Kalmar around the world

A GLOBAL BUSINESS MAGAZINE FROM KALMAR INDUSTRIES, NO.2/2008

Yard Optimizer™ is Kalmar's newest simulation tool for optimizing terminal tractor and vehicle transportation at distribution centres. Read more on pages 14–15.

Cargotec opens Dubai office


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Cargotec Corporation, parent company of Kalmar, Hiab and MacGREGOR, has established a new sales and service centre in Dubai. The three sister companies share the facility, enabling Cargotec to provide all-encompassing handling solutions to customers in the Middle East and parts of Africa. Kalmar will use the base to further strengthen relationships with key customers and develop tailored solutions for its growing customer base in the region.

Straddling the globe

Kalmar maintains its position as the market leading supplier of straddle carriers with orders from Germany, South Africa, Finland and the US for a total of 95 machines.

Continues on pages 8–9.

Russia orders 19 *i*con Terminal Tractors

Russia's National Container Company (NCC) has placed an order for 19 TR618i terminal tractors. Fourteen Kalmar *i*con series units will be deployed at NCC's First Container Terminal and the remaining five at its Shushary off-dock container terminal, both in St Petersburg.

Continues on pages 10–11.

Leading the way to ecological productivity

Kalmar maintains its position as a market-leading innovator with new products across the range, and launches Pro Future™, a new concept encompassing all its environmentally friendly equipment.

Kalmar introduces the world's first straddle carrier equipped with hybrid technology.

Pro Future™ is green

Kalmar's Pro Future™ solutions enable customers to truly promote sustainable performance and gain key benefits. Kalmar rates its machines against five ecological drivers. Within each category, products are systematically evaluated, with those scoring highest offering the most environmental benefits. Qualifying machines carry a new green and white Pro Future™ logo, making Kalmar's eco-friendly products easy to recognise. Continues on pages 4–5.

PROFUTURE Ecological Productivity by Kalmar

Foremost in innovation

Kalmar's ECF50-90 series all-electric forklift truck features the latest in AC power technology and is one of the world's most productive, cost-effective and environmentally friendly lifting solutions.

Continues on page 5.

7th generation ESC W electric straddle carriers can now be fitted with Kalmar's Pro Future™ hybrid technology package, including an energy storage system for fuel savings of up to 30 percent. Continues on page 4.

The new purpose-built TT612d distribution tractor, with its enhanced manoeuvrability, hydraulically-powered elevating 5th wheel and the industry's smallest turning radius, can turn around trailers at least three times as quickly as conventional road trucks. Continues on pages 10–11.

Version 2.0 of Kalmar's Remote Machine Interface (RMI) enhances customer value further with its ability to analyse operational, maintenance and service information. Continues on page 7.

Kalmar's Counterbalance Simulator is training operators on new equipment in realistic scenarios. Presented on a "heads-up" display, the simulator uses the latest computer technology and a lifelike cab layout, presenting actual working conditions that the operator will meet. Continues on page 15.

Kalmar

Kalmar is part of Cargotec Corporation

A greener future is here

Market leadership means offering innovative solutions encompassing the ultimate in productive and eco-friendly design.

Today, Kalmar's success is thanks in part to its continuous commitment to improve and refresh its wide range of container, material and trailer handling equipment. Its reputation in the industry as a market-leading innovator of not only reliable and productive products but also intelligent automation and service solutions has solidified Kalmar's status as a preferred global partner.

Success, however, is volatile. A business-to-business company must adapt with the needs of its customers and be ready to invest in the latest technologies offering greater efficiency.

But the climate for staying competitive is changing with prominent concerns about the environmental impact of the logistics chain.

For a long time, Kalmar has been aware of its carbon footprint, a concern which is deeply rooted in its Nordic roots. For more than two decades, the company has been offering terminal tractors with cleaner-burning alternative fuels. Furthermore, just last year, Cargotec Corporation, Kalmar's parent company, made a commitment to reduce the fuel consumption of its customers by approximately 1 million barrels of oil at an annual meeting of the Clinton Global Initiative in New York.

Today, its range of eco-friendly products has grown immensely with offers of electrically and hydraulically powered solutions as well as the cleanest in engine regulations.

The public, however, is increasingly aware of the logistical chain's ecological impact, which calls for real action on the behalf of terminal and yard operators to reduce their harmful emissions. Kalmar is making it easier for customers to identify its greenest solutions by launching Pro Future™, a new concept encompassing all of its environmentally friendly products.

With Kalmar's Pro Future™ solutions, customers can truly promote sustainable performance while also gaining from key benefits, such as direct cost savings with energy efficient engines in the light of rising fuel costs; the ability to prove an operation's eco-friendliness to stakeholders; and improved employee job satisfaction and attendance rates.

Most recently, Kalmar added two new products carrying the green and white Pro Future™ logo to its already diverse range of eco-friendly products—the world's first straddle carrier fitted with Kalmar's modular hybrid technology system and the latest generation of electrically powered 5 to 9 tonne forklifts. Both machines decrease their dependence on fossil fuel and minimise emissions while maintaining the ultimate in productivity.

Sustainability in any industry presents a challenge and an opportunity. Kalmar is dedicated to providing intelligent handling solutions that meet the toughest environmental restrictions without compromising efficiency.

Being committed to ecological productivity is a responsibility taken very seriously at Kalmar, out of respect for our customers, colleagues and future generations.

Pekka Vauramo
President
Kalmar Industries

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Kalmar around the world

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Kalmar employees recently celebrated the 45,000th terminal tractor produced at its Ottawa, Kansas facility as well as the product's 50th anniversary.

The birth of the first purpose-built trailer shunting solution—developed by Kalmar half a century ago—was recently celebrated together with another remarkable achievement: the 45,000th terminal tractor built at Kalmar's US facility.

Happy 50th Birthday, terminal tractor!

Today, customers continue to rely on Kalmar's purpose-built terminal tractors to move trailers at ports, intermodal facilities and distribution centres. Highly regarded for their excellent durability, operator comfort, ease of servicing and latest generation engines featuring the cleanest in engine technology, the 45,000th unit recently came off the assembly line at Kalmar's US production plant in Ottawa, Kansas.

Achieving this milestone is proof enough of the continuous support and dedication of Kalmar's employees in the terminal tractor business.

Mikko Vuojolainen, Vice President, Kalmar Terminal Tractors, said: "Kalmar is the global terminal tractor market leader because we offer an excellent machine backed by the support of the industry's most extensive distribution network. The success of Kalmar's world-class terminal tractors is the result of its close cooperation with many long-term customers.

"As the logistics business continues to develop," Vuojolainen continued, "the need for further product segmentation—complemented by more productive and cost-effective trailer handling solutions – becomes ever more critical. By listening to the unique needs of our customers, Kalmar has been able to provide market leading solutions for port, intermodal and distribution applications."

Kalmar's 45,000th machine was delivered as part of an order from Parsec, Inc, the intermodal division of Cincinnati-based O/B Leasing. Parsec is one of North America's leading providers of contracted terminal management services. In the last 10 years, Parsec has taken into operation hundreds of Kalmar terminal tractors, further solidifying Kalmar's position as the preferred supplier of trailer spotting machines to the intermodal market.

Rapid success built on rich tradition

The popularity of Kalmar's terminal tractor has grown more quickly in recent years. In June 2006, the Ottawa factory produced its 40,000th unit, reinforcing the superiority of Kalmar's offering and its customers' desire to meet just-in-time inventory requirements which influenced more rental and fleet sales. It took 41 years to build the first 25,000 units and less than nine years to build the next 20,000 units.

The keys of Kalmar's 45,000th terminal tractor assembled at its Ottawa facility were presented to the customer, David Budig (second from left), VP of Parsec, Inc and O/B Leasing, by Randy Dennis, VP, Kalmar Sales and Marketing.

Kalmar also leads in product development

As the worldwide leader in terminal tractors, offering customers the most comprehensive range of models for heavy industrial applications as well as ports and terminals, Kalmar has driven the product's development to include many industry firsts.

Besides being the original manufacturer of terminal tractors, Kalmar was the first to engineer its machines with automatic transmission, a rear door entry, integral air conditioning, power cab tilt and ABS brake systems. Kalmar was also the first to introduce a DOT/EPA certified terminal tractor to the US market, a paramount classification for distribution and industrial customers whose operation entails shunting trailers between yards via public streets and roadways.

The next generation featuring CAN-BUS technology

In 2006, Kalmar introduced its i-series of new intelligent terminal tractors featuring the industry's first units equipped with CAN-BUS technology. The new system makes troubleshooting service issues easier for maintenance technicians and also provides practical information like fuel consumption.

Attention to the driver's working environment was paramount in the launch of Kalmar's next phase of intelligent terminal tractors, the icon series. In addition to the CAN-BUS system, the icon series features a newly redesigned cabin boasting a larger work space and better-placed controls for more efficient duty cycles.

One of the many earlier versions of today's terminal tractor.

Committed to the European market

Kalmar continues to advance its range of terminal tractors with the recent launch of its purpose-built TT612d terminal tractor for use at European distribution centres. The new machine features a totally redesigned cab to include a taller rear doorway. Only one low step separates the cabin from the rear deck, ensuring an easy, smooth entry and exit for the driver. Characterised also by its excellent manoeuvrability and elevating 5th wheel, the TT612d model can turn around trailers three times as fast as over-the-road trucks.

"The TT612d distribution tractor further emphasises Kalmar's ability to make product adaptations based on localised needs," said Vuojolainen.

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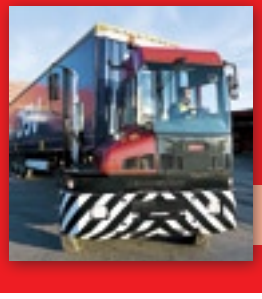

Kalmar launches a modern, more efficient distribution tractor in Europe

Read more on pages 10–11.

PROFUT

Ecological Pro

Being "green" is a responsibility that Kalmar and its customers take very seriously. Reducing emissions and creating cleaner work surroundings doesn't just make environmental sense—it can also reduce costs. The need for productive and eco-friendly solutions is driving Kalmar's commitment to developing new generations of equipment featuring green technology.

This spring, Kalmar launched Pro Future™, a new concept encompassing all of its environmentally friendly equipment. The first Pro Future™ products were announced in Hannover, Germany, at the CeMAT Fair and Exhibition in May and in Amsterdam, the Netherlands, at Terminal Operators Conference Europe in June. Read more about the world's first hybrid straddle carrier and the latest generation all-electric light-duty range of forklifts below.

The new Pro Future™ concept specifies that Kalmar rate its machines against five ecological drivers: source of power, energy efficiency, emissions, noise pollution and recyclability. Within each category, a product or service is evaluated on a scale of one to five, with the highest totals offering the most environmental benefits. Qualifying machines carry a new green and white Pro Future™ logo, making Kalmar's eco-friendly products easy to recognise.

With Kalmar's Pro Future™ solutions, customers can truly promote sustainable performance and gain key benefits, such as direct cost savings with energy efficient engines; the ability to prove an operation's

The most innovative and energy efficient Kalmar machines featuring the cleanest in engine technology will wear the new green and white Pro Future™ logo. Kalmar recently introduced new products to the Pro Future™ equipment range.

Introducing the world's first hybrid straddle carrier

More moves, less fuel

Kalmar continues to enhance its range of eco-friendly products and strengthen its reputation as an industry pioneer with the introduction of the world's first straddle carrier equipped with a hybrid drive system.

The company's new Pro Future™ hybrid technology package is a modular option which can be fitted to its proven 7th generation Kalmar ESC W straddle carrier for genuine fuel savings of up to 25 or 30 percent.

Kalmar's EDRIVE® straddle carriers are currently used throughout the world's container terminals. The new hybrid ESC W straddle carrier will significantly improve the machine's cost per box efficiency by delivering more moves with less fuel. Units equipped with the hybrid package will carry Kalmar's Pro Future™ green and white logo, further emphasising its green credentials to customers and stakeholders.

Ilkka Annala, Vice President, Straddle Carrier product line, commented:

"The cyclical operation of straddle carriers in container terminals is the foundation upon why hybrid technology lends such good results in a straddle carrier handling system. This type of operation is very transient and has suitable positive and negative energy peaks that can be utilised to save fuel.

"Genuine reductions in energy use also mean genuine environmental protection, as the emissions of harmful greenhouse gases, such as CO_2, are reduced considerably. On an annual level, more than 50 tonnes of CO_2 emissions per straddle carrier can be eliminated while employing hybrid technology."

Kalmar's Pro Future™ hybrid technology package allows hoist motors to be used as generators when lowering containers. The energy produced can be stored until it's needed. Similarly, when machines are braking or decelerating, energy can be produced from the electric drive system and stored. The machine's supercapacitor energy storage system draws on the saved energy before making further demands on the diesel engine for movement or lifting, thereby drastically reducing fuel consumption and emissions. An in-cab display shows the machine's energy flow, thus the driving style can be further fine-tuned to make the most efficient use of the straddle carrier.

The Pro Future™ hybrid technology package includes a supercapacitor energy storage system and a VSG (Variable Speed Generator) diesel-generator package with temperature-controlled fan technology. The VSG system optimises engine use by determining whether high or low engine power is needed, further reducing both energy consumption and pollution.

Applying various stages of the Pro Future™ hybrid technology package to future ESC W models is also a possibility. Operators can use the latest technology on the platform of Kalmar's proven and tested 7th generation ECS W straddle carrier without unnecessarily risking lower reliability or availability. This presents terminal operators with greater flexibility in their on-going quest to achieve superior dependability and performance by deploying the most economical methods and meeting increasingly stringent environmental requirements.

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Kalmar is the world's leading supplier of straddle carriers and the frontrunner when it comes to developing eco-friendly solutions, now offering the only straddle carrier on the market equipped with hybrid technology.

TURE

oductivity by Kalmar

eco-friendliness to stakeholders; and improved employee job satisfaction. The recyclability of decommissioned machines also plays a role in Kalmar's customers' effort to maintain more sustainable operations.

Pro Future™ is an evaluation system for Kalmar equipment. Machines will be rated against five ecological decision-making drivers:

- Source of power
- Energy efficiency
- Emissions
- Noise pollution
- Recyclability

Long-term commitment

Kalmar's drive to reduce fuel consumption and emissions has been under way for some time. The company was among the first to introduce low emission engines to heavy material handling equipment like reachstackers and lift trucks, well ahead of new emission regulations. Twenty years ago, Kalmar was already supplying terminal tractors that could use alternative fuels such as CNG (Compressed Natural Gas), LNG (Liquefied Natural Gas) and LPG (Liquid Petroleum Gas).

Kalmar has modernised almost its entire product portfolio with the environment in mind, offering electric, diesel and LPG powered forklifts in the 5- to 9-tonne range, zero-emission and E-One+ all-electric rubber-tyred gantry cranes, and the electrically-driven EDRIVE® straddle carrier.

Besides equipping machines with the industry's cleanest engines, Kalmar is actively developing hybrid technology for some of its handling equipment, like the ESC W straddle carrier. Hybrid machines re-use braking and other waste energy, dramatically reducing energy consumption and emissions.

Customers want green solutions

Environmentally friendly solutions often go hand-in-hand with efficiency. The issue is then not just about equipment, but how to organise the total handling process.

The Port of Hamburg's biggest container terminal operator, Hamburger Hafen und Logistik AG (HHLA) is doubling its handling capacity at Container Terminal Burchardkai by converting its conventional straddle carrier container storage area to an automatic stacking crane (ASC) system by 2012. Kalmar will supply HHLA with 24 ASCs by the end of 2009. The semi-automated terminal conversion will reduce CTB's emission levels and lower operating costs. The rail-mounted cranes will be powered by a cable electric feed as opposed to diesel engines, and a new layout will have shorter travelling distances for straddle carriers.

With the Pro Future™ concept, Kalmar is dedicated to providing intelligent handling solutions that meet the toughest environmental standards on pollution, emissions, noise, safety and working environment without compromising productivity, reliability or cost efficiency.

Presenting the new green truck: Kalmar's all-electric light-duty forklift

Kalmar has launched the ECF50-90 series electric forklift truck featuring the latest in AC power technology. This all-electric forklift series, which can handle loads from 5 to 9 tonnes, joins Kalmar's already long list of Pro Future™ solutions.

Every aspect of the new machine has been examined to produce one of the world's most productive, cost-effective and environmentally friendly lifting solutions.

Using fewer mechanical parts and hydraulic connectors, the Kalmar ECF50-90 series has less items requiring maintenance and replacement. This significantly reduces downtime, increasing machine availability and productivity and reducing total lifetime ownership cost. An ergonomically-designed cab with improved visibility provides a working environment carefully planned to raise the levels of performance.

The ECF50-90 uses two compact AC traction motors, which can be controlled individually. An electronic control system produces excellent driving characteristics, with rapid response to the driver's actions and smooth transitions when accelerating, decelerating, starting and stopping.

Andreas Schumacher, Managing Director of Kalmar Flurförderzeuge Vertriebs GmbH, said: "The number of warehousing operations in Central Europe requesting highly productive forklifts featuring longer work intervals and zero emissions is quickly increasing. With the rising costs of fossil fuels, operators are searching for reliable alternatives in materials handling. Kalmar is dedicated to providing efficient, productive, low maintenance customer-driven solutions."

The Kalmar ECF50-90 series uses the latest technology to maximise battery power and usage, extend intervals between charges, and produce improvements in electricity consumption. Being electrically powered, there are no harmful emissions at the point of use. Regenerative systems replenish the battery when the vehicle is decelerating and when braking. The new machine is quieter, reducing noise pollution and providing a better environment for the driver. By using fewer hydraulic connectors, hydraulic oil leakage is minimised and oil usage dramatically improved.

Components have been placed to optimise heat dissipation and for easy access. The battery is behind the cab, where it can be fixed or, optionally, can slide out or be removed using fork lift slots. For operations requiring continuous use of the truck for several shifts, Kalmar offers complete solutions for battery handling and exchange.

The all-new fully electric Kalmar ECF50-90 series forklift.

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Kalmar Total Terminal Maintenance: The ultimate level of service

In the last decade, the port industry has experienced strong and steady increases in cargo volumes. The demand on established trade routes has put pressure on existing port terminals to perform at the highest level, and consequently, greenfield port development in emerging trade lanes is also on the rise. From the start, Kalmar has been committed to ensuring the smooth and efficient operation of its customers' equipment and machinery. We're now taking that promise one step further with our new Total Terminal Maintenance service concept.

Kalmar doesn't just make the broadest range of container, trailer and heavy industrial handling equipment—we maintain it, too. Backed by the industry's most extensive service network, no one is better placed to work hand-in-hand with terminal management to design and implement the right long-term maintenance strategy.

The issue of terminal equipment maintenance has never been more important and has become a key critical success factor. The infrastructure set up to handle the movement of cargo must operate like a well-oiled machine—smooth and efficient, day in, day out, month after month, meeting ever changing needs and ever-increasing customer expectations. With such a delicate balance required between efficient operation and tight cost management, it's time to consider a fresh approach to the way on-site maintenance is handled.

The success of the Total Terminal Maintenance (TTM) approach relies upon Kalmar and the terminal management team to design an agreed, all-encompassing maintenance plan. Naturally, it can include all makes and types of equipment, spare parts, logistics, components, technicians, operations and management facilities—in fact, everything from servicing equipment to changing light bulbs in an office or fixing potholes on the terminal! And as health and safety legislation constantly evolves, Kalmar TTM integrates sound working practices, robust policies and relevant training to meet consistently high standards.

Brand new operations lend opportunity for service perfection

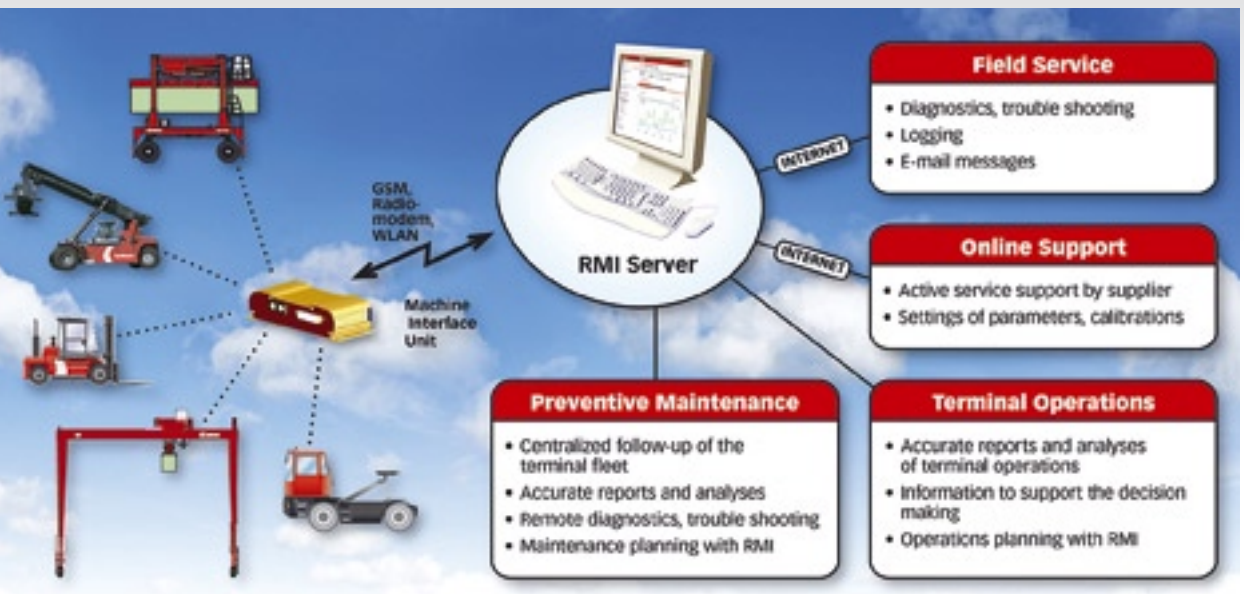
Take for instance greenfield port terminals. With cargo volumes on the continuous rise, more operators are coping with the demand by building new terminals de-

RMI version 2.0 features new look

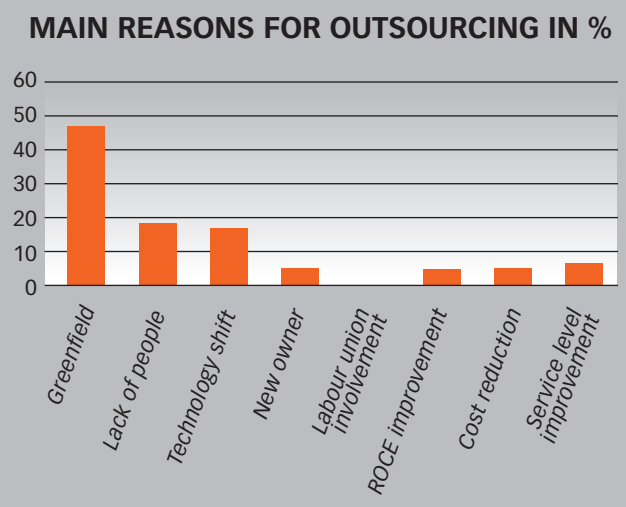
Kalmar has launched version 2.0 of its Remote Machine Interface (RMI), a tool for remote machine monitoring, maintenance tasking and reporting. RMI 2.0 enhances customer value further with its ability to analyse operational, maintenance and service information.

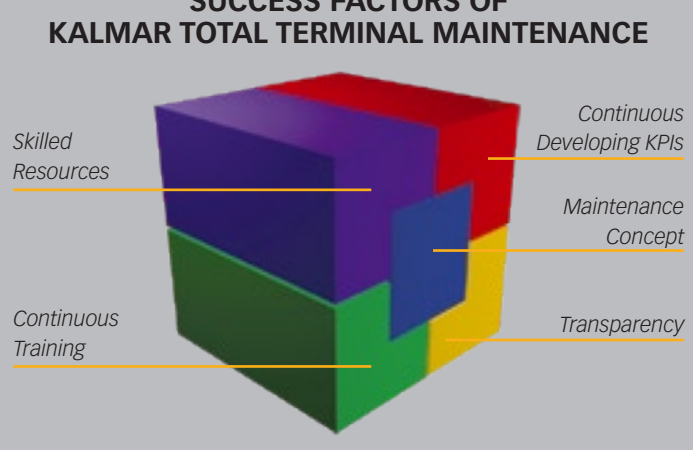
RMI first appeared in 2005, offering operators centralised machine maintenance data, the ability to optimise equipment fleets through real-time maintenance and operational planning, and a decrease in downtime with more predictive maintenance.

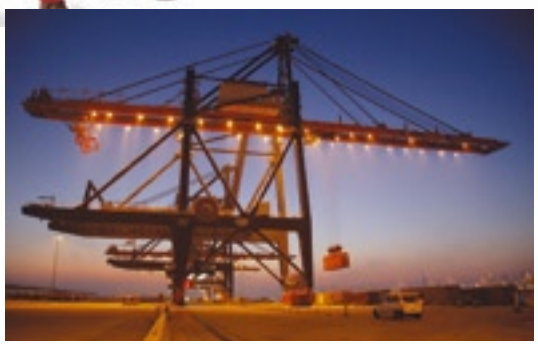
Hannes Myllärniemi, RMI Product Coordinator, said: "RMI 2.0 reflects the



RMI 2.0's new graphical user interface is designed to serve customers efficiently with a more user-friendly menu structure.







signed with the latest handling systems. How better to ensure the uptime of extremely busy operations than by adopting an all-inclusive, coordinated and integrated approach to equipment maintenance?

By outsourcing the entire maintenance operation of a greenfield site to a dedicated, experienced supplier like Kalmar, terminal owners can rest assured that productivity will never be compromised by the service organisation. Kalmar essentially eliminates for terminal owners the burden of recruiting, developing and training maintenance personnel. With a network of more than 3,200 service technicians worldwide—more than any other manufacturer in the industry—Kalmar transcends its role as just a manufacturer and steps up as a partner—sharing the risks associated with keeping terminal equipment up and running.

Furthermore, the advantage of Kalmar TTM is that you never pay for services your operation doesn't require. The output-based payment system of Kalmar TTM is ideal for new terminals because it allows maintenance budgets to increase in parallel with new business, which in turn requires more maintenance as the usage of equipment increases. Of paramount importance is the fact that customers can focus on their core business of serving shipping lines as Kalmar shares the risk and takes full responsibility for operational productivity.

No ordinary maintenance offering

Marco Plug, General Manager, TTM, said: "TTM isn't just an 'off the shelf' package—as every port and terminal is different, each TTM agreement is carefully tailored to meet the maintenance needs of the customer, whatever those needs might be, while value for money remains a crucial consideration.

"TTM arrangements have already been successfully provided to operators in Europe, the Nordic states, Africa and Asia."

Kalmar TTM package not only delivers certainty to stakeholders, it also ensures operational efficiency is maximised, standards are maintained and costs controlled. TTM gives customers peace of mind, knowing that they don't have to worry about equipment breakdowns or other operational glitches because Kalmar's remuneration is based on the productivity achieved.

With just one point of contact, it's possible to take a clear, holistic approach to terminal maintenance, ensuring maximum equipment uptime, avoiding bottlenecks by carefully planning machine maintenance, and delivering real cost savings and efficiencies with certainty.

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and better functionality

importance of using analytical data to create more efficient operations. Information management is vital to making the best use of machines, and cutting-edge information provides a significant competitive advantage.

"RMI 2.0 further refines machine data, producing applicable business knowledge. It helps terminal operators to follow, better understand and develop handling operations. The terminal operator no longer needs to check machines individually or base decisions on rough calculations."

Different reports and analyses can be investigated in various ways, and the customer can choose the timeframes for the desired actions easily from the options.

New, user-friendly interface

RMI 2.0 uses Kalmar's proven data collection software and a new graphical user interface (GUI) featuring better, more analytical functionality, with a simpler menu structure and easier usability. Data is collected from the entire terminal machine fleet, sent wirelessly to the RMI system and accessed via the user's GUI. Customers can generate a variety of reports and analyses, choosing specific timeframes for desired actions.

RMI 2.0 can extend the life of handling equipment through efficiently planning preventative maintenance. Detailed alarm reporting ensures that machine operators are prompted for critical checks on, for example, fluid levels and tyre pressures on Kalmar's latest generation straddle carriers.

It can be fitted to all Kalmar equipment and to other-branded machinery, providing extensive real-time information. Customers' fleets can also be monitored remotely by Kalmar experts via the internet, providing direct product support and assistance, and easing the uploading of software updates to equipment.

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On top of the

Kalmar's straddle carriers continue to be the preference of some of the world's most productive ports, with significant new orders being recently placed. The orders reflect the entire Kalmar straddle carrier range, and demonstrate how Kalmar works closely with its customers to provide the ideal handling solutions, keeping Kalmar at the top as the world's number one supplier of straddle carriers.

EUROGATE chooses EDRIVE® for Hamburg and Bremerhaven

A grand total of 48 of Kalmar's updated 7th generation EDRIVE® series straddle carriers are to be supplied to boost EUROGATE's operations in Germany. Twenty-two of the ESC440W units have been ordered for EUROGATE Container Terminal Bremerhaven, and thirteen will go to EUROGATE Container Terminal Hamburg.

The remaining thirteen EDRIVE® units will be deployed at the MSC Gate Bremerhaven terminal, a joint venture between EUROGATE and one of the world's largest container carriers, Mediterranean Shipping Company. Delivery of the units will commence in the autumn.

EUROGATE is Europe's leading container terminal and logistic group. Their decision to purchase a significant number of Kalmar straddle carriers for the three terminals was based on the outstanding performance of its already growing Kalmar ESC W fleet. The new

More for South Africa, Finland and the

Kalmar's straddle carriers, featuring proven 7th generation technology consisting of an enhanced CAN-bus PLC diagnostics system, fly-by-wire controls and PLC-controlled engines, continue to attract orders from operators across the world.

Port of Durban

SOUTH AFRICA

Transnet Port Terminals (TPT) addressed increasing volumes at Durban Container Terminal (DCT) by ordering 30 CSC440 straddle carriers capable of stacking containers 4-high. DCT currently uses 3- and 4-high stacks, so its new Kalmar machines will further increase stacking density.

Logan Naidoo, Capital Projects General Manager, TPT, said: "With container traffic in South Africa on the rise, we needed a fast and cost-effective solution to accommodate the demand for more storage capacity at Durban Container Terminal."

TPT has been a long-time user of Kalmar straddle carriers, currently employing more than 140 of the machines at its container terminals in Durban, Cape Town and Port Elizabeth.

FINLAND

Steveco Oy has ordered ten Kalmar EDRIVE® ESC440W

Port of Kotka

straddle carriers for its operations at the Port of Kotka. The machines will be capable of stacking containers 1-over-3 high, one higher than the straddle carriers currently used at the Mussalo Container Terminal in Kotka.

Jouko Kyrola, President of Kalmar Finland, said: "Steveco chose us for our reliable, environmentally friendly equipment. By heightening stacking blocks, Steveco can cost-effectively and flexibly expand capacity. The order demonstrates how Kalmar's eco-friendly and economical straddle carriers increase productivity and reduce costs."

Service matters, too

Norsteve Oslo AS awarded Kalmar a comprehensive five-year parts and labour service contract to provide preventative maintenance, trouble shooting, and repairs due to normal wear and tear for five Kalmar ESC 350 W straddle carriers at the new Sjursøya Container Terminal in the Port of Oslo.

Kalmar's 7th generation EDRIVE® straddle carrier is a new type of machine for the Port and Norsteve Oslo. However, Norsteve Oslo's parent company, Finnsteve Ab Oy, operates identical units at the Mussalo Container Terminal in the Port of Kotka in Finland.

Eero Posti, Kalmar Contract Maintenance Manager, said: "Norsteve Oslo's order for EDRIVE straddle carriers means the two companies can benefit from technological and operational synergies. Norsteve Oslo's service agreement demonstrates Kalmar's commitment to developing our maintenance offering by partnering with customers."

Port of Oslo

world

4-high units have a lift capacity of 40 tonnes and feature Kalmar's latest enhanced 7th generation technology with electrical winch hoists.

Ilkka Annala, Vice President, Kalmar Straddle Carriers, said: "In just a few years, the active and continuous fine tuning of EUROGATE's Kalmar machines has resulted in a successful partnership and a solution that is a good blend of the customer's requirements and Kalmar's offering.

"EUROGATE introduced Kalmar ESC W straddle carriers into its Hamburg container handling operation two years ago," said Annala. "The operator was immediately pleased with the machines' excellent performance, reduced fuel cost, minimal noise output and eco-friendliness, especially considering the fast pace and demanding operation of EUROGATE in Hamburg.

"EUROGATE has since opted for more EDRIVE units each year, knowing fully that they will receive outstanding machine and service performance thanks to the extensive support network of Kalmar Flurförderzeuge Vertriebs GmbH in Hamburg and Bremerhaven."

Kalmar's ESC W units are designed to meet the ever-stricter greening regulations and tough noise standards at German ports. The machines feature electrically controlled engines, which lower exhaust emissions and reduce fuel consumption—making them environment-friendly as well as cost-effective. Their soft landing system and automatic container picking system minimise the noise generated at container handling and the subsequent positioning of containers on the stack or ground.

EUROGATE operates at nine terminals across Europe and handles more than 13.9 million TEU a year.

e US...

Port of Tacoma

USA

The Port of Tacoma in Washington state ordered seven Kalmar CSC 340 straddle carriers for loading and unloading double stack container cars at its on-dock intermodal rail facility. The units have a 40-tonne single lift capability and can stack containers 3-high.

Jim Anastasio, President, Kalmar Region Americas, said: "Kalmar has been supplying straddle carriers to the Port of Tacoma since 1986. This recent order for new machines will add to the port's fleet of 26 Kalmar straddle carriers and assist in the demanding operating conditions found at intermodal rail terminals."

Bryon Boerner, Electronics Technology Manager at the Port of Tacoma, said: "Kalmar's straddle carriers have proven to be extremely reliable. The CSC machine has a robust frame that we feel stands up to the rough service of rail yards. Backed by excellent support from Kalmar's team in Tacoma, the straddle carriers are our labour partners' preferred machines."

Kalmar straddle carrier users recently met in Antwerp to discuss the machine's latest technical and operational developments. As part of the event, the group visited PSA's straddle carrier terminal at the Port of Antwerp.

Straddle Carrier Users' Forum returns to Europe

Kalmar's Straddle Carrier Users' Forum in Antwerp, Belgium was well attended by European terminal operators. The aim of the spring event, organised in co-operation with PSA with a visit to the operator's terminal in the Port of Antwerp, was to bring users of Kalmar's straddle carriers together to discuss the machine's latest technical and operational developments.

One of the forum's main topics was the environmental impact of straddle carriers. Kalmar, as a market leader in ecological R&D, presented in Antwerp a prototype of its electrically driven straddle carrier featuring Kalmar Pro Future™ hybrid technology and an energy storage system. The emission-reducing, fuel-saving machine was formally launched at this year's TOC Europe in Amsterdam.

Another important item on the agenda was automation and the possibility of shifting from manned to unmanned container handing operations. Early 2008, Kalmar launched the industry's first so-called one-over-one fully-automated Kalmar Autoshuttle®, a totally unmanned, self-loading vehicle able to pick, place and transport containers between ship-to-shore and yard stacking cranes.

Kalmar's track record in developing fully automated machines is well-proven. In cooperation with Patrick Technology & Systems (PTS), Kalmar launched the world's first fully automated straddle carrier operation with the implementation of 23 Kalmar EDRIVE® fully automated straddle carriers at Brisbane Fisherman's Island in 2005. Andrew Zerk of PTS made a presentation at the forum which conveyed the current excellent performance figures of its Brisbane terminal as well as Patrick's future plans for automation.

Ilkka Annala, VP, Kalmar Straddle Carriers, commented that the straddle carrier users' forum plays a significant role in the on-going development of the product line. He explained:

"It is absolutely essential that we organize users' forums because it is the best way to receive direct customer feedback and to learn how they view the current straddle carrier market. Their comments are systematically collected, and action plans are created to develop our products and processes. As an example, it's now possible to remotely monitor the tyre pressure of Kalmar straddle carriers which was suggested at previous forums. Also, Kalmar's unique straddle carrier product improvement/service bulletin system was created based on direct customer feedback at a users' forum.

"Probably of paramount importance is to create a forum where straddle carrier operators can exchange their ideas, thoughts and experiences with other Kalmar straddle carrier users. That is the forum's overall goal," Annala concludes.

Kalmar has been hosting Straddle Carrier Users' Forums annually since 1994. The forum is an annual event and rotates locations in Europe, Asia and the Americas regions.

Kalmar Straddle Carrier Users' Forum
Antwerp April 9–10, 2008

Wednesday, April 9th

9.00 Welcoming words, Jorma Tirkkonen
9.10 Introduction of Terminals, All
10.30 Coffee and Refreshments
10.45 New 7th generation Kalmar Straddle Carrier, Ilkka Annala
11.00 Environmental aspects and availability issues in SC operations, Ilkka Annala
11.30 Kalmar service support, Marco Plug
12.00 Kalmar driver assisting features in straddle carriers, Raimo Raita
12.30 Lunch
14.00 Users' feedback session
16.00 Coffee and Refreshments
16.15 Kalmar's fully automated solution for straddle and shuttle carriers, Ilkka Annala & Andrew Zerk
17.15 Terminal Development, Jari Pirhonen

Thursday, April 10th

9.00 Short presentation of PSA/HNN terminal, Caroline Creve
Departure for visit to PSA Terminal Quay 913
10.00 ... presentation of ESC360W

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Europe welcomes a modern, more

the Kalmar distrib

As the world's market-leading manufacturer of terminal tractors, Kalmar continues to improve upon its range of purpose-built trailer handling solutions by launching the TT612d distribution tractor. The new model has been specifically designed to meet the demanding operational requirements of European distribution centres.

The new distribution tractor from Kalmar can move at least three trailers in the same amount of time a conventional over-the-road-truck moves one. Kalmar applied its enormous expertise in engineering terminal tractors to produce a vehicle which features excellent manoeuvrability, low operating costs, superior cabin comfort, easily accessible service points and the ultimate in proven reliability.

Customers can seek further assurance knowing that Kalmar was the first manufacturer to introduce a purpose-built terminal tractor to the market, an achievement which saw its 50th anniversary this year. In 1958, Kalmar sold its first terminal tractor to US port customers requiring fast, efficient trailer movements. Today, Kalmar's range of trailer handling solutions has obviously evolved and expanded to serve customers operating in distribution and industrial environments around the world.

Operator ease and a safe working environment draw top consideration

Driver comfort and safety remained paramount in designing a productive, low-cost workhorse. The TT612d's cabin has been totally redesigned to include a taller rear doorway. Only one low step separates the cabin from the rear deck, ensuring an easy, smooth entry and exit for the driver. Kalmar's new distribution tractor also facilitates safe movements even in poor and wet conditions with wide stairways on both sides of the rear deck and the industry's largest level work space.

Timo Matikainen, Director in charge of terminal tractor sales in Europe, said the innovative design and functionality of the new TT612d is the result of thorough ergonomic research and input from operators. He continued:

"Kalmar has invested a great deal of time and effort in making working conditions better and tasks easier for drivers.

"Traditionally, road trucks have been used at distribution centres to move trailers between loading docks and parking areas. However, with several key improvements to the cabin and rear deck, the TT612d now offers the ultimate in efficient duty cycles—a top priority of busy distribution terminal operations."

Europe's distribution centres gain in number and popularity

Today, Europe's extensive network of retail and logistics depots continues to grow as more customers require enhanced speed-to-market and just-in-time deliveries and inter-European Union commerce continues to rise. Kalmar's overwhelming reputation as the preferred supplier of terminal tractors to the mature North American distribution market laid the groundwork for successfully introducing the modernised, purpose-built TT612d model to customers in Europe.

Featuring enhanced manoeuvrability, Kalmar's new distribution tractor allows faster transfer operations as it has the industry's smallest turning radius. Time is also saved with its hydraulically-powered elevating 5th wheel, eliminating the need for the driver to crank the trailer's landing gear and thereby decreasing operator fatigue. Drivers will also enjoy conveniently placed switches and controls, improved visibility and a very quiet cabin.

Serviceability, of course, did not go overlooked in the design of the TT612d model. The new machine features more accessible service points for maintenance and repairs—thanks in part to its electronically lifted cab—resulting in improved productivity and less downtime. A multidisplay located on the dash inside the cabin also provides the driver with essential information and advice, helping to maximise service intervals.

The 'green' factor

Kalmar's commitment to the environment remains a critical element in the design of its products. The TT612d features Kalmar's proven power line including the cleanest in engine standards with Stage 3a / Tier 3 technology emitting only the minimum in harmful emissions. The new distribution tractor combines innovation and reliability resulting in low operating costs with a machine design which decreases component wear. Easier maintenance also improves productivity and profitability with more accessible service points.

The Kalmar distribution tractor has gone from strength to strength with its high-quality design and well-known components guaranteeing maximum uptime and keeping customers' distribution operations on the move.

Kalmar now offers **Yard Optimizer™**, a simulation tool for improving operational efficiency at distribution centres. Read more on pages 14–15.

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Russia's leading container terminal

Since the launch of its icon generation of terminal tractors just one year ago, Kalmar has received many requests for the TT618i, TR618i and TRL618i models, characterised by superior operator comfort, outstanding performance and long lifetime durability.

One of the largest orders for icon units came from Russia's largest container terminal operator, National Container Company (NCC), which made an agreement with Kalmar for the supply of 19 TR618i terminal tractors.

For NCC, the TR618i model's efficient operation, easily accessible maintenance points and innovative design played a crucial role in the company's agreement to purchase the units. Kalmar's icon series terminal tractors offer numerous advantages in productivity, cost-efficiency, safety and durability.

Operations receive a boost for the future

The annual container terminal turnover in Eastern Europe is expected to grow 10 to 20 percent each year until 2012, and NCC is making major investments in equipment and infrastructure to meet the anticipated demands on its future operations.

Fourteen Kalmar icon series units will be deployed at NCC's First Container Terminal and the remaining five at its Shushary off-dock container terminal, both in St Petersburg. All of the units are scheduled to be delivered by September 2008.

Timo Matikainen, commented on NCC's decision to purchase

Kalmar's icon series terminal tractors offer numerous advantages in productivity, cost-efficiency, safety and durability.

efficient trailer handling solution:

bution tractor

The new TT612d distribution tractor– purpose built for the European market.

Tall cabin with functional rear doorway—only one low step to the even rear deck.

Large windows and angled corners without A-pillars provide excellent all-round visibility.

Two double-acting hydraulic cylinders for efficient trailer lifting and lowering.

TT612d is the best solution for distribution in terminals

- Three times as fast turnaround times
- Excellent manoeuvrability
- Low operating costs
- Superior cabin design and comfort
- Easily accessible service points
- Superior visibility
- Largest working space on the market
- Display unit provides essential information

operator orders 19 *i*con series units

terminal tractors from Kalmar:

"NCC matched its needs against the advantages of the TR618i and concluded that the icon series' CAN-BUS control system would help streamline its service operations making procedures faster, safer and simpler—a definite win for Russia's leading stevedore."

Durable even in harsh conditions

The TR618i model also boasts a robust frame and a new, stronger Dana RTE15822 transmission enabling softer and smoother gear changes with better traction—further reassuring NCC that the enhanced durability of the icon series terminal tractor will stand up to Russia's harshest winter conditions.

NCC operates numerous container terminals in Russia and CIS countries, employing various Kalmar equipment—including straddle carriers, reachstackers and terminal tractors—and handling an aggregated throughput in 2007 of more than 1.5 million TEU. The company is currently engaged in the construction of Ust-Luga Container Terminal near St Petersburg. The new facility will have an expected capacity of 3 million TEU making it the largest in Russia and the Baltic region.

Many of the world's busiest ports are committed to cleaner operations

The following news items were featured in the May/June 2008 issue of* GreenPort*, a new maritime journal aiming to bring together opinions, agendas and ideas from a wide range of port authorities, terminal operators, shipping lines, equipment suppliers, stakeholders and customers to develop their business in an environmentally sustainable and responsible way.

Charleston commits to cleaner air

By Autumn 2008, every drop of fuel powering equipment at the Port of Charleston's public facilities will be cleaner ultra-low sulphur diesel (ULSD), reaffirming the port community's commitment to cleaner air and cutting emissions by 10 percent.

The South Carolina State Ports Authority (SCSPA) and seven on-terminal tenants will all be using ULSD by no later than September of this year, nearly two years before it is required by federal regulations. The US Environmental Protection Agency (EPA) has mandated that all off-road equipment switch to ULSD by 2010.

The Ports Authority and seven different companies use fuel on the public marine terminals in Charleston to power on-terminal cranes, lifting equipment, buses, trucks, refrigerated container generators and other engines.

Port of Charleston

The upgrade has certain commercial impact. ULSD can be more expensive than traditional low sulphur fuel. However, due to increased use and demand for off-road ULSD, the fuel is now available in larger quantities in the area. Also, engine upgrades or replacements may be necessary to use the cleaner fuel.

"We can achieve a cleaner environment while developing additional business in the Port of Charleston," says Bernard Groseclose, President and CEO of the SCSPA.

www.scspa.com

Stephen L. Johnson

Houston welcomes EPA's new diesel emissions rules

US Environmental Protection Agency (EPA) Administrator Stephen L. Johnson announced new diesel emission standards, requiring new and existing locomotive and marine diesel engines to significantly reduce air pollution.

"EPA is fitting another important piece into the clean diesel puzzle by cleaning emissions from our trains and boats," said Charlie Jenkins, Port of Houston Authority (PHA) director of planning & environment. "As more and more goods flow through our ports and railways, EPA is cutting diesel emissions at their source—keeping our nation on track toward a clean, healthy, productive tomorrow."

PHA is a member of the EPA's National Environmental Performance Track and the Blue Skyways Collaborative, which is dedicated to reducing diesel fuel emissions, and was the first port to implement an Environmental Management System that meets the rigorous parameters of the ISO 14001 standards..

Gothenburg saves emissions

The Port of Gothenburg is investing heavily in expanding rail traffic to and from the port. Last year 42,000 tonnes of carbon dioxide were saved by transporting goods in and out of the Port of Gothenburg by rail instead of by road. This is equivalent to 200,000 flights between Gothenburg and Stockholm or the annual emissions from 14,000 passenger cars.

Together with rail operators, industrial companies, forwarding agents, shipping lines and the National Rail Administration, the port has built up a system of rail shuttles. Ten years ago, the first shuttle began operating to Karlstad. The number has now risen to 22, with daily departures to 21 towns in Sweden.

Rail shuttles make it possible to establish a direct route between towns throughout Sweden and the largest port in the Nordic region. Instead of the companies themselves moving their freight to the port, it is driven to the nearest inland terminal before being loaded onto a train bound for Gothenburg.

"In reality we see no limit

Kalmar pushes the pedal to the metal

When Europe's largest metal recycler, European Metal Recycling (EMR), experienced a problem with its Kalmar RSD4231-5TL reachstacker at its Birmingham depot in the UK, the Kalmar parts and service team pulled out all the stops to provide a rapid solution.

The reachstacker was first commissioned by EMR in 1997 to handle containers carrying metal-based consumer products. With many thousands of tonnes being processed every week, the machine has been working to maximum capacity and providing high standards of performance over the years.

Naturally, with a machine being worked this hard, occasionally things go wrong. When they do, customers can rely on Kalmar's experienced service engineers and parts infrastructure to solve the problem quickly.

So when EMR's machine experienced a wheel hub failure on

EMR considers its Kalmar reachstacker a workhorse—handling metal-based consumer products for the last 10 years.

GreenPort / EcoPorts 2009

GreenPorts/EcoPorts 2009 is a conference aiming for safer, healthier and cleaner operations in ports, terminals and the wider logistics chain. The Port Authority of Naples will host the next GreenPort/EcoPorts conference 25–26 February 2009. For more information, visit www.green-port.net.

Long Beach signs enviro-agreement with Rotterdam

During a recent trade mission to major European ports, Long Beach Port officials signed an agreement with Port of Rotterdam to share best environmental practices, work together on ways to reduce greenhouse gases and promote environmentally sustainable seaport technologies.

"We look forward to sharing our environmental efforts with ports around the world," said Port of Rotterdam CEO Hans Smits. "We are impressed with what the Port of Long Beach has done."

Under the comprehensive exchange agreement, or "Memorandum of Understanding", the ports of Long Beach and Rotterdam will collaborate on environmental issues such as marine wildlife, air quality, soils and sediments, water quality, sustainability and community engagement.

Port of Long Beach

The accord covers the exchange of technical information on improving air quality, the establishment of joint delegations to study port emissions and pollutants, as well as the ongoing development of control measures and best practices surrounding port and urban sustainability policies.

to this explosive rate of development," says Eric Nilsson, head of the Port of Gothenburg Rail Center (PGRC). "The demand for rail shuttles is enormous. Certain shipping lines even insist that their goods are forwarded by rail."

Last year, PGRC handled 190,000 containers. In seven years, volumes have more than tripled and each month new records are set. In total, 38 percent of container goods to the Port of Gothenburg arrive by rail shuttle, a figure that is unique by international standards.

The Port of Gothenburg has received another environmental award for its shore-to-ship electricity supply initiative. The Clean Seas Award was presented by Lloyd's List newspaper.

North Africa, South Europe look to Kalmar for eco-friendly RTGs

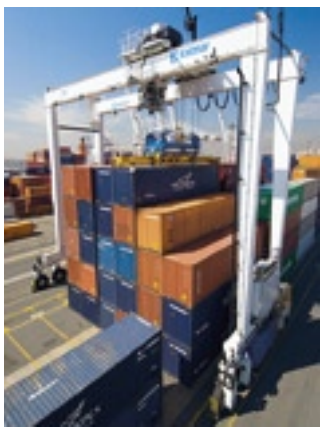
Moroccan ports invest in efficiency and capacity

Somaport, operating at the Port of Casablanca, has ordered 10 E-One+ rubber-tyred gantry (RTG) cranes. The 7+1 wide and 1-over-5 high units, fitted with Bromma twinlift spreaders and Kalmar's automation systems—Smartrail®, for autosteering and container position verification, and Remote Machine Interface (RMI), for remote machine monitoring, maintenance tasking and reporting—will be delivered by the beginning of 2009. Somaport took its commitment to ensuring maximum machine uptime a step further with an agreement which calls for Kalmar to perform full-maintenance on its cranes for a seven-year period.

Demand for Kalmar RTGs continues at Tangier Mediterranean Port, the brand new, state-of-the-art container handling facility located at the Northern tip of Morocco and at the crossroads of the major east-west and north-south shipping routes. Tangier Medgate S A—a joint venture formed by Eurogate, Contship Italia, MSC, CMA CGM and COMANAV—recently exercised an option for five E-One RTGs on top of the 11 cranes ordered in the middle of last year. All 16 of the 7+1 wide and 1-over-5 high machines for Tangier will feature Bromma twinlift spreaders and Kalmar's Smartrail®.

Spanish operators modernize with innovative, reliable cranes

Abra Terminales Maritimas (ATM), S A, operating at the Port of Bilbao, has awarded Kalmar a contract for the supply of two E-One+ RTGs. The new

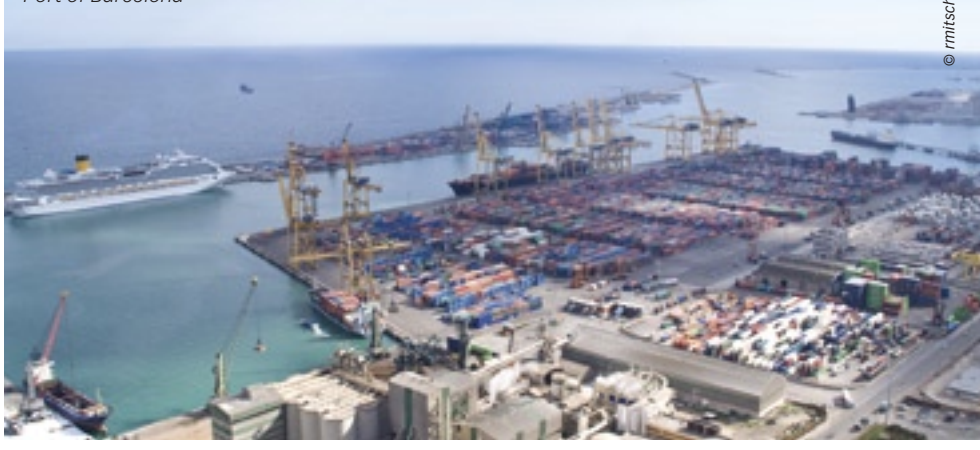


Kalmar's green, productive and uncompromising RTG.

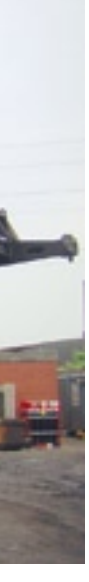
7+1 wide and 1-over-5 high units featuring Kalmar's Smartrail® will be delivered starting in October, joining ATM's five Kalmar RTGs already in operation. The terminal operator's commitment to efficiency was evident with its additional request to retrofit ATM's eight existing RTGs with Smartrail®.

Container terminal Port Nou at the Port of Barcelona recently opted for two Kalmar E-One RTGs featuring a 16-wheel design and Variable Speed Generators (VSG) for further reductions in energy consumption and pollution. The 7+1 wide and 1-over-5 high units will come equipped with Kalmar's Smartrail® and replace the operator's two existing RTG cranes.

Four 7+1 wide and 1-over-5 high Kalmar E-One RTGs were recently delivered to OPCSA's terminal in Las Palmas de Gran Canaria, on the fast-track to becoming one of Spain's busiest port terminals.



Port of Barcelona



a Saturday morning, Kalmar reacted swiftly to rectify the problem. A quick call was made around midday to Kalmar Ltd's parts team and the complete wheel hub and other required parts, a heavy consignment of around 280 kg, was soon in a dedicated vehicle on its way from Kalmar's European parts distribution centre in France.

The delivery was achieved overnight and arrived on Sunday morning where the service team was on site to meet the delivery and had already prepared the wheel for the new hub installation. The repair was carried out and the machine became operational within 24 hours of the fault being diagnosed.

EMR Depot Manager, James Sheppard, was impressed with the speed of response from Kalmar. "Time is money in our business, and to have containers standing represents significant costs in downtime," he explained. "To have a component failure like this resolved in such a short amount of time speaks volumes about Kalmar's commitment to customer service. It's one of the principle reasons we specified Kalmar in the first place."

Kalmar's man on the spot—Service Engineer Andy Ward—commented that responding quickly and efficiently is what sets Kalmar's service apart. "With a reachstaker playing a vital role in EMR's production process, the cost of downtime is very expensive," he said. "With Kalmar's service and parts infrastructure, we are geared to respond quickly—even during weekends— to minimise disruption and downtime."

"We managed to get the customer's machine back in action in record time, which is part of our unique service commitment," Ward added.

European Metal Recycling

European Metal Recycling was formed in 1994 by Manchester-based Sheppard Group and is a global leader in recycling. The company employs 1,400 people and operates at 65 locations, with liaison offices all around the world.

Its core business involves the fast-paced accumulation and recycling of metal-based consumer products, metal off-cuts from factories and demolition materials. Over 8.5 million tonnes a year are processed at its plants.

Yard Optin

A smart way to optimize distribution centre operations

Jari Pirhonen, General Manager, Kalmar Terminal Development (from left), Mike Davies, Regional Manager, Kalmar Ltd., Jorma Hartimo, Cybercube, Chris Mason, Group IT Director, Wincanton, and Richard Conneely, Head of Transport Logisics, Wincanton, launched the Yard Optimizer™ in March 2008.

Kalmar, in cooperation with one of the leading supply chain providers, Wincanton, has developed Yard Optimizer™, a tool for simulating yard operations at distribution centres. The new software further strengthens the ability of Kalmar to assist customers and consultants with planning new hubs and improving the efficiency of existing centres.

Yard Optimizer™—a spin-off product of Kalmar's proven Port Optimizer™, and a tool for simulating container handling systems—optimizes terminal tractor and vehicle transportation inside distribution centres. The simulation's principal advantage is its ability to estimate the optimum amount of vehicles needed in the yard in various operating scenarios.

"This simulation tool helps us to estimate how many vehicles are needed in distribution centres, together with different inputs from our management and expertise. The simulator will help us to find the right answer," says Richard Conneely, Head of Transport Consultancy, Wincanton.

Deploying right

With 400 locations across Europe, Wincanton is focused on achieving greater efficiency results by optimising its terminal tractor handling operations. With the help of Yard Optimizer™, Wincanton can employ the correct number of terminal tractors working at its distribution centres, therefore ensuring the smooth and efficient transfer of trailers in and out of its yards.

In the typical operation, at a logistics centre, a vehicle from a supplier brings the goods to the distribution centre. The merchandise is then unloaded from the trailer and stored at the facility until the items are dispatched to several stores. When handling trailers, unnecessary waiting times can create efficiency problems for distribution companies like Wincanton if handling operations have not been optimized.

Wincanton receives numerous vehicles every day in its distribution centres. Instead of vehicles driving directly to the loading bays where they would have to wait to be loaded, Wincanton is using terminal tractors in handling trailers in the yard. Terminal tractors move trailers between loading bays and parking areas. This maximises the efficiency of the vehicles because they can leave an empty trailer at the parking lot and pick up a full trailer to be transported to another location.

Flexible evaluation

Yard Optimizer™ can be easily adapted to different handling operations. The software was designed to accommodate three basic scenarios: small, medium and large distribution yards. A customer can choose the closest size based on their operation and then modify the yard by removing or adding parking and door slots. Also, a more detailed model based on the customer's actual layout is possible. Other information which is necessary to input in the system, to achieve the most accurate equipment estimation, includes information such as gate and bay processing time for trucks, trailer hook-up and detachment times and bay priorities. Yard Optimizer™ provides an easy way of estimating the efficiency and costs of different scenarios.

"With the help of Wincanton's expertise in logistics and supply chain solutions, Kalmar has been able to gain essential information for building the simulation tool based on actual figures rather than theoretical models. This helps us to better understand customer requirements in distribution centre operations," explained Jari Pirhonen, General Manager, Kalmar Terminal Development.

nizer™

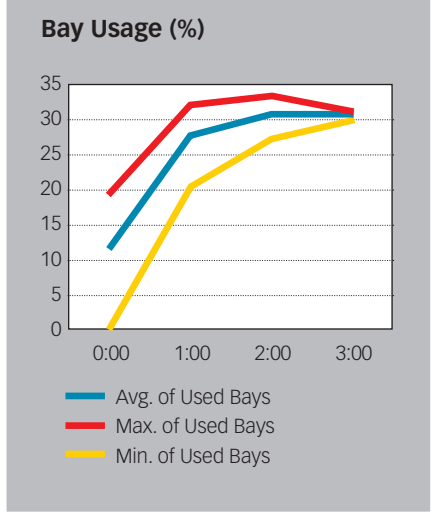
Yard Optimizer™ simulates the operation of a distribution centre so that the actual movements can be seen.

"This has also been a unique opportunity for Kalmar to deepen our cooperation with one of the largest distribution companies in the U.K. Wincanton's in depth knowledge of logistics and distribution centres has been the key in developing an understanding of what is required in this business sector," added Mike Davies, Regional Manager, Kalmar Ltd.

Fast and easy-to-use

Wincanton will be using the simulator mainly for new projects where they hope to gain business by proving to customers that they offer expert supply chain solutions. The tool will also be used to assist Wincaton's development projects that aim to improve existing operations.

Conneely said that one of the most important features of Yard Optimizer™ is that it's easy and fast to use. "The three main scenarios we use are enough to get all the critical info that is needed in a short time period to support, for example, a tender process. The tool is simple enough to get fast answers which make it possible to change parameters for different scenarios and to compare the results," he explained further.



Wincanton is a leading European provider of supply chain solutions. With a turnover of £1.93 billion and operations in 15 countries, the business employs over 30,000 professionals. They strive to achieve operational excellence, focusing closely on customer needs, to maintain and expand product leadership and deliver value.

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Kalmar's counterbalance simulator:

As real as it gets!

Nothing beats real-life practice, and Kalmar's modern training simulator aims to give new machine operators a real true-to-life training experience.

The right training is essential if new machinery and practices are to be introduced quickly and efficiently. The Kalmar Counterbalance Simulator helps to train operators on new equipment in a variety of scenarios. Presented on a "heads-up" display, the simulator uses the very latest computer technology in a mobile unit that can be used across many training sites.

Mikael Persson, Kalmar Reachstacker Product Line Director, said, "Using the simulator, operators are given real-life insights into how different approaches to operations can speed productivity, improve fuel consumption and reduce wear and tear.

"It's possible to train operators before they use the real machines. This means that they will be able to get the best possible performance and productivity out of the real equipment from day one, without compromising on safety."

The simulator uses a lifelike cab layout featuring full joystick control to operate a crane or other machinery in realistic scenarios. With high quality graphics run on a computer optimised for simulations, the Counterbalance Simulator presents actual working conditions that the operator will meet.

Simulator training presents many advantages over traditional training programmes. Individual training can be provided for each operator and for specific scenarios. Operators quickly learn correct techniques for increasing time efficiency, lowering fuel consumption and reducing machine wear and tear. Incorrect operation is easily identified and corrected without risk to machinery, equipment and safety. Operators get up-to-speed faster and are more confident on the real equipment from day one. Importantly, machines are not taken out of productive use for training purposes.

With the Counterbalance Simulator, a student can safely and effectively learn how to control and operate a machine without taking a productive unit out of operation.

Kalmar smooths the for Interforest

Established in 1967, Interforest Terminal Rotterdam has experienced rapid growth over the past five years, assisted in no small way by Kalmar. It has now signed a "lifetime" contract with Kalmar for the maintenance of its two ship-to-shore (STS) cranes.

Photo: www.aeroview.nl

Interforest Terminal Rotterdam has made several recent improvements to its facility, including the construction of a 20,000 sq m warehouse (pictured top left, grey roof) for handling the most sensitive paper and woodpulp grades.

Interforest Terminal Rotterdam (ITR) operates a wide range of Kalmar equipment including heavy-duty terminal tractors, reach stackers capable of loading river barges and two Panamax STS cranes. Both of the STS cranes are maintained by Kalmar under a long-term contract that includes renewal options, referred to by Kalmar as a "lifetime" contract.

Containers are playing an ever more important role in the operations of ITR. For much of its 41-year history, its paper and forest products traffic was handled either conventionally or by ro-ro. Now though, a significant volume is moving lo-lo, creating the original requirement for a single STS crane and the subsequent need to add a second unit. A wide variety of vessels are handled under the cranes ranging in size from barges and shortsea container ships to large deepsea vessels including Panamax forest product carriers operated by Star Shipping of Bergen arriving from North America and elsewhere. Star Shipping alone generated about 80,000 of the 115,000 TEU handled by ITR in 2007.

According to ITR's Managing Director, Bob de Lange, having just one crane curbs efficiency:

"At our 500 metre container quay, we can now handle two ships simultaneously or deploy two cranes on one ship. As with our new 8.5 million euro warehouse, the extra crane is to encourage growth and to enable faster handling operations."

Photo: Piet Radder

Bob de Lange

de Lange revealed that ITR is currently discussing new container services with a number of shipping lines:

"We still have additional stacking capacity. Discussions being held with a number of shortsea carriers are promising and we expect to be able to announce a new customer before long."

Unconventional handling offers advantages

The two STS cranes supplied by Kalmar can handle ships carrying up to 14 containers wide and feature a 20m backreach and 30m hoist height. A lift capacity of 60 tonnes under the hook allows for the handling of unitised forest products, aluminium and project cargoes, aided by an optional rotator. de Lange reports that the new crane has already completed trials loading and discharging pulp with a semi-automatic pulp frame, lifting 16 units each weighing 2 tonnes. As he said, this is a rather unusual deployment of an STS crane.

A fleet of four Kalmar terminal tractors link the STS cranes to the stacking areas.

Ensuring that the cranes operate smoothly and efficiently 24/7 is of course essential and to achieve this, ITR has signed a full maintenance contract with Kalmar Services. Under the terms of this service arrangement, Kalmar offers a 24 hour on-call facility with a reaction time of one hour. The timing of routine servicing is deliberately very flexible with engineers working on the cranes during quieter periods.

When Kalmar delivered the first crane in 2004, ITR and Kalmar signed a five-year service agreement but with the delivery of the second crane, this has been superceded by this new contract covering both cranes. According to Kalmar, given that the fact that the first crane is

way

now three years old, the incorporation of it in a new all-inclusive contract is somewhat unprecedented.

Pulp and paper remains ITR's essential bulk cargo

ITR now handles about 1 million tonnes of breakbulk cargo annually, much of it paper and pulp shipped from Scandinavian, European, South American, US and Canadian ports. This is handled, stored and forwarded to the European hinterland. In addition, large volumes of paper from European continental mills are stuffed into containers and shipped overseas to almost every destination in the world. Kalmar 16-tonne forklifts are used for part of this work.

Much of the paper and pulp from Scandinavia is carried by the ro-ro ships of ITR's parent company SCA Transforest. These transport 12 metre cassettes carrying between 50 and 63 tonnes of cargo. For these ro-ro operations, ITR uses three heavy-duty terminal tractors.

On the landside, the lifting of containers is entrusted to a fleet of eight Kalmar reachstackers. In the past, these have also been used to handle barges although ITR expects this task to be undertaken by the STS cranes in the future.

Since the commissioning of ITR's second Kalmar STS container crane, Interforest's capacity and flexibility for deepsea, shortsea and inland container ships has increased.
Photo: Piet Radder

Finland's newest container facility, Vuosaari Port in Helsinki, will soon be capable of handling post-Panamax ships carrying up to 18 containers across. The first of four state-of-the-art Kalmar ship-to-shore (STS) cranes arrived in June, and erection was immediately underway. The remaining trio are all expected to be operational by the end of 2008.

Construction of the modern Port of Vuosaari will be finished in 2009.

Finland goes post-Panamax

Vuosaari's deepsea container terminal will be operated by Finnsteve Oy Ab and, when completed, will have an enormous impact on the Baltic Sea trades. For the first time, 7,000 TEU-plus ships will be able to sail all the way from China to Finland knowing that there is a modern container terminal awaiting them.

The four new STS cranes, which will serve a 750m long quay, will incorporate the latest handling technology both in terms of capacity and performance.

World-class performers

The cranes being supplied to Finnsteve are similar to STS cranes previously supplied by Kalmar to some of the world's largest port operators, including DP World and PSA. Lifting capacity will be 82 tonnes, enabling Finnsteve the option of using twin-lift spreaders able to handle two heavy 20ft containers simultaneously or the increasingly popular Bromma-developed tandem lift mode, whereby two 40ft containers are lifted at the same time.

As is usual in Nordic countries, special attention has been paid to the crane operator's working environment. The spacious cabins offer good visibility and well-designed control systems for safe and comfortable operations. Energy-saving solutions and ease of maintenance will also be inbuilt.

A Crane Monitoring System will provide information on the condition of each crane, the number and weight of lifts, maintenance intervals, and fault diagnosis.

Kalmar is a leading STS crane manufacturer in Europe, having delivered over 40 STS cranes to large European ports such as Antwerp, Oslo and Helsingborg in recent years.

The first STS crane for Vuosaari was shipped from Kalmar's Rotterdam manufacturing facility (shown) at the end of May. The main components included the portal and the upperstructure, weighing 450 and 750 tonnes respectively.

Chancing bette

wasn't a gamble for

By challenging the industry with new handling concepts, Graeme Cooper of American Stevedoring, Inc. has paved the way for reachstackers operating at ports on the US East Coast. With terminals in New York and New Jersey handling containers and break bulk, the stevedore's 15 Kalmar DRS reachstackers have proven to be a versatile solution and worth the so-called risk.

Implementing change has always been instrumental in the success of American Stevedoring. The company, which operates the Red Hook container and break bulk terminal in Brooklyn, NY, and a barge terminal at the Port of New Jersey, is a family owned and operated business that began offering stevedoring services in 1982, stemming from its business of stuffing and stripping containerized cargo.

American Stevedoring is now the largest break bulk handler—with the exception of bulk salt, bulk stone, scrap steel and specialized liquids—in New York and New Jersey offering the best turnaround times of any stevedoring company in the area. In 2006, the company handled 375,000 TEU and averaged 87 million board feet (26.5 million metres) of lumber, 27,000 tons of steel or steel product, 71,000 tons of cocoa, and 11,000 tons of general break bulk annually.

Easier, better performance makes sense

Graeme Cooper, responsible for equipment purchasing and the integration of equipment into the operations of American Stevedoring, credits the company's success to its willingness to try atypical handling equipment—like for instance its 15 Kalmar DRS reachstackers, employing seven units at its terminal in New Jersey and eight units at the Red Hook terminal. The pride each employee feels as a result of working for a small, family-run business is also essential, according to Cooper.

"It's a family business. Everybody takes part and has a sense of duty to see the company succeed," said Cooper. "We were able to implement changes and do things that other people wouldn't be able to get done or have the will to get done."

Cooper purchased two DRS reachstackers in 1999 after Kalmar asked him to demo a unit in 1997. He comments that at the time of his first purchase, reachstackers were only thought of as rail machines, not terminal equipment.

"Previously, we were using top loader machines which are not very maneuverable, have heavy tire wear, are difficult to line up with the container, do not offer a lot of flexibility for driver error, and are tiring on the driver. With a reachstacker, you eliminate a lot of those issues as there is a lot of flexibility with the boom and spreader movements offering improved visibility. Reachstackers also minimize moves, especially with second or third row picking ability. They are smoother, easier and faster to operate, they're less work, and you save time. It just made sense to me."

A hands-on approach

Cooper commented that the reachstacker is gaining popularity among young operators and terminal stevedores alike. However, he said, there is a risk involved when changing your

Graeme Cooper

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Kalmar provides unique solution

Specially fitted forklifts furnish VAM USA with headache-free load-handling capabilities

Running forklift units as many as 16 hours a day to move multi-ton loads of oilfield pipe, officials of VAM USA had become accustomed to equipment service problems—until a Houston-based Kalmar dealer offered a customized solution.

The dealer, Mustang industrial Equipment (now Adobe Equipment Texas), provided VAM USA with three Kalmar DCE 160-12 trucks, each specially equipped with clamp attachments for holding steel pipe in place.

VAM USA, which had had a long history of using units made by another manufacturer, now relies upon the custom-fitted Kalmar machines as the backbone of its busy operation.

"We have not had one single problem with the Kalmar units," smiled Durk Wagoner, purchasing manager for VAM USA, who brought the three Kalmar machines to his firm nearly three years ago under a four-year, full-lease, full-maintenance program.

"We had had Hysters for more than a dozen years, and we were experiencing some expensive repairs, which just went on and on," Wagoner recalled. "So, we went out to see if there was something that would work better for our application."

Customized attachment wins praise

Adobe Equipment representative Dillon Wooten brought Wagoner and coworkers to the yard of a nearby firm that was benefiting from top-quality Kalmar units. Wooten then offered to have Kalmar trucks customized with the pipe clamps, which, while not manufactured by Kalmar, have provided an ideal solution for VAM USA. Kalmar has a well-earned reputation for customizing units to meet customer demands.

"The technology they applied

Custom-fitted with clamp attachments, Kalmar DCE 160-12 forklifts are counted upon by VAM USA to move steel pipe throughout the firm's 17-acre Houston facility.

er productivity
American Stevedoring

operational equipment, such as the investment associated with implementing new maintenance knowledge, stocking new parts and training drivers.

To help facilitate the transition between top loaders and reachstackers, Cooper took it upon himself to learn the equipment inside and out. Only when other operators at the New Jersey terminal witnessed how much faster and easier Cooper was able to grab difficult to reach containers were they convinced that reachstackers could offer improved productivity, not to mention a comfortable and stable environment.

"Look what we're doing; we're basically moving 375,000 TEU with 15 reachstackers. It works well for us. But it did take a team effort," said Cooper. "Our reachstackers are mainly handling containers, but they are amazing for handling break bulk cargos. They are really good because in our heavy lift yard, they can be used to handle odd-sized cargo. In that situation, a reachstacker is more like a crane. The disadvantage of a top loader is that you are limited when handling wide cargo because of the mast. With a reachstacker you just boom out. It really works well for that so we do a tremendous amount of heavy-lift work with them."

Trying out change

Cooper joined American Stevedoring as maintenance manager in 1993 at the time when the company was expanding its New York operations to New Jersey. With no prior knowledge of or experience with terminal equipment, he was responsible for the company's terminal tractors, forklifts and top loaders.

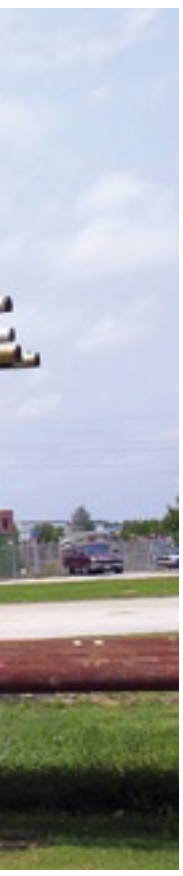
"I learned a lot along the way," said Cooper. "And what I learned was that there was room to do better."

"I began to investigate different types of equipment," he said. Soon, Cooper was promoted to Purchasing Director, which meant that every equipment purchase had to pass over his desk, including equipment integration and training. His hands-on approach and willingness towards change allowed him to easily switch from using top handlers to reachstackers.

Cooper was also instrumental in the procurement of two mobile harbor cranes—the first to enter the US—purchased for American Stevedoring's New Jersey terminal, citing that the cranes would work well in a medium-sized terminal.

As the driving force for change and innovation behind American Stevedoring's handling equipment, Graeme Cooper does not regret the "risks" he's taken to improve the company's operational productivity.

for Houston oilfield pipe facility



for us was more than we expected," Wagoner said. "The capabilities of the equipment have matched our specifications very nicely."

The customized Kalmar machines are used in loading and unloading trucks and transporting pipe throughout VAM USA's 17-acre facility, near George Bush Intercontinental Airport.

The clamps secure oilfield pipes that are several feet long and range in diameter from 2.38 inches (60.33 mm) to 13.63 inches (346.08 mm). The units can carry with each move more than two-dozen of the smallest-diameter pipes, which weigh about 300 lbs (0.14 tonne) each, or they may be counted upon to move six of the largest pipes, each weighing 4,000 lbs (1.81 tonnes).

Stable, durable, reliable

Of the Kalmar units, VAM USA yard supervisor Charlie Winslow said, "They're stable. They're durable. They're reliable.

"They are the most durable things we've ever had out here," Winslow continued. "They're just solid, structurally and mechanically."

Winslow explained that the VAM USA facility operates two 10-hour shifts each day and frequently runs its forklifts 15 or 16 hours per day.

According to Adobe Equipment's Wooten, a typical customer might run each of its forklifts about 1,200 hours per year, but VAM USA's usage is considerably more than three times that—about 4,000 hours per year.

Durk Wagoner (right), VAM USA purchasing manager, shares his enthusiasm for specially equipped Kalmar units with Dillon Wooten, an Adobe Equipment Texas representative.

Good support sweetens the deal

When VAM USA does require service, Winslow directly rings the cell phone of Adobe Equipment field service technician Wes Collins, who swiftly responds.

"One of the main selling points is the dealer and the service that we get," Winslow said.

Wooten noted that the full-lease, full-maintenance program chosen by VAM USA is serving the customer well because it is resulting in lower monthly payments and lower maintenance costs than would be incurred with a straight purchase, especially considering the firm's heavy use of the machines.

As VAM USA moves to expand its Houston operation, company officials are seeking to augment their pipe-handling fleet. Not surprisingly, they are looking to Kalmar.

Kalmar is ready if weighing containers becomes mandatory

To weigh not t

Two influential and well-publicised reports into recent maritime accidents have flagged up some key issues that could have important consequences for port and terminal operators. One in particular is that the major containership operators might soon be insisting that all containers should be weighed prior to loading on board ship.

Clearing the resultant mess is time consuming and expensive, delaying the vessel and blocking a busy berth.

The first purpose-built container vessels were built about 40 years ago and the industry as a whole has had an excellent safety record. Now, though, there are growing concerns about the way the industry is evolving. One major issue is the increasing incidence of on-deck container stack collapses. These are often quite spectacular with ships arriving in port with containers hanging over the side and others still on deck but residing at crazy angles.

So what is happening?

Two things are already apparent. Firstly, there is no single cause of stack collapse and therefore there will be no single solution, and secondly, while the losses are currently acceptable from a financial/insurance standpoint, they are damaging the image of the shipping industry, especially when cargo, sometimes hazardous, is washed ashore or when semi-submerged containers are held to be a danger to recreational sailors.

One probable cause of container stack collapses is that the declared weights of individual containers are often understated by exporters. The container shipping industry still accepts these weights on trust despite much anecdotal evidence of gross overloading at times. Now though, it looks like this is about to change following two reports by the UK government agency, the Maritime Accident Investigation Bureau (MAIB).

Incidents reviewed

The first of these reports investigated a stack collapse on board the 868 TEU feeder vessel Annabella in the Baltic Sea and the second looked at the case of the 4419 TEU MSC Napoli, which had to be abandoned by her crew in the English Channel when large cracks appeared in the hull plating. The ship was subsequently beached to stop her sinking, providing the MAIB with the opportunity to thoroughly investigate the cause of the hull failure.

The latter report found that there were numerous factors that ultimately led to the disaster including the design of the ship and her speed at the time the cracks occurred. However, they also noted that the ship's structure had often been severely stressed during 'routine' operations and that at the time of the incident, 20 percent of the containers on deck were at least three tonnes heavier than their declared weights and one was 20 tonnes heavier! Furthermore seven percent of the deck containers were not in the locations specified on the loading plan.

The MAIB also noted that in the shipping industry, the container sector is the only one in which the weight of cargo is not known and stated that if the stresses acting on container ships are to be accurately controlled, then it is essential that containers are weighed before embarkation.

Amongst other things, the MAIB has recommended that the key industry players should work together and agree on what constitutes accepted safe working practices and incorporate these into an industry code of best practice.

In response, the International Chamber of Shipping (ICS) has established a working party to develop this code. In so doing, it has also involved the World Shipping Council, often known as the Box Club, whose members represent over 90 percent of the global liner vessel capacity. Initial indications are that the code will include a requirement to weigh boxes before loading, something that has caused consternation in the ports industry.

Kalmar offers solutions to the weighing issue

While Kalmar can understand the reasoning behind calls for the weighing of containers prior to loading on board ships, it also recognises the concerns of port and terminal operators who want to know who will pay

When containers fail, the result can be spectacular. The Annabella case kicked off the debate about overweight containers leading to demands for a code of best practice.

or to weigh?

One surprising feature of stack collapses is that it is often the aft stow that fails.

When MSC Napoli was beached to avoid her sinking, 20 percent of the containers on deck were found to be at least 3 tonnes overweight.

for this additional process and worry about it exacerbating current congestion difficulties.

Kalmar specialists are keen to reassure ports and terminals that if properly planned and given sufficient time, then weighing need not present a problem. The technology to weigh containers exists already and its use need not be disruptive.

When considering how best they could implement 100 percent weighing of containers prior to loading, many ports think first of weighbridges and secondly of weighing using a ship-to-shore crane.

Unfortunately, the weighbridge solution risks causing congestion at the gate, already a bottleneck in many busy terminals. The problem with using ship-to-shore cranes to weigh containers is of course that it is too late in the process. What do you do with the overweight boxes? Put them back on the quay? It's also too late to alter the stowage plan.

Kalmar believes there are better solutions. Ilkka Annala, Vice President, Kalmar Straddle Carriers, explained:

"For a container arriving by road, the best time to weigh it is when it is lifted from the road vehicle and placed in the container stack. More or less all of the straddle carriers or RTGs delivered by Kalmar in the last five years are capable of weighing containers if fitted with the optional modules now available.

All that is required then is for this information to be included in the data exchange between the machine and the terminal operating software (TOS) and for the TOS to compare the declared weight with the actual weight that has been recorded by the straddle, RTG, etc. No manual input is required. That is a key requirement."

Handling heavier-than-declared containers

Once the TOS is aware of the true weight of the container, this figure can be provided to the vessel planners who need to know the real weights of the containers to be loaded. The data can also be incorporated into the Baplie files used to provide such vital information to the vessel and to subsequent ships and terminals that may be called upon to transport or handle the containers in question.

Human intervention only occurs if, for example:

- the weight of the cargo exceeds the maximum payload capacity of the container, in which case some cargo would need to be removed before the container could be safely shipped;
- if the customs authorities want to examine the contents of the container;
- if the carrier concerned wishes to surcharge the shipper for the additional cargo, a purely commercial decision.

Of course, another issue is what if the container is too heavy to be moved legally onward by road at its port of destination. The shipper may wish to sort out this problem prior to shipment rather than upset the consignee and/or incur additional costs at the destination port. After all, it would be much cheaper to re-stow a container in India or China than in the US or Europe.

In all of the above cases, one can assume that the terminal operator would be able to earn additional revenue by charging extra for these actions.

ICTSI opens the door to South America

Ecuador is the world's largest exporter of bananas.

When the Port Authority of Guayaquil awarded a 20-year operating concession for its container and multipurpose terminals to International Container Terminal Services Inc. (ICTSI) in May 2007, the Manila-based operator had just one month after taking control of the facilities in July to bring the newly privatized terminals back into operation. Needing fast, efficient container and trailer handling solutions maintained by local support, ICTSI's wholly-owned on-site operating unit, Contecon Guayaquil SA (CGSA), sought Kalmar as its reliable partner.

CGSA's Kalmar reachstackers are continuously working to keep terminal efficiency high.

(From left:) Jose Miguel Olavide, Service Manager, Righttrack; Luis Enrique Galves, Manager, Righttrack; Gustavo Cercos, Director of Engineering, CGSA; Gaston Chipy, Managing Director, Kalmar.

When Gustavo Cercos accepted the job as CGSA's Director of Engineering for CGSA almost one year ago, he felt comfortable in his new position knowing that he had the help and support of Kalmar's local dealer, Righttrack Equipos y Soluciones SA, in Guayaquil.

Cercos was the technical manager for BACTSSA at the Port of Buenos Aires before accepting ICTSI's challenge to seamlessly transition its terminals at the Port of Guayaquil from public- to private-sector management. ICTSI was awarded an operating concession for two terminals at Ecuador's largest port facility. Guayaquil's third terminal is operated by Ecuadorean firm Andipuertos.

Besides bringing with him many years worth of experience working in port operations, Cercos also transported his preference for Kalmar equipment—a sentiment fostered by a long-term relationship with Kalmar's reliable agent in Argentina.

"I come from Argentina, so I didn't know the country or the kind of support we would find here," Cercos said of his new location in Ecuador. "So the first contact I made was with the local Kalmar dealer. He not only helped with the support of the equipment, but with many other things."

Good experience knows no boundaries

Soon after accepting his new position at the port, Cercos made an order with Kalmar for 13 DRF 450 reachstackers, four DCE 90 empty container handlers and 18 terminal tractors as part of ICTSI's initial investment programme. The global terminal operator has earmarked USD80 million in the first year of the concession for facility improvements and equipment acquisitions.

Speedy delivery

Time was of the essence for CGSA's order. The operator was in need of high-quality equipment on-site and as soon as possible. Kalmar's guarantee of a fast order-to-delivery turnaround time clinched Cercos and CGSA's decision to go with the reliable equipment supplier.

All of the Kalmar machines Cercos ordered were operational by November 2007, except for three reachstackers delivered early 2008.

"The possibility for Kalmar to give us the equipment soon was very important," Cercos added. "The commissioning of the equipment was fast. The last four units were done in two days. This gave us the opportunity to quickly take the operations of the port."

In 2006, Guayaquil's container terminal handled approximately 600,000 TEU. When the port's new owners took control in August 2007, they achieved a throughput of 150,000 TEU in that month. Cercos commented then that the figure was a great improvement and that he would like to keep productivity at the same level or higher.

Investing for future growth

The Port of Guayaquil, located in the province of Guaya, is Ecuador's major port handling around 75 percent of the country's international trade and over 90 percent of the country's container traffic. General cargo traffic includes the important banana trade where Ecuador ranks as the world's number one exporter of the fruit.

CGSA—a wholly-owned subsidiary of ICTSI—will take delivery of three ship-to-shore cranes and eight rubber-tyred gantry cranes late this year, further solidifying its commitment to improving the efficiency and competitiveness of the terminal's container handling operations. The operator is also planning to extend its existing 550-metre container quay by 230 metres.

Overall, ICTSI will invest USD170 million over the first three years of the 20-year concession agreement for equipment and infrastructure.

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Kalmar

Kalmar is part of Cargotec Corporation