 94,000 workers will be required to meet rising demand. This is consistent with Human Resources and Social Development Canada (HRSDC) projections for the general labour pool that twice as many jobs will open due to retirements than the creation of new jobs. Crane operators and heavy equipment operators are two key trades in highest demand.

Over these past years, we have heard numerous fallacies and assumptions that lead us to believe that we should not worry, that we do not have to be concerned. Some of these are:

1 DON'T WORRY "IT'S NOT A LABOUR SHORTAGE, IT'S A SKILLS SHORTAGE."

While this was true in the 1980s and 1990s, it is no longer true. The forecast is for less than 6% unemployment between now and 2013. The unemployment rate in the resource-rich provinces is expected to be much lower. Employers are competing for a shrinking labour pool, and we can expect both a labour and a skills shortage in the years ahead. Today, fewer young adults are studying in trades than their parents. According to Statistics Canada, 10% of young adults between 25 and 34 had a trade certification in 2006, and of all trades, the construction trades are decreasing in popularity.

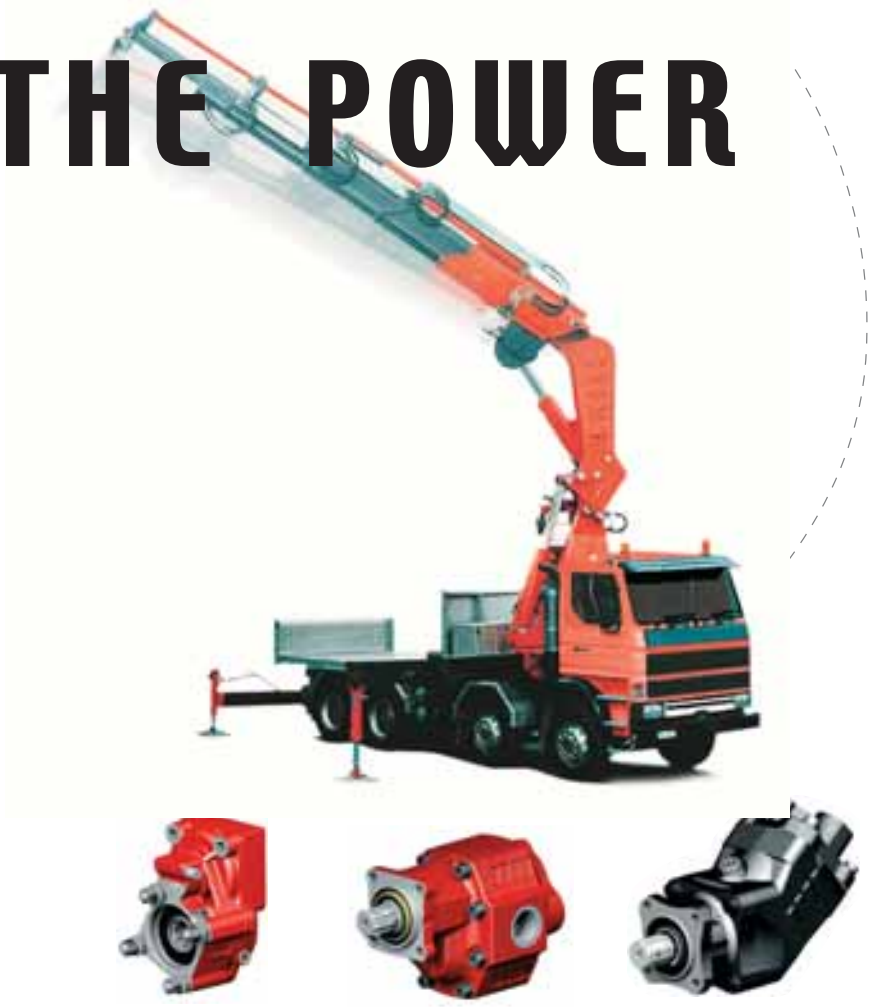
2 DON'T WORRY "THE ECONOMY IS CYCLIC. THE CONSTRUCTION INDUSTRY IS CYCLIC."

Historically, the construction industry was prone to volatility. Since 1996,

ENGAGE THE POWER

An action, an instant and the power is the force for your work, in complete safety, with OMFB professionalism and reliability.

For fifty years we have been producing: power take off's for trucks, hydraulic gear and piston pumps, hydraulic valves, hand pumps with and without tank and mini power packs.



OMFB®
HYDRAULIC COMPONENTS

www.omfb.it

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
=ISO 9001/2000=

Sede: Provaglio d'Iseo - Via Cave, 7/9 - 25050 (Bs) Italy - Tel. +39 030 98.30.611 - Fax italia: +39 030 98.30.658 - Export: +39 030 98.38.25 - e.mail:info@omfb.it
Filiali: Modena - Via Dalla Costa, 240/C - 41100 (MO) Italy - Tel. +39 059 25.40.35 - Fax: +39 059 25.59.949 - e.mail:info.modena@omfb.it

however, construction has shown steady and consistent growth. Statistics Canada confirms that growth in construction has been 4.5% annually. Low interest rates continue to stimulate construction activity. With the forecast of a strong construction economy and a high demand for Canadian energy and raw materials, we can expect that the demand for operators will increase significantly even with some minor productivity gains.

3 DON'T WORRY "IMMIGRATION WILL TAKE CARE OF IT."

Immigration will certainly help to offset population growth, which is projected to decline from 1.1% to 0.9% from 2006 to 2015. Immigration policy, however, is slow to change and, even with the current high number of immigrants entering the country, there will be a substantial lag time in the testing, certification and acceptance of these new entrants. Alberta, British Columbia, and Ontario have enjoyed some success attracting temporary foreign workers to meet short- term peak demand.

Historically, European immigrants were attracted to the construction industry but, with low birth rates and high retirement rates, that source of supply is dwindling. Eastern Europeans, American, British, and Philippines, and Germans now take some of the jobs but, research shows, the construction trades are not as popular as they once were. According to Statistics Canada, 51% of recent immigrants who immigrated between 2001 and 2006 had university degrees. This is twice the proportion of degree holders among the Canadian-born population.

4 ASSUMPTION THAT "GOVERNMENT WILL TAKE CARE OF IT."

I expect that governments will continue to assist with studies and forecasts, certification and credentialing, standards to improve mobility, visibility and advertisement for recruitment, some funding for training programmes, and immigration policies favourable to increase supply. Governments, however, expect industry and labour to participate significantly in the development and funding of training programmes.

The federal government, for example, matched dollar for dollar the training aids for Labour Training Centers a few years ago. In 2006 and 2007, the Ontario Provincial Government provided $25 million for skills training for the trades. Of those funds 20% ($5 million) were allocated to the OETIO for training aids for the training of crane and heavy equipment operators. The Ontario Provincial Government also provides about 40% of the funding for our compulsory crane and voluntary heavy equipment apprenticeship trainings programmes.

CONSTRUCTION REQUIREMENTS

SOURCE: *Counstruction Sector Council*

5 ASSUMPTION "LESS IN-SCHOOL TRAINING AND ON-THE-JOB DEVELOPMENT."

I continue to hear this argument from a number of sources. We need, however, to be mindful of basic concepts such as 'due diligence' and 'liability', which are on the rise on Canadian jobsites. In addition, productivity is gained through quality training and on-the-job development programmes that ensure good operating habits and practices – bad habits acquired early are extremely difficult to overcome.

In addition, trends across the country indicate that new technology is driving demand for more training and facilities and many trades are targeting higher levels of certification and training in their workplaces. Coupled with low completion rates for trades training and apprenticeships, selection and screening through good training and development programmes are to everyone's benefit.

In terms of market share, college and university enrolments and graduations have steadily increased, and university degree holders is projected to double from 13.8% in 1990 to 24.4% in 2015. On the other hand, trade and vocational enrolments and graduations remain flat as a result of minimal growth and low completion rates.

6 ASSUMPTION "JUST-IN-TIME TRAINING AND DEVELOPMENT."

This makes sense but history shows that it never happens. When industry is booming, few want to take training when they can be working. On the contrary, when industry is slow, few are interested in training as the prospects for employment do not look good in the short term. The latter is what happened in the 1990s when industry was slow, few took training and governments reduced funding to apprenticeship programmes. Hindsight tells us that we should have maintained a strong apprenticeship programme to ensure a good balance of youth in the workforce today.

The forecast that there will be 17,000 retirements a year in 2014 as opposed to 13,000 in 2005 is quite an increase.

In summary, the critical issues facing labour supply and the training and development of operators are: retirements due to an aging workforce, low birth rates, complex immigration policies, competition for skilled labour, the stigma of construction work, and our capacity to ramp up training in time to meet demand.

In Ontario we have separate compulsory certification for tower crane and mobile crane operators, i.e. apprentices attend formal training programmes, are tested against standards and must have a provincial government 'Certificate of Qualification' before being granted journeyperson status. This is a good thing. The next step to increase supply is to improve the journeyperson/apprenticeship ratio for on-the-job training to graduate more apprentices to fill the gap of the projected shortfall. ■

Join online at www.scranet.org

SC&RA Specialized Carriers & Rigging Association

Making Great Companies Even Better

What is **SC&RA?**

The Specialized Carriers & Rigging Association (SC&RA) is an international trade association for the crane, rigging and specialized transportation industries.

What are the **benefits** of membership?

- A free company listing in directory of members and online
- Weekly newsletters and monthly magazines
- Discounts on meetings and products

Why join SC&RA?

In addition to the wealth of information the Association provides, you'll be part of a collective voice. SC&RA represents over 1200 companies on state and federal legislative issues.

For more information visit www.scranet.org or call (703) 698-0291.

NEW BOOK FOR 2008

Lifting & Moving the World

Commemorating the 60th anniversary of the Specialized Carriers & Rigging Association

KHL Group USA, in conjunction with the Specialized Carriers & Rigging Association, announce the publication of *Lifting & Moving the World*, a coffee table style book that commemorates the 60th anniversary of the SC&RA. The book recounts the history of the association while chronicling the major milestones in the modern history of the crane, rigging and specialized transportation industries.

3 WAYS TO ORDER YOUR COPY

Call: **512-869-8838**
Go to: **www.khl.com**
E-mail Katy Storvik,
KHL Bookshop Manager:
katy.storvik@khl.com

60 Years of Excellence 1948-2008

SC&RA

COMMENT

Joel M Dandrea

Sleep to keep ahead

If you are like millions of others around the world, rooting for your country during the 2008 Summer Olympic Games in Beijing, 8-24 August had you staying up late. In exchange for watching athletes display their best efforts, you probably had to settle for less than peak performance at work the next day.

The price may be high: reduced energy, greater difficulty concentrating, irritability, and greater risk of accidents. Work performance and relationships can suffer too and pain may be intensified by the physical and mental consequences of lack of sleep.

Every year, new research reinforces the value of sleep. When researchers at the University of California at Berkeley in the US kept volunteers awake for 24 hours after giving them a list of words to study, the subjects' ability to recall the words fell by 40%. Another new Berkeley study indicated your recall of all that happened today would be 20 to 30% sharper after sleeping for at least seven of the next 12 hours than it is immediately after the day's events occur. In addition, you would be able to make broader and more logical connections when well rested.

"Many successful CEOs talk about having good instincts," said Matthew Walker, a Berkeley researcher. "I would argue that all they are doing is allowing themselves at least 12 hours to marinate the information they take in and, if those 12 hours include some sleep, they get even better results."

According to an internet poll of more than 300 small business owners and managers conducted by Staples office supply stores earlier this year, more than half of respondents said that work has actually become part of their dreams. Fifty-one percent of those surveyed said that they "sleepwork" (i.e. dream about work), and nearly 70% of those "sleepworkers" report that they wake up and put their "work dreams" into action.

Of greater concern to SC&RA members whose employees operate trucks, cranes and other large equipment, research proves sleep deprivation greatly hinders the ability to perform at high levels on "psychomotor vigilance" tasks, which measure reaction. A study conducted at Walter Reed and the University of Pennsylvania in the US found that those who slept three hours or less not only had progressively slower reaction times, but did not recover from the effects of sleep deprivation even after several days of sleeping longer hours.

This research also has been applied to long-haul trucking. The researchers concluded that the level of impairment caused by sleep deprivation can be equivalent to that caused by drunkenness.

For more than a decade, the U.S. Department of Transportation has been working to revise its hours-of-service rules for drivers. Although there have been numerous disagreements, some of which have ended up in federal courts, virtually everyone involved believes the issue warrants considerable focus.

Regardless of the hours officially set aside for slumber, sleep disorders may result in even the most well-intentioned drivers being drowsy on the road. Sleep apnoea, the most common pulmonary problem encountered in commercial drivers, is the condition characterised by loud snoring, cessation of breathing for a short time, multiple awakenings, gasping for air, and eventually sleep deprivation.

"Like people who have had too much to drink, the chronically sleep-deprived have no sense of their limitations," says University of Pennsylvania researcher David Dinges. His study of a random sample of 1,391 commercial drivers licence holders living within a 50-mile (80 km) radius of the university revealed that 17.6% had mild sleep apnoea, 5.8% had moderate sleep apnoea, and 4.7% had severe sleep apnoea.

If you (or your spouse) suspect you have sleep apnoea, you should see your physician, who may refer you to one of the growing number of sleep clinics. If you have continued to deprive yourself of sleep after the closing night ceremonies at the Olympics, you need to stop now. There is no gold medal for lack of performance.

Hands across

The association is working to resolve an issue over a proposed revision to the EN 13000 standard regarding the override key on capacity limiters for mobile cranes. TERRY WHITE reports

A delegation of eight US representatives from SC&RA will travel to the facilities of fellow member Liebherr-Werk Ehingen, Ehingen, Germany, 4 and 5 November 2008. They will meet there at the invitation of the Mobile Cranes Technical Committee of the Federation Europeene de la Manutention (FEM), the European manufacturers association of materials handling, lifting and storage equipment, as part of continuing efforts to resolve differences between the United States and Europe concerning changes to the European standard for the design of mobile cranes.

That standard, EN 13000, is scheduled for revision in January 2009, with implementation to take place by 1 January 2010 for mobile cranes bearing the CE mark. The CE mark indicates that the product carrying it complies with all relevant European requirements, and that the compliance has been assessed according to applicable certification procedures.

Set-up button

The revised standard calls for the replacement of the standard override key on capacity limiters for mobile cranes with a set-up button. The button would allow the crane to be rigged and de-rigged but, in operation, override of the rated capacity limiter would be impossible in conditions where there is a load chart.

In deadlock situations, the crane operator could press the set-up button to increase the shut-off limit to 110% of the load chart until the crane is returned to normal operation. Pressing the set-up button, however, would reduce crane speed to 15% of maximum. A data logger, often known as a "black box" would record details, for example, the number and frequency of crane overloads. This information could be used to evaluate accidents and avoid future accidents, according to FEM.

The revisions reflect a compromise with health and safety administrations in countries including France, Germany and Italy. The government officials, arguing that operators could too easily override a crane's safety system by simply turning a key, objected to the override keys. Consequently, they refused to entirely confirm EN 13000 in 2005. After several years of discussion, FEM finally made the changes to gain their approval.

The response, however, was less than enthusiastic in the United States when the SC&RA Crane & Rigging Governing Committee learned of FEM's plans during

> **"Suddenly a gust of wind blows the beam, causing it to exceed the radius of the load chart, putting the crane in an overload situation and cutting off the lifting function. A qualified operator would quickly lower the load. If his operating speed is reduced to 15%, it reduces his control over the crane, which could result in a tipping or failure situation."**

the water

the Association's January 2008 Board & Committee meetings. During that meeting, the committee formed the EN 13000 Task Force to research, discuss and respond to modifications to the standard.

A month later, the Task Force issued a position paper, calling for the industry to "stand united to defeat these recommended amendments." It was noted in the SC&RA position paper that: "Eliminating the standard override key would not result in safer crane operations but could, in fact, result in serious consequences. The override key is provided, among other functions, to assist operators and provide them with an efficient and timely way to avoid and/or correct a dangerous situation."

Reduced control

The position paper was particularly critical of the 15% crane-speed reduction resulting from use of the set-up button. It put forth the scenario of an operator lifting a steel beam, working well within the crane's load chart: "Suddenly a gust of wind blows the beam, causing it to exceed the radius of the load chart, putting the crane in an overload situation and cutting off the lifting function. A qualified operator would quickly lower the load. If his operating speed is reduced to 15%, it reduces his control over the crane, which could result in a tipping or failure situation."

This issue was further addressed at March's ConExpo exhibition in Las Vegas. During two meetings with FEM members, SC&RA representatives explained their viewpoint concerning the serious safety hazards that EN 13000 would create.

"Initially, FEM disagreed with SC&RA's position and stated the passage of the standard was a 'done deal,'" recalled Joel Dandrea, SC&RA executive vice president. After much discussion, however, FEM members agreed that "perhaps, in their quest to satisfy European safety officials, they did not take a broad enough look at the situation and the impact on the industry."

Some of the liveliest discussion at April's SC&RA Annual Conference in Florida, US, concerned the European standard. EN 13000 Task Force chairman Robert Weiss, Cranes, Inc., summed up the controversy in a standing-room-only meeting by saying, "We think EN 13000 is unsafe. They think it is safe. We want to convince them they are wrong."

Used equipment

In addition to safety considerations, related business concerns also commanded attention during the Annual Conference. Weiss explained that, at the request of the SC&RA EN 13000 Task Force, European manufacturers agreed to sell cranes to the United States without the CE markings for the foreseeable future.

Doug Williams, Buckner Companies, who was finishing his term as SC&RA president, expressed concern about what that meant for the used equipment market. "If the rest of the world accepts the European standard and it becomes the norm, how do we sell the crane back out of the country?" he asked.

Weiss explained that, most likely, a manufacturer or dealer would need to then retrofit the machinery to make it acceptable for resale in Europe. Although it is unclear how much such changes would cost and how long they would take, Weiss seemed confident that relatively simple, inexpensive solutions would emerge to meet the industry's changing needs.

Perhaps meetings such as the one to be hosted by Liebherr-Werk Ehingen in November will help the industry worldwide move toward greater safety and efficiency. FEM also has invited representatives from ESTA (the European Association of Heavy Haulage, Transport and Mobile Cranes) and CICA (the Crane Industry Council of Australia), who will be called upon for their support in finding a compromise concerning EN 13000.

In addition to Beth O'Quinn, SC&RA vice president-crane & rigging, members of the SC&RA EN13000 Task Force planning to attend the meeting include: Robert Weiss, Cranes, Inc.; Frank Bardonaro, AmQuip Crane Rental LLC; George M. Bragg, Bragg Crane Service; Lynn Dietrich, Manitowoc; Randy Harris, All Erection & Crane Rental Corp.; Ronald Schad, Essex Crane Rental Group; and SC&RA assistant treasurer Bill Stramer, Link-Belt Construction Equipment, Inc.

"SC&RA is being represented by an extremely well-qualified group of members who will work with our international counterparts for the best collective interest for the industry," said Dandrea. "Their efforts will also mesh perfectly with the goals and objectives in our current strategic plan to expand SC&RA's international presence. Without a frank exchange of views, we could never find common ground."

International forum

Further emphasising the SC&RA commitment to the worldwide specialized carrier and rigging industry is the Association's International Forum, 3-13 November. While SC&RA meets FEM in Germany, other SC&RA members from the United States will be meeting their fellow members in Australia and New Zealand. The programme is being conducted in co-operation with the Crane Industry Council of Australia, the Crane Industry Association of New South Wales, the New Zealand Heavy Haulage Association and the Crane Association of New Zealand.

Enthusiasm is also building for the World Crane & Transport Summit, planned for October 2009 in Amsterdam. KHL Group, publisher of this magazine, is planning this event with SC&RA, ESTA, CICA, CRAC (Crane Rental Association of Canada) and other leading associations in the world crane and transport market. Harmonisation of equipment registrations is among the topics to be explored during that event. ■

Simple stability

Mounting hydraulic control valves directly to the ports of a hydraulic motor saves space, simplifies installation and places the valve in the best position to provide protection and/or control, according to Integrated Hydraulics.

The company's new motor-mounted control valves, designed for the most common port patterns, bolt directly onto the motor, which eliminates the need for steel pipe or hose between valve and motor. "Thus reducing installation time, removing the cost of connectors and pipework and minimising the overall size of the motor/valve package," explains the company.

Cartridge valves are used in the block and, because an extensive range of over-centre cartridges using the same cavity is available, the most appropriate design; standard, part balanced, balanced or counterbalanced; pressure range and pilot ratio can be selected to give the best possible performance and stability from the system.

■ For more information see www.integratedhydraulics.com

HOG HIGH

With as many as three deaths already recorded in the UK this year, resulting from falls from containers, GenQuip has developed a new system to make loading and unloading safer, the manufacturer said.

The Hoglift can be operated by one person on the ground

and there is no need to climb onto the roof of the container at any time. The system consists of four vertical pillars, each containing a free-moving lift trolley. Lifting slings are connected to each trolley at ground level and then slide up the channel to the top of the pillar as the container is lifted. Lifting capacity is 8.8 tonnes. A 15 tonne version will follow in the near future, GenQuip said.

■ For more information see www.hoglift.co.uk

EIGHT CAN COMMUNICATE

Eartec has introduced the PCx-1000 double channel, multi-station, full duplex wireless that works within a quarter mile (0.4 km) range for up to eight people. The non-voice activated headset radio is turned on by switch and can be talked through without delay. The company uses a spread spectrum frequency hopping system that formats all radios into a group to occupy a specific frequency for a fraction of a second. This means no transmissions from other wireless systems can interrupt conversations.

■ For more information see www.eartec.com

Super side vision

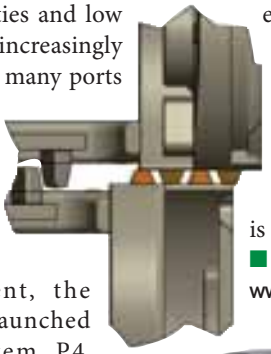
The Voyager super CMOS side vision camera from ASA Electronics is intended for commercial and heavy duty vehicles. The compact, aerodynamic unit can be installed on a machine's front bumper to eliminate blind spots. The camera can be paired with a Voyager LCD observation monitor to provide operators with real time images that will assist reversing, changing lanes, merging and making wide turns. Anti-blooming technology means the cameras will not wash out the screen when direct light hits them, explained the company.

The system uses a cylindrical camera enclosed in a waterproof, impact-resistant plastic housing in chrome finish or primer.

■ For more information see www.asaelectronics.com

Efficient energy

A new energy chain for parts has been launched by Igus. In view of ever increasing travel speeds, the demands made on energy chains are increasing all the time, Igus said. "Smooth running properties and low noise levels are increasingly needed, because many ports are moving closer to residential areas as they grow."



Following three years of development, the company has launched the new System P4. "Thanks to the use of additional centre links, there is practically no weight limit. The upper run and the lower run of the chain roll offset on one another. This means the tribologically optimised plastic profile rollers are not rolled over. Instead they roll on a consistently wide area, which increases the service life of the chain even more," explained the company.

Endurance tests at speeds of up to 7 m/sec have been carried out successfully, said the company. Energy and data transmission is possible up to 1,000 m.

■ For more information see www.igus.de

TECHNOLOGY MADE IN ITALY


Cestello / Basket


Traversa / Stabilizer


Sede / Headquarter


€uropedana/Block for Stabilizer


Il Team / The Team


Rotatore / Rotator


Progettazione / Designing


Benna / Bucket


Produzione / Production


Forca / Pallet Fork


Logistica / Despatch Area


Argano / Winch


Logistica / Despatch


Pompa / Pump


Fiere / Exhibitions

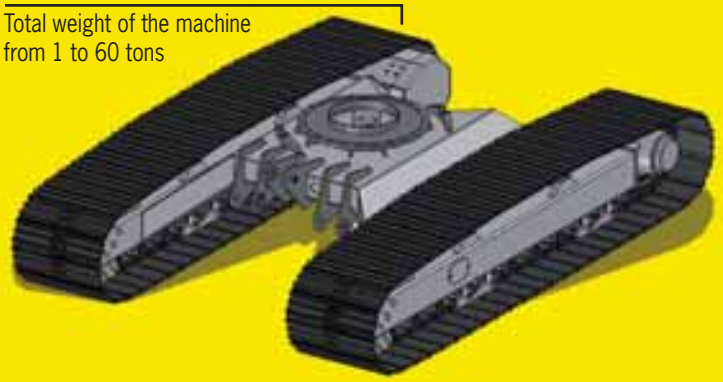

Scambiatore / Oil Cooler

FERRARI INTERNATIONAL 2 S.p.A.
Via Lombardia, 20/B - 42100 Reggio Emilia - Italy
Tel. +39.0522.2387 - Fax +39.0522.920990 - e-mail: sales@ferrariint2.com
www.ferrariint2.com - Azienda certificata ISO 9001:2000

Gemmo Group
UNDERCARRIAGES

On request:
- Extendable track gauge
- Non-marking rubber tracks
- Customized colours
- Rubber shoes for steel tracks
- Berco original parts
- Customized projects

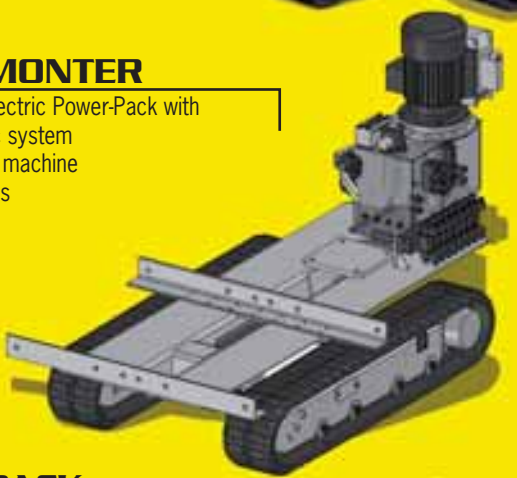
STEEL TRACKS
Total weight of the machine
from 1 to 60 tons



RUBBER TRACKS
Total weight of the machine
from 0.3 to 9 tons

Let your machine be more stable! Use our articulated tracks

PRÊT À MONTER
Petrol, diesel or electric Power-Pack with complete hydraulic system
Total weight of the machine
from 0.3 to 10 tons



POWER-PACK from 6.75 to 31.3 KW
All the hydraulic controls are operated electrically, and if required can be remote-controlled via cable or radio

GEMMO GROUP s.r.l.

Sede Legale/Commerciale: Via Broli, 66/A
Stabilimento Produttivo: Via della Tecnica, 10
36025 NOVENTA VICENTINA (VI) - ITALY
Tel. 0039.04.44.88.71.41 Fax 0039.04.44.76.06.69
e-mail: info@gemmogroup.it

www.gemmogroup.it

EVENTS DIARY

2008

BALTICBUILD
10 – 13 September 2008
St Petersburg, Russia
www.primexpo.ru

CONEXPO RUSSIA
15 – 18 September 2008
Moscow, Russia
www.conexporussia.com

APEX 2008
17 – 19 September 2008
Maastricht, the Netherlands
Tel: +31 (0)547 27 15 66
Fax: +31 (0)547 26 12 38
www.apexshow.com

SC&RA CRANE & RIGGING WORKSHOP
18 – 20 September 2008
Toronto, Canada
www.scranet.org

NATIONAL CONSTRUCTION EXHIBITION
30 September – 3 October 2008
Sydney, Australia
Tel: +61 (0)2 9422 2511

SAIE 2008
15 – 18 October 2008
Bologna, Italy
www.saie.bolognafiere.it

BAUMA CHINA 2008
25 – 28 November 2008
Shanghai, China
www.bauma-china.com

2009

INTERMAT 2009
20 – 25 April 2009
Paris, France
www.intermat.fr

SC&RA ANNUAL CONFERENCE
21 – 25 April 2009
La Quinta, California, USA
www.scranet.org

TRANSPOTEC LOGITEC
7 – 10 May 2009
Milan, Italy
www.transpotec.com

M&T EXPO
2 – 6 June 2009
Sao Paulo, Brazil
www.mtexpo.com.br

MATEXPO 2009
2 – 6 September 2009
Belgium

Picture of the month

Photographed in Amsterdam, this is a 90 m crane-inspired demolition boom, weighing 69 tonnes, produced by Rusch Kraantecniek. It has been mounted onto a heavily modified loading shovel. The three stage telescopic boom and upper will lift a 5 tonne demolition tool to 90 m and a 10 tonne tool to 80 m.

PEOPLE NEWS

■ Remote control manufacturer Cattron Group has appointed **MARTIN CHEN** as marketing and sales manager for China. He will be based at the company's Shanghai, China affiliate office.

Chen will report to **JIM ROBERTSON**, Cattron Group International executive director for business development. "[Chen] will develop new strategic business relationships and expand Cattron's distributor sales network in China by adding additional distributors as well as working directly with major key accounts within China," says the company.

■ Marine contractor A2Sea has appointed a new CEO. **JENS FREDERIK HANSEN** (below) will manage the company's growth strategy in the field of foundations and wind turbine installation. Before taking the role, Hansen was a member of the executive management team for India-based Suzlon Energy.

■ **DOUG FRIESEN** is the new Terex Cranes Germany managing director and vice president (*IC* August News, p6). He has moved to Germany from Terex in the US to replace Alexander Knecht who has left the company. Friesen is pictured (right of picture) with **BARRY BARNES**, Terex Cranes UK managing director, at the 8 August opening of the new Terex Cranes UK sales and service headquarters in Buckinghamshire, north east of London.

PALFINGER APPOINTMENTS

Palfinger's supervisory board has appointed the company's former chief marketing officer **HERBERT ORTNER** (right) as its new CEO, with immediate effect.

Ortner was global business unit manager for industrial hoses at the Semperit Group until 2001. He then joined Palfinger where he developed the spare parts, equipment, and service business before being appointed to the management board in 2003.

CHRISTOPH KAML (right) will become the group's new chief financial officer (CFO). Kaml is currently based in Niagara Falls, Canada, where he is in charge of finance, strategy, and business development for North America.

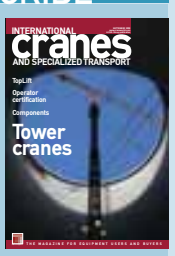
Ortner will oversee the CFO position until Christoph Kaml moves into the Palfinger headquarters in Austria, at the beginning of 2009.

■ **Send picture of the month entries and all other back page-related information to *International Cranes and Specialized Transport*, KHL Group, Southfields, Southview Road, Wadhurst, East Sussex TN5 6TP, UK or by e-mail to alex.dahm@khl.com. Picture caption entries should include: the month and year taken, the place, type of crane, owner and project, plus any other relevant information.**

COMPANY NAME	PAGE	WEBSITE
AGS	47	www.ags-btp.fr
Alfred Scholpp GmbH & Co. KG	48	www.scholpp.de
Amco Veba srl	59	www.amcoveba.com
Anmopyc	56	www.anmopyc.es
Arcomet	34	www.arcomet.com
Autec srl	47	www.autec.it
BLUG - Credeblug S.L.	62	www.blug.es
Bridon International Ltd	60	www.bridonltd.com
Carl Stahl GmbH	62	www.carlstahl.com
Casar Drahtseilwerk Saar GmbH	27	www.casar.de
Comansa SA	38	www.comansa.com
Demac Srl	59	www.demac.it
F.lli Ferrari SpA	55, 64	www.flliferrari.it
Favelle Favco Cranes (M) SDN BHD	39	www.favellefavco.com
Ferrari International 2 SpA	75	www.ferrariint2.com
Forjas Irizar sl	37	www.forjas-irizar.com
Gemmo Group Srl	75	www.rigemmo.it
Goldhofer Aktiengesellschaft	46	www.goldhofer.de
HBS	23, 25	www.hbs.it
Igus GmbH	18	www.igus.de
Imai SrL	68	www.imai.it
KHL Group LLP	70	www.khl.com
Kobelco Cranes Europe Ltd	OBC	www.kobelco-cranes.com
Kranenbouw Bergeijk BV	44	www.kranenbouw.com
Kroll Cranes AS	44	www.krollcranes.dk
Liebherr International Deutschland GmbH	28	www.liebherr.com
Lift Systems Inc	32-33	www.lift-systems.com
Link-Belt Construction Equipment Company	16	www.linkbelt.com
Manitowoc Crane Group	IFC	www.manitowoc.com
Messe München GmbH	62	www.messe-muenchen.de
Modulift Design & Consulting Ltd	22	www.modulift.co.uk
Morrow Equipment Co LLC	40	www.morrowequipment.com
OMFB Spa	68	www.omfb.it
Palfinger AG	15	www.palfinger.com
Reel-O-Matic	31	www.reelomatic.com
Robway Crane Safety Systems Pty Ltd	66	www.robway.com.au
Rotzler GmbH & Co	65	www.rotzler.de
SMIE	42	www.smie.com
Sany Heavy Industry Co. Limited	12	www.sany.com.cn
Sennebogen Maschinenfabrik GmbH	26	www.sennebogen.de
Slingmax Inc	51	www.slingmax.com
Specialized Carriers & Rigging Association	64, 70	www.scranet.org
Spierings Kranen	42	www.spieringskranen.nl
Tadano Ltd	4	www.tadano.co.jp
Tecno Elettrica Ravasi Srl	55	www.tecnoelettrica.net
Terex Demag GmbH & Co Kg	10	www.terex-demag.com
Vanson Cranes Ltd	59	www.vansoncranes.com
Verope AG	20-21	www.verope.com
Westfälische Drahtindustrie GmbH	24	www.wdi-python.de
Wilbert Turmkrane GmbH	41	www.wilbert.de
Wolffkran GmbH	45	www.wolffkran.de
Zoomlion Heavy Industry	9	www.zoomlion.com

TO SUBSCRIBE

To receive your FREE copy of *International Cranes and Specialized Transport* each month



REGISTER ONLINE
www.khl.com/register

E-MAIL
circulation@khl.com

TELEPHONE
Hayley Coulson
+44 (0)1892 786233

For information on the magazines and directories in the KHL portfolio go to

www.khl.com

MEDIACO

MEDIACO, nº 1 in France and in North African countries for Crane rental, lifting and global industrial services.

- 70 agencies all over France and abroad.

- 5,000 types of equipment - 700 cranes from 30 to 1 200 tons capacity
- Handling, transport equipment and access platforms

The biggest telescopic crane in the world LTM 11200.9 expected at the beginning of 2009

CRANES FOR SALE

TELESCOPIC MOBILE CRANES

Cap. (T)	Manufacturer	Type	Year
30	LIEBHERR	LTM 1030.1 & 2	1997/1998
35	LIEBHERR	LTM 1035.3	1989
40	LIEBHERR	LTM 1040	1991
50	LIEBHERR	LTM 1050.1	1997/1998/1999
70	LIEBHERR	LTM 1070	1995
90	LIEBHERR	LTM 1090.1	1998
90	LIEBHERR	LTM 1090.2	1997/1998/1999
120	LIEBHERR	LTM 1120	1990/1994
160	LIEBHERR	LTM 1160-1	1994
200	LIEBHERR	LT 1200	1983
225	LIEBHERR	LTM 1225	1997
300	LIEBHERR	LTM 1300	1995/2000
35	FAUN	RTF 30.2	1991
40	FAUN	RTF 40.3	1996
50	FAUN	ATF 50.3	1998/1999/2000/2001
70	FAUN	ATF 70.4	1996/1998/1999/2000
90	FAUN	ATF 90.4	1996/1997/1998

Cap. (T)	Manufacturer	Type	Year
25	TADANO	AR 250	1990
30	TADANO	TR 300	1990/1991
20	TEREX	A230	1993
25	TEREX	ATT 290	1995
25	TEREX	ATT 280	1991
25	TEREX	ATT 300	1998
25	TEREX	ATT 350	1997
35	TEREX	ATT 340	1995/1996/1997
35	TEREX	ATT 400.2&3	1999/2000/2001/2002
50	TEREX	ATT 600	1997/1998
80	TEREX DEMAG	AC 205	1996
120	TEREX DEMAG	AC 120	1999
200	TEREX DEMAG	AC 200	2003
30	GROVE	AT 633	1989
160	GROVE	GMK 5160	1997

- ***Lattice boom crawler*** *- LIEBHERR 400 tons - Fully equipped - 1999*
- *Lattice boom GOTTWALD MK 75 - 50 tons - and MK 150 - 100 tons.*
- *Access platforms on truck & telescopic forklifts Manitou.*

MEDIACO LEVAGE
17, Avenue André Roussin - 13016 MARSEILLE
Tel : +33.4.91.03.81.91 - Fax : +33.4.91.09.32.82
E-mail : mediaco@mediaco.fr
www.mediaco.fr

Worldwide specialists in heavy lifting and transport

MAMMOET Trading

Cranes for sale

Faun ATF 70-4
Cap. 70 ton

Faun RTF 40-3
Cap. 40 ton

Set of new Hydraulic
Modular trailers*

XCMG QY65K
Cap. 65 ton

Terex RT 1000
Cap. 90 ton

Faun ATF 60-4
Cap. 60 ton

Cranes

REF NR	MANUFACTURER	TYPE	YOM	MAINBOOM	JIB	CAP.
20540	Grove	RT 528C	1994	21,2 Mtr	13,1 Mtr	25
1598	Faun	RTF 40-3	1995	30 Mtr	8,7 + 6,75 Mtr	40
1597	Demag	AC 155	1993	40 Mtr	-	50
1404	Faun	ATF 60-4	1998	40,2 Mtr	16 Mtr	60
1074	XCMG	QY65K	2006	42 Mtr	15 Mtr	65
1407	Faun	ATF 70-4	1996	40,5 Mtr	16 Mtr	70
1426	Zoomlion	QUY70	2007	57 Mtr	18 Mtr	70
711	Grove	GMK 4075	2001	43,2 Mtr	17 Mtr	75
773	Terex	RT 1000	2002	38,4 Mtr	18,2 Mtr	90

** Set of new Hydraulic Modular trailers for sale:*
Gooseneck, 3-axle trailer, Bed capacity 150 ton, 5-axle trailer, powerpack 13KW, Drawbar
Location: Dubai. Directly Available

Contact persons
Jan van Seumeren Jr. / Miranda Verhoef
Phone +31 (0)10 204 25 85 / 204 26 37
Fax +31 (0)10 204 24 42
E-mail mammoet.trading@mammoet.com

www.mammoettrading.com

CALL STAFFORD FOR ALL OF YOUR LIFTING NEEDS

STAFFORD®

www.staffordequipment.com

NEW TEREX ROUGH TERRAIN CRANES AVAILABLE FOR DELIVERY

TEREX RT 555'S---55 TON CAPACITY---110' OF BOOM---33' TO 57' JIB---2 WINCHES---HEATER & AC---BLOCK AND BALL.....**POR**

TEREX RT 665---65 TON CAPACITY---110' OF BOOM---2 WINCHES---33' TO 57' JIB---HEATER & AC---BLOCK AND BALL.....**POR**

TEREX RT 780---80 TON CAPACITY---126' OF BOOM---2 WINCHES---33' TO 57' JIB---HEATER & AC---BLOCK AND BALL.....**POR**

NEW TEREX TRUCK CRANES IN STOCK AND READY TO SHIP

TEREX T340-1XL---40 TON CAPACITY---105 BOOM---32' TO 49' JIB---H/L PKG---2 WINCHES---HEATER---BLOCK AND BALL .....**POR**

TEREX T560---60 TON CAPACITY--- 110' OF BOOM---33' TO 57' OF JIB---SINGLE WINCH---HEATER---BLOCK AND BALL.....**POR**

TEREX T775---75 TON CAPACITY--- 126' OF BOOM--- 33' TO 57' OF JIB---2 WINCHES ---HEATER---BLOCK AND BALL.....**POR**

Tel: 001 704-333-0786

ASK FOR ONE OF OUR CRANE SPECIALISTS!

John Wall --- Ext. 1111

Kevin Belflower --- Ext. 1921

BOOM TRUCKS IN STOCK

TEREX BT 4792---23.5 TON CAPACITY---92' OF BOOM---JIB, FRONT O/R, BLOCK.....**$169,500**

TEREX RS 701000---35 TON CAPACITY---100' OF BOOM -- JIB, REAR CAB, FRONT O/R, BLOCK.....**$235,000**

MANITEX 28102S---28 TON CAPACITY---102' 5 SECTION TELESCOPIC BOOM, JIB, REAR CAB, FRONT O/R, BLOCK.....**$223,500**

MANITEX 38124S---38 TON CAPACITY---124' 5 SECTION TELESCOPIC BOOM, JIB, REAR CAB, FRONT O/R, BLOCK.....**$279,500**

MANITEX 40124S---40 TON CAPACITY---124' 5 SECTION TELESCOPIC BOOM, JIB, REAR CAB, FRONT O/R, BLOCK.....**$295,000**

MANITEX 5096S---50 TON CAPACITY--- 96' BOOM, JIB, REAR CAB, FRONT O/R, BLOCK.....**$379,000**

NEW AND USED TEREX CRAWLER CRANES IN STOCK NOW AND READY TO MOVE

HC 80'S--- 80 TON CAPACITY---WITH AND WITH OUT 3RD DRUMS. NEW AND USED IN STOCK NOW .....**POR**

HC 110'S---110 TON CAPACITY--- WITH AND WITH OUT 3RD DRUMS, NEW AND USED IN STOCK NOW.....**POR**

HC165--- 165 TON CAPACITY.....**POR**

HC230--- 230 TON CAPACITY.....**POR**

HC275--- 275 TON CAPACITY.....**POR**

NEW CARRY DECK CRANES IN STOCK FROM SHUTTLELIFT & BRODERSON
8.5 TON CAPACITY TO 18 TONS --- DIESEL AND DUAL FUEL

SHUTTLELIFT Manitex TEREX DMC

ALL MACHINES LISTED ARE SUBJECT TO PRIOR SALE AND AVAILABILITY---- PLUS ALL APPLICABLE TAXES ---FOB THE FACTORY

STAFFORD

www.staffordequipment.com

RENTALS
SALES
SERVICE
PARTS

SHUTTLELIFT

TEREX

DOZIER CRANE

SAVANNAH • GEORGIA • USA

"Your Crane Source for the New Millennium"

155 Pine Barren Rd
P.O. Box 1137
Pooler, GA 31322
PH +1 (912) 748 2684
Fax +1 (912) 748 5361
sales@doziercrane.com

CRAWLER CRANES

2008	KOBELCO	CK-2500 II	250-TON	250' + 100', 2 WINCH, 3RD DRUM	P.O.R
2005	KOBELCO	CK-2500II	250-TON	200' BOOM, 3RD DRUM	$1,750,000
2004	KOBELCO	CK-2000	200-TON	200'+60'	$1,450,000
2007	KOBELCO	CK-2000	200 TON	200'+80', 3RD DRUM	$1,650,000
2006	KOBELCO	CK-1600	160-TON	110'+40'	$1,250,000
2008	KOBELCO	CK-1600 II	160-TON	200' MAIN BOOM, 3RD DRUM	$1,375,000
2008	KOBELCO	CK-1000 III	100-TON	150' + 60', 3RD DRUM	$820,000
2007	KOBELCO	CK-850 III	85-TON	150' MAIN BOOM, 2 WINCH	$650,000
1999	LINKBELT	LS-248H II	200-TON	160' MAIN BOOM BLOCK & BALL	$1,100,000
2005	LINK-BELT	LS-248H5	200-TON	230' + 70'	$1,450,000
2008	LINKBELT	LS-248H5	200-TON	240' + 100'	$1,650,000
1997	LINKBELT	LS-218H	100-TON	130' MAIN BOOM, 2 WINCH, 3RD DRUM	$525,000
1999	LINKBELT	LS-138H II	80-TON	4 UNITS	$475,000 EA.
2005	LINKBELT	LS-138H 5	80-TON	140' MAIN BOOM, 2 WINCH	$550,000
1998	LINKBELT	LS-138H	75-TON	120' MAIN BOOM, BLOCK & BALL	$395,000
2007	MANITOWOC	12000	120-TON	2 UNITS	$950,000 EA.
2008	MANITOWOC	12000	120-TON	200' + 70', 2 WINCH, 3RD DRUM	$990,000
2008	MANITOWOC	10000	100-TON	200' + 60', 2 WINCH, 3RD DRUM	$820,000
2007	MANITOWOC	10000	100-TON	2 UNITS	$795,000 EA.
1997	MANITOWOC	222	100-TON	120' + 40', 2 WINCH	$475,000
2006	MANITOWOC	8500	85-TON	180' + 60', BLOCK & BALL	$650,000
2008	TEREX	HC-275	275-TON	240' + 40'	$1,950,000
2003	TEREX	HC-275	275-TON	260' + 55', 3RD DRUM	$1,750,000
2008	TEREX	HC-230	230-TON	160' MAIN BOOM	$1,750,000
2008	TEREX	HC-165	165-TON	230' + 40', 2 WINCH	$1,450,000
2001	TEREX	HC-110	110-TON	2 UNITS	$550,000 EA.
2008	TEREX	HC-110	110-TON	160' MAIN BOOM, 2 WINCH	P.O.R.
1999	TEREX	HC-80	80-TON	130' MAIN BOOM, 2 WINCH, 3RD DRUM	$450,000
2000	TEREX	HC-80	80-TON	160' MAIN BOOM, 2 WINCH	$465,000
2001	TEREX	HC-80	80-TON	100' MAIN BOOM, 2 WINCH	$475,000
2008	TEREX	HC-80	80-TON	110' MAIN BOOM, COMING IN '08	$650,000

ROUGH TERRAINS and TRUCK CRANES

2003	GROVE	RT-9130	130-TON	160' + 111', 2 WINCH	$883,200
2008	TEREX	RT-1120	120-TON	2 UNITS COMING APRIL '08	$1,100,000
2004	GROVE	RT-890E	90-TON	142' + 56', 2 WINCH	$735,000
2008	GROVE	RT-890E	90-TON	142' + 56', 2 WINCH	$805,000
2008	TEREX	RT-780	80-TON	10 UNITS COMING IN '08	$595,000
2005	GROVE	RT-875E	75-TON	128' + 56', 2 WINCH	$575,000
2008	TEREX	T-775	75-TON	126' + 57'	P.O.R
2008	TEREX	RT-665	65-TON	9 UNITS COMING IN '08	$495,000
1998	GROVE	RT-860B	60-TON	115' + 60', 2 WINCH	$295,000
2008	TEREX	T-560-1	60-TON	110' + 57' AVAILABLE NOW	P.O.R.
2008	TEREX	RT-555	55-TON	15 UNITS COMING IN '08	$440,000
2008	GROVE	RT-650E	50-TON	105' + 51', 2 WINCH, 2 UNITS	$440,000
2008	TEREX	RT-335	35-TON	10 UNITS COMING IN '08	$346,620
2008	TEREX	RT-230	30-TON	6 UNITS COMING IN '08	$311,562

INDUSTRIAL CRANES

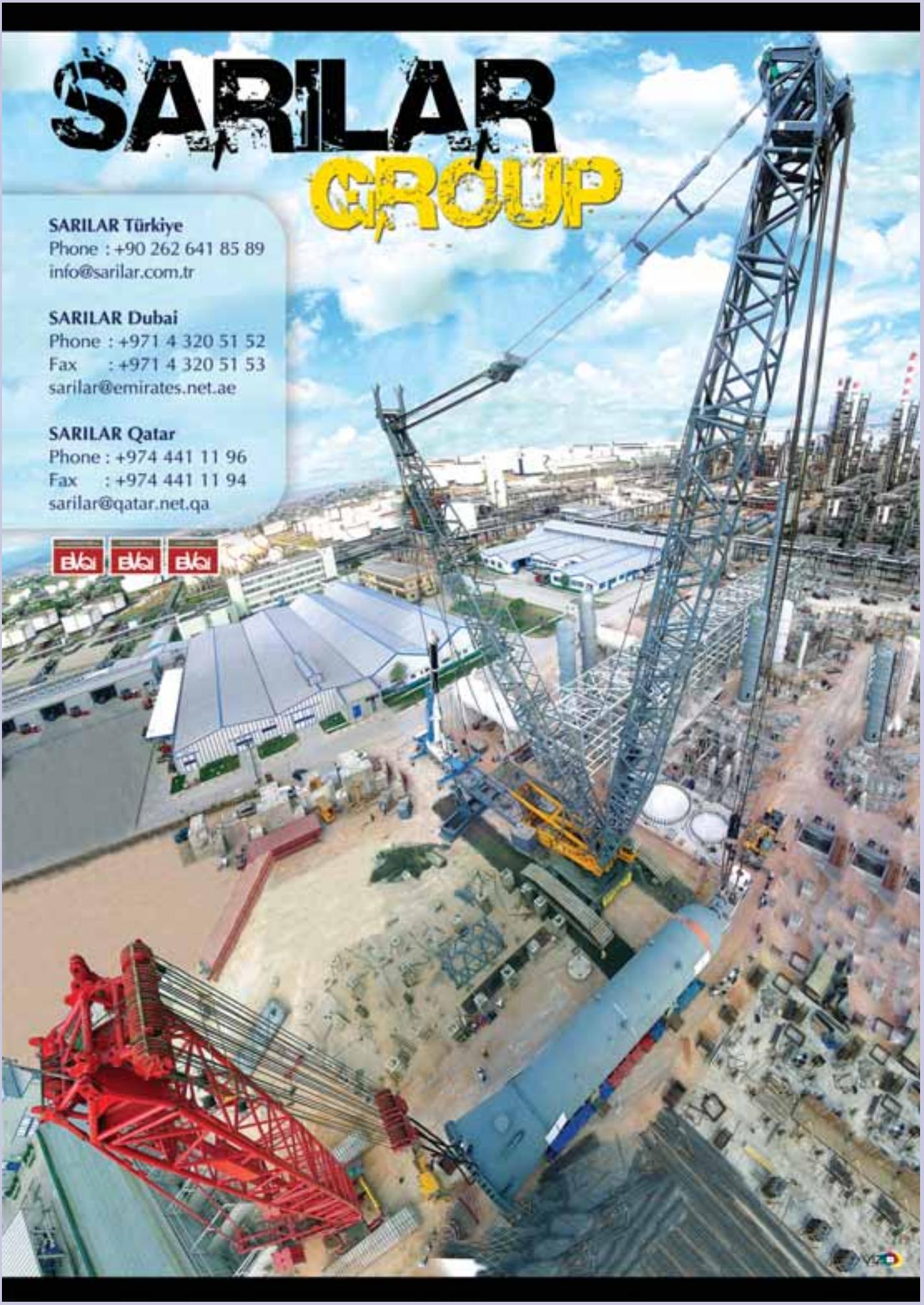
2008	SHUTTLELIFT	7750	22-TON	67' 5 SECTION FULL POWER BOOM	P.O.R.
2008	SHUTTLELIFT	5560B	18-TON	54' 4 SECTION FULL POWER BOOM	P.O.R.
2008	SHUTTLELIFT	5540F	15-TON	41' 3 SECTION FULL POWER BOOM	P.O.R.
2008	SHUTTLELIFT	3340B	10.5-TON	32' 3 SECTION FULL POWER BOOM	P.O.R.
2008	SHUTTLELIFT	3339	9-TON	32' 3 SECTION FULL POWER BOOM	P.O.R.
2008	SHUTTLELIFT	3330F	8.5-TON	21' 3 SECTION FULL POWER BOOM	P.O.R.

IMMEDIATE AVAILABILITY ON SELECTED ROUGH TERRAINS AND CRAWLER CRANES CALL TODAY!

CALL AND PLACE YOUR ORDER TO RESERVE YOURS TODAY

Call us at: +1 (912) 748 2684

www.doziercrane.com


SARILAR
GROUP
SARILAR Türkiye
Phone : +90 262 641 85 89
info@sarilar.com.tr
SARILAR Dubai
Phone : +971 4 320 51 52
Fax : +971 4 320 51 53
sarilar@emirates.net.ae
SARILAR Qatar
Phone : +974 441 11 96
Fax : +974 441 11 94
sarilar@qatar.net.qa

MICHIELSENS trading

Bisschoppenhoflaan 275 • 2100 Antwerp - Belgium

Tel. +32 3 324 40 00
Fax. +32 3 888 42 22
Trading@cranes4u.com
www.cranes4u.com
Member of the Michielsens Group

XCMG

NEW CRANES DEALER

- **HOMOLOGATED BY BELGIAN GOVERMENT - CE - CERTIFIED**
- COMPLETE CHECK UP OF THE MACHINES BEFORE THEY LEAVE OUR DEPOT - MICHIELSENS PROOVED QUALITY-GUARANTEE
- MACHINES IMMEDIATELY DELIVERABLE
- SEVERAL MACHINES ALREADY SOLD TO SATISFIED CUSTOMERS

NEW MOBILE CRANES QY25K5
QY50K + CRAWLER CRANE QUY50

QY25K5 - Mercedes Engine
5th outrigger for extra stability
Boom: 38,5m + 8,3m jib

QY50K + Cummins Engine Boom 40,10m + 15m jib

FIRST IN SECOND HAND CRANES

DEMAG AC75
FAUN ATF 50-3
GROVE INDUSTRIAL 24
GROVE GMK6250
GALION 150A
KRUPP KMK4080
LIEBHERR LTL 1025
LIEBHERR LTM 1030
LIEBHERR LTL 1050
LIEBHERR LTM 1060/2
LIEBHERR LTM 1070
TADANO TR250-EX (4)

LIEBHERR

GROVE

TADANO

FAUN

SALES - SERVICES - PARTS
www.cranes4u.com

CASAR
SPECIAL WIRE ROPES

Are You Safe?

Casar, a leading wire rope producer, has published a new brochure covering various aspects of safety in general and the safe use of wire ropes in particular.

The brochure is available free of charge.

Please contact Casar at
Marketing@casar.de
Fax No. +49 6841 8091 359
www.casar.de

HINEMAN CRANE SALES LIMITED

Make/Model		Capacity	Y.O.M.
DEMAG AC100	ALL TERRAIN	100T	2007
FAUN ATF 80-4	ALL TERRAIN	80T	2006
DEMAG AC80/2	ALL TERRAIN	80T	2004
FAUN ATF65G-4	ALL TERRAIN	65T	2007
FAUN ATF 50-3	ALL TERRAIN	50T	2008
FAUN RTF 40-3	ALL TERRAIN	40T	1999

GOOD CLEAN CRANES WANTED FOR STOCK.

For further information on the above machines, contact: John McCulloch
TEL: +44 (0) 1794 322777 FAX: +44 (0) 1794 322070
MBL: 0044 (0) 7785 291922
E-mail: sales@hinemancranes.com or John@hinemancranes.com

COLTON CRANE COMPANY

★ ★ NEW LISTING: ★ ★

(1) 2004 TEREX-DEMAG AC250-1,300 Ton
(1) 2008 Grove GMK 6350,350 Ton

E-mail: coltoncraneco@yahoo.com
Tel: 714-228-1285 • Fax: 714-228-9920
www.coltoncranecompany.com

HOLLAND DOLLIES
TRANSPORTING

- Mega-Yahts
- Transformers
- Wind Tower Tubes

In your factory or on the road - your transportation solution.

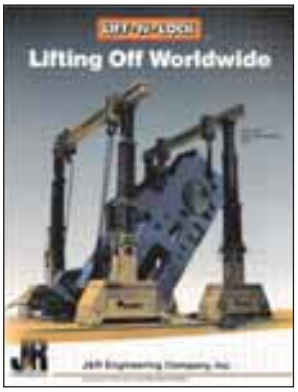
Holland Moving & Rigging Supplies, Inc.
Tel: 1+ 641-585-3630 www.movingriggingsupplies.com

GUNNEBO LIFTING

In business with a purpose

We have developed products to meet the stringent requirements of the offshore oil & gas industry for many years. The working conditions are tough and products have to be able to sustain extreme conditions. Our new BKD safety hook with an extra latch secures a safe operation even when unexpected opening of the hook might occur. We have taken the aero space industry as a role model; when the normal system fails, another is ready to save the situation. That is business with a purpose.

Gunnebo Industrier AB export@gunnebolifting.com www.gunnebolifting.com



LIFT - N - LOCK®

Lift and move heavy loads safely and conveniently with **J&R** Engineering hydraulic boom gantries as detailed in this brochure. The exclusive ***LIFT-N-LOCK®*** feature holds up the load in the event the lift cylinder loses pressure. Other exclusive patented safety feaures include Stabilizer bars, Octagon booms, Load sensing, Digital height indicating system and Oscillating header plates. Field proven models up to 1800 ton capacity and lift heights up to 100 feet. Crawler mounted gantries up to 700 ton capacity and other specialized lifting and transportation equipment available.

Tel: +1 (262) 363-9660
Fax: +1 (262) 363-9620
E-mail: jreng@execpc.com
Web Site: www.jrengco.com

Hellmich Kranservice

Please contact Mr Hellmich / Mrs Petri / Mr Heinrich
Am Schwarzbach a. d. B 44 • D-64560 Riedstadt-Erfelden • Germany
Tel: +49-6158-188413 • Fax: +49-6158-6929
Email: info@allcrane.de
www.allcrane.de
www.allkran-hellmich.de

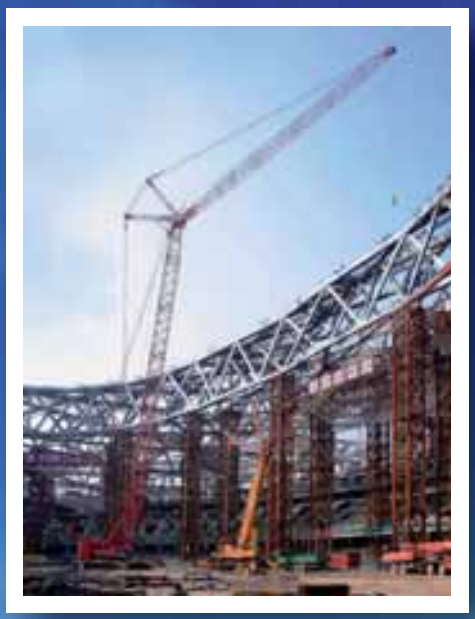
M.J. VAN RIEL USED CRANES HOLLAND.COM

In stock for immediate delivery: NEW CRANE TYRES 1600 R25

Telescopic Cranes:		Mobile Tower Cranes:	
Faun ATF 60-4	1999	Spierings SK477 (2x)	1996
Grove GMK5100	2000	Liebherr MK80 (2x)	2000
PPM 390 ATT	1995	Spierings SK365	1997
Grove GMK 3050	2000	Spierings SK598	2000

Call mr. Martin van Riel :
Mobile: +31 (0)6-53195123
Fax: +31 (0)13-5955448
E-mail: mriel@vanrielbv.nl
Web: www.usedcranesholland.com

The Sky is



With many years experience in the crawler crane industry, the Cranebusiness Company is focussing on the future by offering more practical, economical and advanced solutions to its customers.

Cranebusiness is the EU distributor for Fushun Exc. Co. Ltd, and works closely with this high quality manufacturer of crawler cranes. As a result, there are a growing number of new, more modern cranes that comply fully with international standards and requirements. Proven relations with the Fushun factory, combined with an increasing number of customers, motivate us to work harder. It is our absolute intention to work internationally with Fushun and provide even more high quality and innovative products such as the LOGICRANE.

Located in Moerdijk, the Netherlands, we offer unique advantages being close to the country's main seaports and airports.

We are proud to work with you, we are ***HOOKED ON CRANES.***

CRANE BUSINESS

Cranebusiness BV.
Apolloweg 144782 SB
MOERDIJK
The Netherlands

T: +31 168 381575
F: +31 168 381576
E: info@cranebusiness.com
W: www.cranebusiness.com

our limit

Fushun manufactures crawler cranes from 35 to 350 ton

Fushun Exc. Co. Ltd's roots lie in China's industrial northeast. For over 100 years Fushun has contributed to China's industrial development by manufacturing a host of heavy equipment. Since the 1980's Fushun has accumulated vast experience and currently leads the field in developing and manufacturing modern hydraulic crawler cranes. Large investment in human resources, and in an advanced industrial plant, has seen Fushun become a leading manufacturer of safe and reliable cranes to both the domestic, and international markets.

An ever-growing network of reputable distributors offering even better quality products is seeing a strong relationship develop with the global customer base.

We look at the world; ***THE SKY IS OUR LIMIT.***

Fushun Excavator Corporation Ltd.
No. 2 Shuangyang Road
Fushun, Liaoning
113126 CHINA

T: +86 413 7642558
F: +86 413 7642766
E: export@cnfuwa.com
W: www.cnfuwa.com

FUSHUN EXCAVATOR CORPORATION LTD.

KOBELCO CRANES

TOP PERFORMANCE ALL THE WAY

KOBELCO CRANES Co., Ltd.
TOKYO, JAPAN
Tel: 00-81-(0)3-5789-2130
Fax: 00-81-(0)3-5789-3372
intlsales_cr@kobelconet.com

KOBELCO CRANES MIDDLE EAST FZE
Dubai, U.A.E.
Tel: 00-971-(0)-4-881-3291
Fax: 00-971-(0)-4-881-3299
miyashita@kobelconet.com

KOBELCO CRANES
NORTH AMERICA INC
Houston, Texas,U.S.A.
Tel: 00-1-(0)-713-856-5755
Fax: 00-1-(0)-713-856-9072
jack_fendrick@kobelconet.com

KOBELCO CRANES
SOUTH EAST ASIA PTE. LTD
Singapore
Tel: 00-65-(0)-6268-1308
Fax: 00-65-(0)-6268-2490
okadata@kobelconet.com

KOBELCO CRANES CO., Ltd.
Shanghai Office for CHINA
Tel: 00-86-(0)-21-5382-0120 or 0811
Fax: 00-86-(0)-21-5382-2090
syo@kobelconet.com

KOBELCO CRANES EUROPE Ltd.
FOR U.K. AND IRELAND:
Tel: 00-44-(0)-1473-716-302
Fax: 00-44-(0)-1473-716-301
andrew_brown@kobelconet.com
FOR MAINLAND EUROPE
Tel: 00-31-(0)-36-549-5510
Fax: 00-31-(0)-36-549-5520
jos_verhulst@kobelconet.com

www.kobelco-cranes.com