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KALMAR

KALMAR AROUND THE WORLD

ISSUE 1 | 2010

Spreader-Mounted Radiation Detection System Enters Service

ON AGENDA: Cargotec becomes more united and stregthens brands Kalmar, Hiab and MacGregor

CARGOTEC – In Brief

CARGOTEC IMPROVES the efficiency of cargo flows by offering solutions for the loading and unloading of goods on land and at sea – wherever cargo is on the move. Cargotec's main daughter brands for cargo handling Hiab, Kalmar and MacGregor are global market leaders in their fields. Cargotec's global network offers extensive services that ensure the continuous, reliable and sustainable performance of equipment.

Having operations in more than 120 countries and located in all major service hubs worldwide, Cargotec is well-placed to maintain its own as well as other-branded equipment. Maximising machine uptime and improving the lifecycle costs of its customers' equipment remains Cargotec's top priority as the industry's leading solutions provider. Cargotec's sales totalled EUR 2.6 billion in 2009 and it employs more than 9,500 people.

KALMAR

KALMAR solutions handle containers and heavy materials in ports, terminals, distribution centres and in heavy industry worldwide. Kalmar equipment are market leaders in ports and terminals where containers are handled by ship-to-shore cranes, yard cranes, shuttle and straddle carriers, reachstackers and empty container handlers. Moreover, Kalmar forklift trucks are used by the heavy industry, Kalmar log stackers by the wood and paper industry, and Kalmar terminal tractors by distribution and logistics centres.

DECADES OF EXPERIENCE in the special needs of customers and the life cycle of products has made Kalmar solutions forerunners in automation for container handling in ports and the development of energy-efficient solutions.

HIAB

CUSTOMER-DRIVEN HIAB on-road load handling solutions and products move goods and materials in various industries, such as construction, forestry, industrial, waste handling, recycling and the defence forces. The brand Hiab is the global market leader in on-road load handling solutions. The offering includes loader cranes, forestry and recycling cranes, demountable systems, tail lifts and truck-mounted forklifts. Our service network ensures the safe functioning of equipment throughout its long life cycle.

MACGREGOR

MacGREGOR solutions, utilised in the maritime transportation and offshore industries, are market leaders in merchant ships and offshore support vessels where safe and reliable operation of cranes, hatch covers, RoRo and cargo lashing equipment as well as bulk handling and offshore load handling systems is essential. Additionally, MacGregor cargo access equipment is available for naval logistics vessels and linkspans and bulk handling equipment for ports and terminals.

SERVICES

LOCATED IN ALL MAJOR SERVICE HUBS worldwide, Cargotec is well-placed to maintain its own as well as other-branded equipment. Maximising machine uptime and improving the lifecycle costs of its customers' equipment remains Cargotec's top priority as the industry's leading solutions provider.

E-One² takes the Lead in Safer Gantry Crane Operations

PRODUCT LAUNCH pg 6

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AROUND THE
WORLD

ISSUE 1 | 2010

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ON AGENDA

Harald de Graaf, Executive Vice President, EMEA, outlines Cargotec's vision to become the world's leading provider of cargo handling solutions.

We Keep Cargo on the Move

KALMAR

CARGOTEC – FOCUS ON SYNERGIES

Last year container volumes dropped radically, which created challenges to our customers and to our business. Cargotec decided to overcome this situation by creating a balanced, well structured operating model with more united processes as well as a common appearance.

Here, Harald de Graaf outlines how Cargotec has prepared the company to increase its competitive position with these changes, including a wider service network and decision making closer to customers.

"Cargotec and in particular our three strategic brands – Hiab, Kalmar and MacGregor – have traditionally enjoyed leadership positions in their respective markets. Our specialist products and services have progressively helped businesses operate with greater efficiency and profitability. It's from this strong operational base that we decided to consolidate our position and move towards a more united company.

While restructuring our company, we have paid attention to keeping our service network as our key strength. In the EMEA region, we have started to gradually expand our service network even further by cross-training Kalmar and Hiab service personnel.

"Cargotec, with its market leading brands, Kalmar, Hiab and MacGregor, is well positioned to deliver cutting edge solutions to what will undoubtedly be an increasingly demanding marketplace. We keep cargo on the move."

HARALD DE GRAAF, Executive Vice President
Cargotec

Utilising our Cargotec network including Hiab, Kalmar and MacGregor service personnel on the ground, we can bring the full potential of our immense capability to our customers – worldwide.

At the moment our service engineers pay additional attention to making the availability of customers' aged machines a top priority, since investments on new equipment are often being postponed and aged machines need to last longer. We also offer flexible ways to make new investments with fleet management solutions (see p.29).

In a more united company, taking advantage of our economies of scale will result in greater collaboration between units and sharing expertise to find better solutions. By combining our larger knowledge pool with active customer relations, we drive technology development for the benefit of our customers. This will undoubtedly provide us with a noticeable competitive edge. Cargotec really does represent a force to be reckoned with…I like to think that we have significantly increased our horsepower!

The first major part of this reorganisation is now starting to become visible with our new branding strategy and presentation. Cargotec's visibility is more prominent and all the company's brands now share a common symbol, the Cargotec elephant. The elephant stands for lifting capabilities, long life, reliability and trust. It also symbolises our dedication to provide intelligent and sustainable solutions in the process of loading and unloading goods.

In these current economic times it is hard to predict the future but I am sure that there will be many challenges ahead for everyone. However, we can be certain that Cargotec, with its market leading brands, Kalmar, Hiab and MacGregor, is well positioned to deliver cutting edge solutions to what will undoubtedly be an increasingly demanding marketplace. We keep cargo on the move."

E-One² Takes the Lea Gantry Crane Operat

After Cargotec launched the Kalmar E-One series of rubber-tyred gantry cranes (RTGs) in 2005, it was quickly improved with several quality and safety features, and the greener E-One+ was born. However, with Cargotec always being a pioneer in RTG safety, a further version – the all-electric Kalmar E-One² – has now been introduced and has fast become the industry's favourite.

PRO FUTURE™

According to *Raimo Ukkonen*, Vice President of Yard Cranes at Cargotec, customers recognise safety as one of the key issues for improving their operational efficiency:

"Staff should be able to perform at maximum efficiency whilst enjoying a safe working environment. As a result of our thorough hazard analysis and intense product development, we have raised our market-leading RTG to a whole new level of safety."

ENHANCED OPERATOR ENVIRONMENT. The E-One² features safer access to the cabin, left main girder and trolley via a stairway. The stairway lighting has also been improved. The machine's EE-House has also been redesigned, with extended safety distances that exceed stated requirements. The new safety features also comply with EN 954-1, category 3.

The E-One²'s new Fail-Safe PLC control platform is essential for semi-automation and brings enhanced operational safety improvements. The noise level is now lower due to its re-engineered power unit enclosure and a variable speed engine, which idles at a lower speed.

Safety was not the only thing to be improved. With further enhancements that include options for a Variable Speed Generator (VSG) and Zero Emissions with mains supply, the E-One² also meets the latest environmental demands whilst remaining productive and cost-effective. It provides operators with fuel savings of up to 60%, compared to conventional RTGs, through the use of a Variable Speed Generator, an optional hybrid package and a viscous fan system.

VARIABLE SPEED GENERATOR. With a Variable Speed Generator (VSG) the engine runs at a lower RPM level when idling. The system automatically optimises engine speed according to the power required, resulting in lower fuel consumption. Auxiliary loads, such as air conditioning and working lights, will be powered continuously. When compared to conventional RTGs consuming around 21 l/h and assuming an operational cycle of 4,000 h/year, CO_2 emissions are reduced by a very significant 100,000kg/year.

HYBRID PACKAGE. The E-One² is modularly designed and is also ready for Hybrid Package adaptation. It can be equipped with an energy optimised Variable Speed Generator set combined with an energy storage system.

The most efficient way to decrease RTG energy consumption is to eliminate the diesel engine and provide the crane with an electrical supply. This allows all the accumulated energy to be to be reused, maximising energy efficiency. Zero Emissions RTG energy costs are roughly 20% of diesel-electric RTG energy costs, depending on the comparative costs of electricity and diesel fuel.

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ions

PRO FUTURE

Pro Future™ is our concept encompassing greener equipment, launched in 2008. Machines are rated against five ecological decision-making drivers:

- source of power
- energy efficiency
- emissions
- noise pollution
- recyclability

Qualifying solutions have been awarded the Pro Future™ marking.

BACTSSA

Two Kalmar RTGs Raised to New Heights in Argenti

BACTSSA required the two machines to stack 1 over 4 high and 1 over 5 high respectively. In order to achieve this, the length of the columns had to be increased by 2.9 metres. After thorough structural and mechanical calculations, the design fulfilled all the requirements stated on international standards, particularly FEM.

The manufacturing of the column extensions was done by local suppliers under the close supervision of Cargotec Argentina experts, who ensured that the latest regulations and a strict quality control plan were adhered to.

UNINTERRUPTED OPERATIONS. According to *Marcelo Massa*, Managing Director, Cargotec Argentina, his staff performed an excellent role whilst working at the Port of Buenos Aires:

"Our engineers, supervisors, mechanics and electricians worked at site for less than two months and succeeded in putting the RTGs back into operation on schedule. There was minimal disruption to the terminal's normal operations. The Technical Division staff from BACTSSA made a positive contribution in achieving this goal through their valuable assistance during the whole process.

"This successful project highlights Cargotec Argentina's ability to manage complex projects such as modernising and refurbishing container cranes," he said.

BACTSSA, a Hutchison Whampoa

na

After ten years of operating Kalmar rubber-tyred gantry cranes (RTGs), Buenos Aires Container Terminal Services, S.A. (BACTSSA) has awarded Cargotec Argentina the contract to upgrade the stacking capability on two of its existing models.

Limited company, has been operating in Argentina's main container gateway, the Port of Buenos Aires, since 1994. BACTSSA's terminal has two mooring sites for container transporters with modern equipment and infrastructure. Handling over 300,000TEU annually, the company has adopted the latest technology since day one and now uses four additional Kalmar E-One RTGs, which are 6+1 wide and capable of stacking 1 over 5 high.

FACTS

Customer
BACTSSA, Argentina

Cargotec solution
Modification of two RTGs for higher stacking

TRP, ARGENTINA

Cargotec Argentina has completed a ship-to-shore crane structural inspection at Terminales Río de la Plata (TRP) – the Buenos Aires-based container terminal owned by DP World.

Technical Support Structural Inspecti

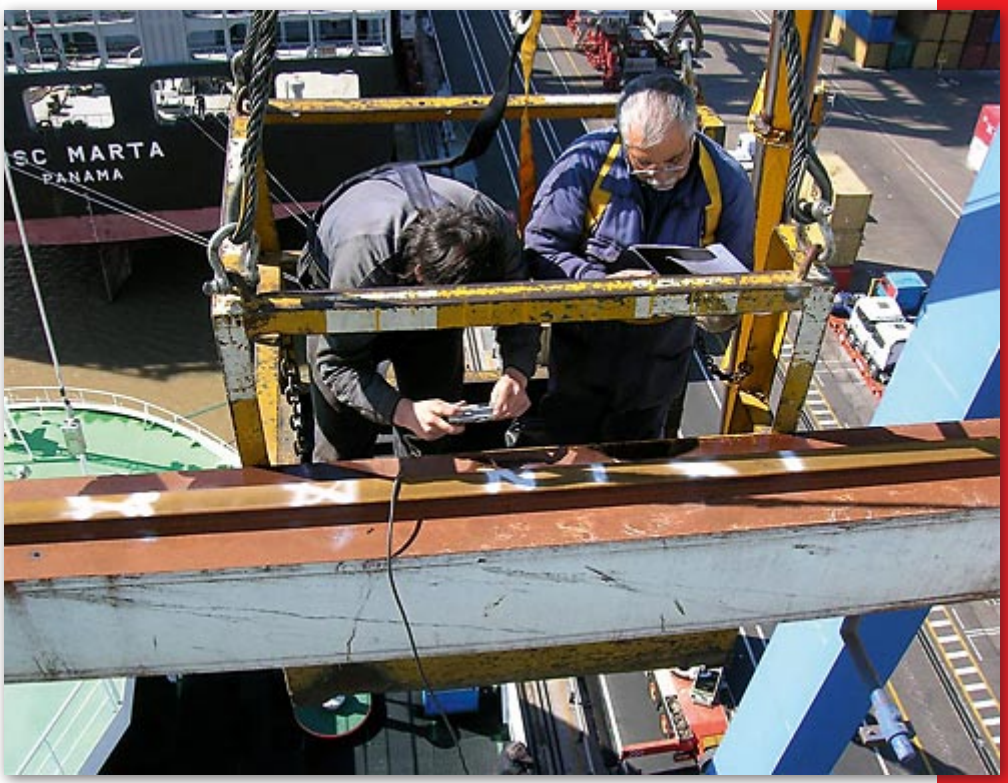
The project focused on two Panamax type STS cranes and was undertaken by Cargotec's highly skilled engineers and inspectors.

The inspection criterion was matched to international standards and included both visual testing and non-destructive testing methods, including magnetic particle testing, dye-penetration testing and ultrasonic testing.

The tests were performed on the machines' main structural components, based on their specific maintenance programme. All accessible welded joints were visually inspected and the tightness of bolts in bolted joints were also systematically checked.

A comprehensive report was delivered

Cargotec Argentina continues to be highly active in the provision of technical services to customers across the region.



and ons in Argentina

to TRP which detailed all the checks carried out and included results of the non-destructive testing undertaken. The report also contained instructions and images clearly explaining how to repair any defects found.

STS structural inspections and the complete monitoring of a cranes' condition are just some of the services Cargotec Argentina is able to offer to customers by capitalising on its highly experienced team and the strong technical support available. Based on these foundations, Cargotec Argentina continues to be highly active in the provision of technical services to customers across the region.

FACTS

Customer
TRP, Argentina

Cargotec solution
Structural inspection for two STS cranes

ELECTRICAL SHUTTLE

Kalmar Electr

ical Shuttle Carrier®
Combines Productivity and Greener Operations

Cargotec continues to develop its range of Kalmar straddle carriers with an environmental focus. The latest addition to the product range is the Electrical Shuttle Carrier®, ESH W, which provides higher productivity with lower emissions.

PRO FUTURE™

According to *Ilkka Annala*, Vice President of Sales at Cargotec, the new product adds a sustainable edge to the proven straddle carrier range:

"With our original Kalmar shuttle carrier we revolutionised quayside productivity in mega-terminals by eliminating waiting times with decoupling of vessel and yard operations. In addition to increasing terminal productivity, our customers are now building more sustainable operations. This need triggered the launch of our new Electrical Shuttle Carrier, the ESH W, for manual or fully automated operations.

HYBRID COMPATIBLE. "With the Electrical Shuttle Carrier, we combine the possibilities of the latest green technology with high productivity. The new power package with variable speed generator technology features a stage 3a engine with SCR (specific catalytic reduction) technology and an electrically controlled viscous fan. The power package is thus ready for hybrid use. The shuttle carrier has an electrical drive, an electrical winch hoist, and in the hybrid version there is also an electrical brake control for optimised energy recovery when braking.

"With this technology we have reduced fuel consumption and lowered CO_2 emissions. Additional options for lowering emissions even further include an energy storage system and a stop-and-go feature, which shuts down the engine when not moving," he said.

The versatile Electrical Shuttle Carrier is part of the 7th generation range of Kalmar straddle and shuttle carriers. The development of the ESH W has been based on as many of the existing straddle carrier components and technical solutions as possible. In automated mode, the Shuttle Carrier navigates with the patented magnetic measurement system, Kalmar MMS, while the Kalmar Terminal Logistic System (TLS) controls its operations.

One of the key productivity benefits of the shuttle carrier is its ability to set down and pick up containers on the ground, eliminating waiting times. Ship-to-shore cranes lift containers from the vessel and place them on the ground, under the crane's back reach, from where they are then collected by shuttle carriers and transported to the automatic stacking crane buffer area. This combination of equipment working together achieves high productivity with the lowest number of horizontal transportation vehicles.

Patrick and Cargotec Surpass Efficiency Standards

The world's first large-scale fully automated straddle carrier terminal at the Brisbane Fisherman's Island facility continues to make dramatic improvements in efficiency. The Australian port – owned and operated by Patrick, part of Asciano – has set a new performance record.

Operating with 27 Kalmar automatic straddle carriers, and five quay cranes, the terminal now meets and exceeds Australian Government benchmarks for waterfront productivity. This latest achievement is the result of Patricks' significant research and development on real-time systems, terminal logistics planning, and state-of-the-art equipment.

Since commencing full-scale commercial operations with 18 Kalmar automatic straddle carriers in December 2005, the Brisbane terminal has expanded by acquiring additional automatic straddle carriers and building a new control tower, a new repair workshop and creating a new facility for empty containers. The interchange area at the yard for empty containers is automatically operated.

Containers are manually placed with empty container handlers at predetermined positions within the manual/automated interchange area for empty containers. Automatic straddle carriers are then used to transport containers from the interchange area to the wharfside container terminal. This seamless cooperation between manned and unmanned machines in the empty yard is yet another first for Patrick and Cargotec – not to mention the world!

HIGHLY EFFICIENT ENVIRONMENT.
Innovations in fully-automated container handling at Fisherman's Island are ongoing. Straddle carriers are automatically handling containers arriving and leaving by truck to/from the facility. A manned remote control is still in use only in the last section of the working cycle when import containers are placed on trailers. Exports are taken into the yard completely unmanned.

The facility has made further efficiency-based improvements including the full use of twin-lift spreaders on all of its automated straddle carriers. Twin-lift discharge and loading is now possible both on the wharfside and at the truck grids. Not only can the terminal's yard equipment now handle twice as many containers in the same amount of time, but the 3-high automated units are also stacking boxes to 3-high. Stacking containers more than 2-high in an unmanned operation is possible because the automation system guarantees that container stacks are in

Tunisian Port Turns to Cargotec for Terminal Tractors and for Refurbishing Straddle Carriers

Cargotec has supplied 20 new Kalmar terminal tractors to Société Tunisienne d'Acconage et de Manutention (STAM) for the port of Rades in Tunisia. STAM has also commissioned the refurbishment of 13 straddle carriers to be carried out later this year.

The 20 Kalmar 4x4 TRX182 terminal tractors have been delivered to the port of Rades where they will facilitate the quayside operation. These terminal tractors are designed specifically to perform demanding handling duties in confined spaces onboard roll-on, roll-off vessels. All of the machines feature electronically controlled, EU TIER2 and US CARB2 compliant diesel engines with catalytic exhaust purification, to significantly reduce emission levels.

REFURBISHMENT CAN PROLONG LIFESPAN.
The 13 Kalmar straddle carriers range from 4 to 10 years old. Under the refurbishment programme, each will be assessed individually and the major repairs identified, prioritised and actioned according to need. The refurbishment programme ensures the reliability of the equipment and is expected to extend their working lifespan by more than 5 years.

According to *Kamel Khelil*, Director of the development programme at STAM,

optimal order. Dual cycling the quay cranes has also been a feature of the system for two years now.

CHALLENGING TRADITIONAL CONTAINER HANDLING. Following a $125 million investment and the newly completed Brisbane Berth 10 terminal, the world's largest full-scale automated straddle carrier operation has changed most people's perceptions of the traditional waterfront, according to *Mark Rowsthorn,* Asciano CEO.

"It is a sophisticated, safe and highly efficient environment exhibiting revolutionary technology and a highly skilled workforce. We would like to thank all those involved in the project who delivered this magnificent terminal," says Rowsthorn.

The completed port now features 27 of the Kalmar EDRIVE straddle carriers, the first to be purpose-built for unmanned operations. They are fitted with motion control and navigation systems that allow them to operate 24 hours a day, 365 days a year, and in all weather conditions. They move containers efficiently, with pin-point accuracy, and safely, without collisions or accidents.

And the numbers are speaking for themselves. In October 2009 alone, all time records for the Brisbane terminal were achieved in:

- Highest TEU exchanged and number of containers transferred to ships.
- Highest TEU exchanged and number of containers moved through truck grids.
- Highest gross and net crane rates.
- Highest number of paid lifts per straddle engine hour.

So despite things getting busier at the terminal than ever before, the performance of the automation systems and the straddles has continued to improve.

Yet another unique aspect of the automatic straddle carriers is the flexibility they offer to the terminal operation. Moving out of the old berth and expanding into the new Berth 10 terminal complex was completed in a morning, without a hitch.

KNOWLEDGE AND EXPERIENCE. Cargotec applied its knowledge and technology in delivering machine control systems that move, brake and steer the straddle carriers and ensure precise picking and placing of containers. Also, the integration of all automation technology in the straddle carrier has combined the expertise of the Cargotec and Patrick automation teams.

Automatic straddle carriers offer a very long list of significant, cost saving benefits. Not only can they operate 24/7/365, but they also reduce the number of driving lanes in the stacking area making more efficient use of often limited portside land. In addition, the automated units contribute considerably to the improvement of workplace safety by dramatically reducing accidents.

The 39-hectacre Brisbane terminal where the Kalmar machines operate has a quay length of 900 metres, and employs approximately 200 staff.

Brisbane Fisherman's Island.

From left:
Mr Arto Eloranta,
Mr Khellil Kamel,
Mr Hannu Varis,
Mr Abdelwahab Larif,
Mrs Ghoummam Fatma,
Mr Belhassen Jlassi,
Mr Kouki Zouhair.

there is a long established relationship with Cargotec and trust in Kalmar equipment:

"We have relied on Kalmar machines for over 25 years. At the moment we have 22 Kalmar straddle carriers, reachstackers and empty container handlers alongside 50 Kalmar terminal tractors. We appreciate the quality of the equipment when it comes to performance, durability and safety, but also sustainability. Kalmar has always been one step ahead of environmental issues set by the Tunisian authorities. Respecting the environment is very important for us.

"Our technicians have participated in Kalmar training and they boast a high-level of competence in maintaining the equipment with excellent technical support from Cargotec.

"Our annual capacity was previously 400,000 TEU and we had planned for eight per cent growth each year, but the turbulence in the global economy has also affected Tunisia. This year we will not reach eight per cent growth, but we are still expanding the business in the port of Rades," he said.

Founded in 1961, STAM employs 1500 people in the Tunisian commercial ports of Rades, La Goulette, Bizerte, Sousse, Sfax, Gabes and Zarzis. STAM handles 69% of the total tonnage of goods transported through ports and maritime trade in Tunisia.

Introducing Hydraulic Hybrid Technology for Terminal Tractors

Cargotec has agreed to work together with Singapore Technologies Kinetics Ltd (ST Kinetics) to finalise the development and then launch hydraulic hybrid feature as an option for Kalmar terminal tractors.

NEW TECHNOLOGY FOR TERMINAL TRACTORS

PSA Singapore Terminals initiated a project for a hybrid terminal tractor with Singapore Technologies Kinetics Ltd (ST Kinetics) some two years ago. The first model was shown to the public on November 16, 2009. PSA Singapore Terminals is the world's largest container transhipment hub and currently operates hundreds of Kalmar terminal tractors.

Cargotec agreed to work together with ST Kinetics and its Canadian Subsidiary, Kinetics Drive Solutions Inc, on a hybrid hydraulic hybrid option for Kalmar terminal tractors with POWER Hybrid Hydraulic Drive.

"ST Kinetics is today among the leaders in hybrid hydraulics technologies. We are thrilled that the project to incorporate ST Kinetics' by POWER Hybrid Hydraulic Drive into a Kalmar terminal tractor for trial with PSA Singapore Terminals was a success and demonstrated fuel savings that benefits both the operator and the environment," said *Sew Chee Jhuen,* President ST Kinetics.

MIKKO VUOJOLAINEN

Mikko Vuojolainen, Vice President, Terminal Tractors,

"Trial with PSA Singapore Terminals was a success and demonstrated fuel savings that benefits both the operator and the environment."

Cargotec, also commented on the project: "Since the beginning of prototype integration for our Kalmar terminal tractor, we have been very excited to assist in this effort. The first Kalmar terminal tractor equipped with POWER Hybrid Hydraulic Drive was delivered to PSA in Singapore for field testing in October and has performed well. The hybrid package recovers braking energy and releases it during acceleration thus reducing fuel consumption and emissions by approximately 20%."

"Container terminals are often surrounded by urban development. Therefore, having high concentration of big diesel engines offers great potential for meaningful reductions in emissions. PSA has always been a forerunner in demanding the latest low emission engine technology in their terminal tractors. It comes as no surprise that we are testing this new hybrid technology also in Singapore," continued Vuojolainen.

ST Kinetics delivers integrated land systems, specialty vehicles and their related equipment, as well as life-time support for defense, homeland security and commercial markets.

The company is part of Singapore Technologies Engineering Ltd (ST Engineering), one of Asia's leading companies in defense and specialty vehicles.

Kalmar Terminal Tractors Ready

At the beginning of 2010, EPA10 regulations are introduced in the USA for all on-road equipment. By the start of 2011, STAGE IIIB compliance in Europe and TIER4i compliance in the USA will also be required for all off-road equipment powered by engines over 130kW.

TERMINAL TRACTORS

This new legislation will impact Kalmar terminal tractors and Cargotec has already responded proactively.

According to *Timo Matikainen,* Cargotec's Director for heavy terminal tractors, Kalmar terminal tractors are being prepared for new regulations and customers can now order machines that meet with the new norms.

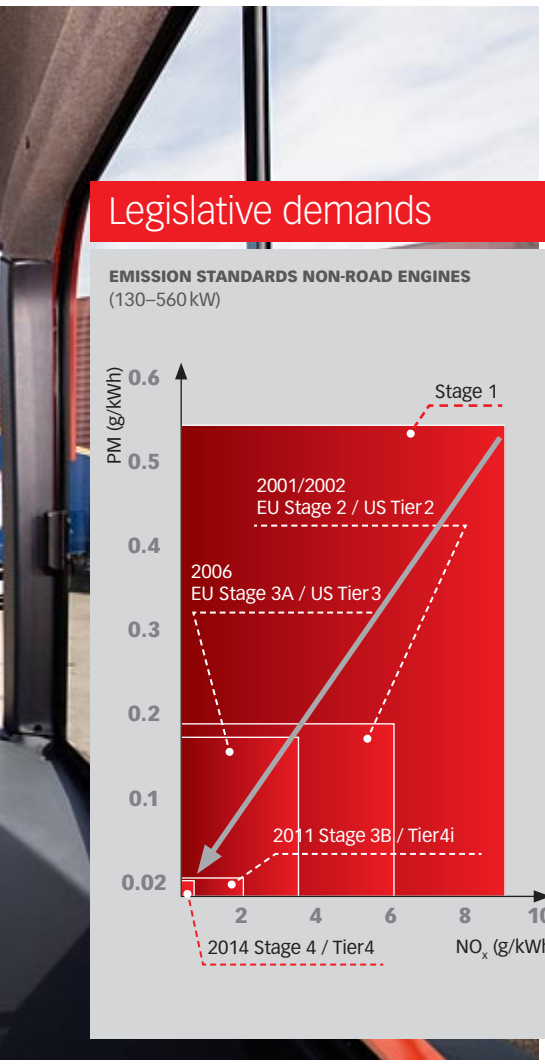
"The most important factor is that we are introducing new engines, not just updating the older models. We mainly use Cummings, Volvo and Sisu Diesel engines and these will now feature a SCR (Urea) system, which is added to the exhaust pipe. The change does not affect capacity but significantly reduces emissions, especially NO_x, which are decreased from 4 grams/kWh to 2 grams/kWh.

"We are always carefully planning ahead to offer solutions that meet the latest standards. Work has already started to meet the Stage 4 regulations with an emphasis on particulate filtration."

NO_x and PM refer to the vehicle air pollution emissions limited by emission legislation. NO_x is a generic term for nitrogen oxides, PM means particulate emissions. The bad local air quality caused by these emissions causes eutrophication of water bodies and respiratory symptoms, amongst others. One method of reducing air pollution emissions is by the use of catalytic converters.

The greatest challenge for regulation is posed by the greenhouse gas emissions of motor vehicles, i.e. carbon dioxide,

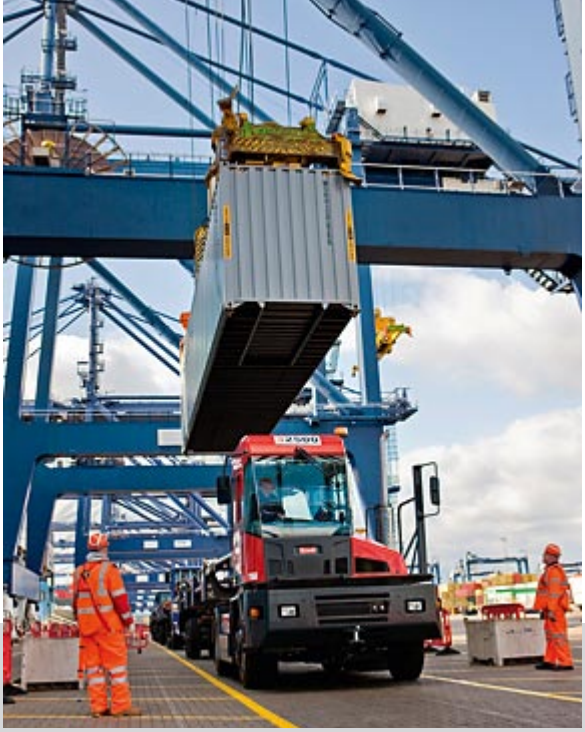
for STAGE IIIB



Legislative demands

EMISSION STANDARDS NON-ROAD ENGINES
(130–560 kW)

which in itself is not toxic or harmful to humans. Carbon dioxide emissions, however, contribute to global climate change. Because carbon dioxide cannot be removed from exhaust gases, the only way to reduce it is to reduce the burning of fossil carbon, which can be done by reducing fuel consumption, e.g. by economical driving.



FIVE TIPS TO OPERATE TERMINAL TRACTORS MORE ECONOMICALLY

1. CHOOSE A POWER RATING WHICH MATCHES YOUR NEEDS
Engines, gears and axles can be tailored to ensure the optimum capacity at certain rpm.

2. ACCELERATE & BRAKE SMOOTHLY
Using a fuel consumption monitor can encourage smoother driving behavior. The driver can see from the monitor how accelerating at full throttle increases fuel consumption, and anticipating breaking by slowing down earlier can quickly decrease fuel consumption.

3. CHOOSE THE RIGHT TYRES AND ENSURE THEY ARE PROPERLY INFLATED
Different tyres are better suited to different applications. Underinflated tyres also require more energy to roll, which translates into more frequent re-fuelling and greater expense.

4. AVOID EXCESSIVE IDLING
When a machine is idling it is using fuel. Effectively it is achieving a fuel consumption of zero mpg. It is therefore more efficient to turn the engine off while you wait.

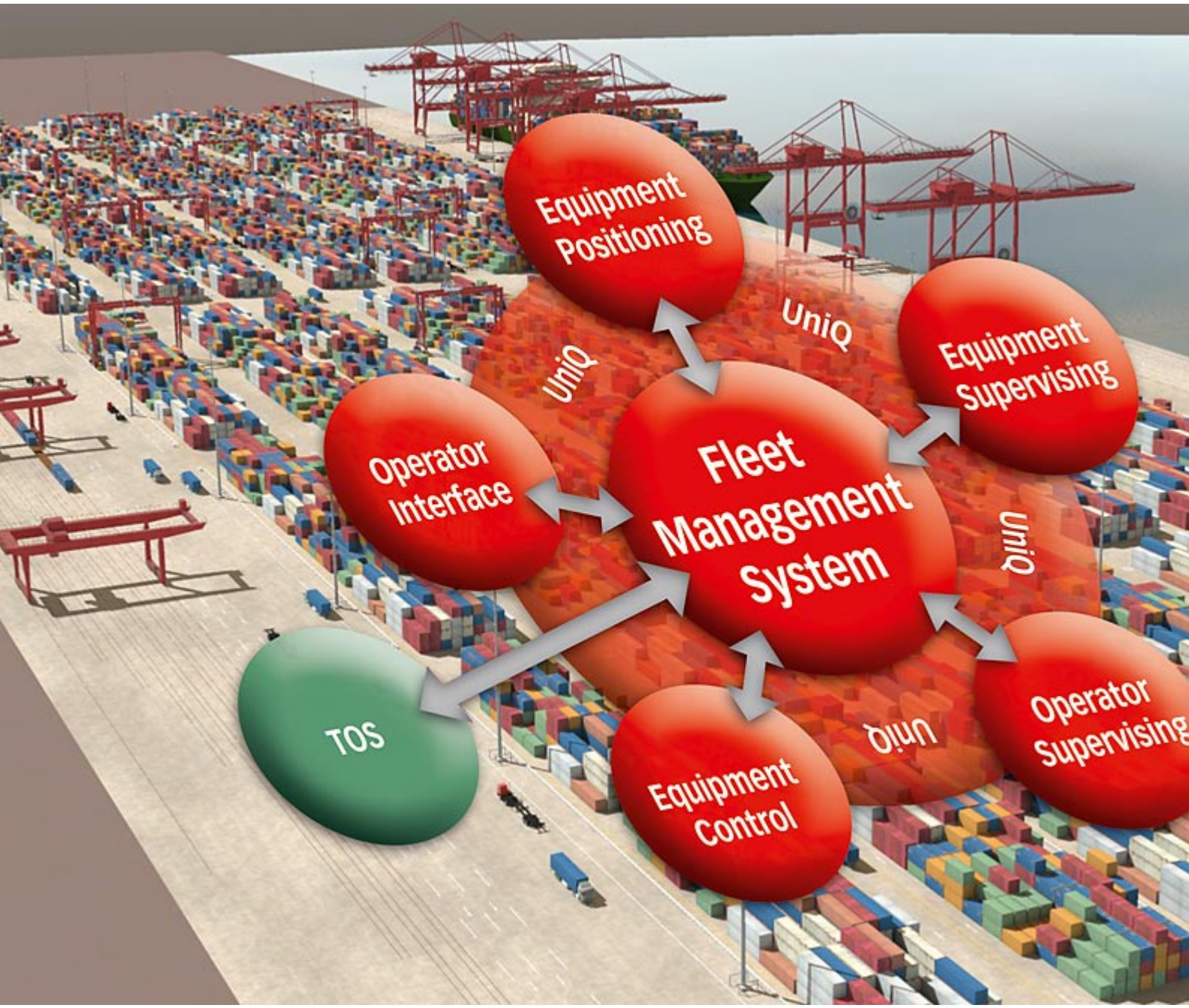
5. FOLLOW THE RECOMMENDED MAINTENANCE PROGRAMME
A vehicle that is well maintained will operate with greater efficiency, particularly regarding fuel consumption.

MACHINE ENHANCEMENTS

The following options are available to make your terminal tractor operations more economical and ecological:

- An. CRT exhaust catalytic particle filter
- Catalytic purifier
- Engine block heater
- Silent drive mode
- Customer-limited maximum driving speed
- An ECO-Drive
- Load-dependent ECO-Drive

UniQ™ – A Customised Soluti for Better Terminal Managem



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Cargotec has launched Kalmar UniQ™, a customised automation platform designed for improving the overall performance and management of container handling equipment fleets in ports and terminals.

NEW PRODUCT

Further enhancing the Kalmar range of cargo handling solutions and intelligent systems, UniQ™ can be adopted module-by-module, improving the productivity of a single piece of equipment, through to managing complete equipment fleets. Kalmar UniQ is designed for all sizes and types of container terminals and it can be tailored to meet customers' specific requirements for both Kalmar and non-Kalmar machines.

INCREASED PROFITABILITY. *Martti Kähkölä*, Vice President, Yard Crane Automation, said, "As containerisation continues to develop, terminal operators will be looking to maximise productivity and minimise costs by increasing their use of automation. UniQ Intelligent Solution utilises the existing range of Kalmar automation systems by combining Fleetview, Remote Machine Interface (RMI), Smartpath and Smartrail technologies into one customised platform, which precisely meets the needs of each customer."

"UniQ provides information about container movement and locations and this significantly helps to improve processes such as fleet usage and overall productivity. It can also gather data about machine performance and then translate it into knowledge about the machines specific maintenance needs. This considerably improves machine uptime as customers can schedule their maintenance needs well in advance," Mr Kähkölä added.

UniQ provides great flexibility and can be adapted for all sizes of operations. The following are typical examples of where UniQ can immediately provide operational benefits:

The performance of a single rubber-tyred gantry crane (RTG) can be improved by electronic driver assistance. This enables the driver to concentrate on visual control instead of steering the RTG. As the RTG operator is able to use a higher traveling speed, the handling time per container can be reduced. The level of crane automation can also be increased by automating gantry, trolley and hoist movements, enabling the RTG to move automatically to the position given in the job order. The operator is then able to concentrate on supervising the equipment motions.

UniQ also provides an opportunity to control equipment locations, which decreases the amount of misplaced containers and increases the equipment availability.

The operator supervising, however, enables driver-specific performance control and ensures that only those drivers with official licenses and expertise are able to drive specific types of equipment.

Cargotec continues to be a pioneer in the automation of container handling equipment and works hand-in-hand with terminal customers and partners around the globe to develop and implement industry-leading handling solutions.

> "Kalmar UniQ is designed for all sizes and types of container terminals and it can be tailored to meet customers' specific requirements for both Kalmar and non-Kalmar machines."
>
> **MARTTI KÄHKÖLÄ**
> Yard Crane Automation

Therefore, close cooperation with the company's Terminal Development consultancy service provides Cargotec with a possibility to help the port operators to better evaluate the benefits of the UniQ Intelligent Solution concept for their own terminal by analyzing its overall effect and cost impact for their individual operation.

Cargotec provides everything from semi-automation features for container handling equipment to fully automated yard handling systems. Intelligent handling solutions can also be the answer to labour shortages and can assist in promoting environmentally sound operations.

Spreader-Mounted Radiation Detection System Enters Service

Cargotec Port Security has installed its first spreader-mounted radiation detection system at a U.S. container terminal, the facility located at Port Charleston, South Carolina, USA. The system at Port Charleston is being used by global security leader Lockheed Martin to complete integration testing of Lockheed Martin's Container Scanning System.

The Cargotec Port Security equipment purchased by Lockheed Martin utilises the Bromma STS45 separating twin-lift 20'–45' telescoping spreader. It is outfitted with radiation threat identification technology designed to ensure secure port operations.

Cargotec Port Security utilises a technology platform that can be installed on crane spreaders, straddle carriers, shuttle carriers, or other mobile equipment, such as on marine vessels engaged in security operations. This technology can detect and analyze, through proprietary software, a particular radiation source and then identify and distinguish isotopes from naturally occurring radiological material. The spreader-mounted system purchased by Lockheed Martin scans containers while the spreader is in transit during the normal course of ship-to-shore operations.

"In today's challenging economic environment, it is essential that security solutions not interfere with the normal velocity of port commerce," says *Troy Thompson*, President of Cargotec Port Security.

"Port Charleston is a strategically important, high-throughput USA terminal, and so we are pleased that our first spreader-mounted radiation detection system is being placed into service there. Terminals need solutions that ensure safe ports, but without compromising port productivity, and Port Charleston offers an ideal environment for Cargotec Port Security equipment, which does not add 'an extra security step' in transhipment and intermodal operations, but which performs container scanning in the normal course of spreader operations," Thompson continues.

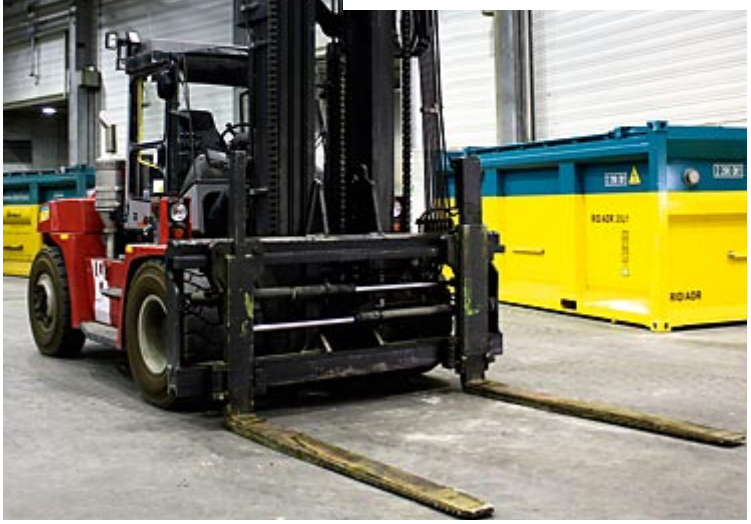
With a staff of 140,000 people, Lockheed Martin is one of the world's leading security organisations, and the largest provider of IT services, system integration, and training to the United States government. Port Charleston, on the southeast coast, is one of the largest container ports in the United States.

CUSTOMER

FOCUS ON KÖLLIKEN

Kalmar Equipment Moves Hazardous Waste in Switzerland

Cargotec has provided a Kalmar DRF450-60S5X reachstacker and a Kalmar DCE100-6 forklift truck to handle special containers in the Swiss town of Kölliken, where a consortium of companies is working to remove thousands of tonnes of industrial waste. **READ ON...**



FOCUS ON KÖLLIKEN

Kalmar Equipment Moves Hazardous Waste in Switzerland

Between 1978 and 1985, approximately 350,000 tonnes of hazardous waste was deposited in a clay-pit near Kölliken when legislation for the disposal of such materials was less stringent. Now the waste, including heavy metals and chemical residues, is endangering the nearby source of ground water and creating serious problems for neighbouring communities. The site is being cleaned up by a joint venture named Arge Phoenix, which was formed by five companies, Eberhard Bau, Eberhard Recycling, Walo Bertschinger, Richi Weiningen and Ecosoil.

COMPLEX CLEAN-UP TASK. *Walter Zwahlen*, Kölliken Site Manager for Arge Phoenix, explains what the operation entailed:

"This major cleaning project, the first of its kind in the world, was started in 2006 by building an enormous hall in which the air pressure is kept low, so as to prevent the escape of dust, gas and odours. Since November 2007, we have been digging up the waste with excavators and placing it into special containers. These containers, each weighing 30 tonnes, are then sealed and loaded onto trucks by a Kalmar reachstacker. The Kalmar forklift truck is then used to handle empty containers in the hall.

"We know roughly what has been dumped on the site but we need to be sure before making decisions about the material's remediation potential. Only after a thorough analysis is the waste transported to treatment centres. Some waste can be recycled, some can be burned and some needs to be buried deep in old salt mines. All of the waste should be removed from the site and treated by 2013," he said.

The Kalmar DRF450-60S5X reachstacker and Kalmar DCE100-6 forklift truck have both been optimised to operate within the hall. A low speed limit, limited height and effective emissions filters all make it possible to use these machines inside.

Eberhard Bau and Eberhard Recycling

Walter Zwahlen

"The Kalmar reachstacker and Kalmar forklift truck have both been optimised to operate within the hall. A low speed limit, limited height and effective emissions filters all make it possible to use these machines inside."

WALTER ZWAHLEN, Site Manager
Arge Phoenix

Excavators place waste into special containers inside the hall.

are the contractors for the Kölliken deposit. *Thomas Angehrn*, Project Manager, Inventory for Eberhard Bau, said:

"We had many options for moving the containers in the hall but chose mobile equipment due to its flexibility and stability in lifting. We knew that Cargotec has the world's best technology in container handling and we are sure we have made the right choice with the Kalmar equipment.

"Contaminated soil is a serious problem but one which can be tackled with experience. Eberhard has been a pioneer for 40 years and continues to be so," he said.

Thomas Angehrn from Eberhard Bau (left) and Reto Keller from BAMAG Maschinen AG, an official Kalmar dealer.

The SCHÄFER group of companies is a long-established medium-sized family business in Southwest Germany with plants in Stahlbeton and Naturstein. The group also holds an interest in the Heidelberger Betonelemente GmbH & Co. KG in eastern Germany.

Concrete Pipes Require Expert Handling

From these locations, the company produces reinforced concrete pipes for heading and open hauling applications. Ranging from sizes DN300 to DN3600 and with unit weights of up to 40 tonnes, the products are compliant with FBS directives as well as the complete pit programme, meeting DIN4034 part I and II, 3D concerning rainwater cisterns and noise barriers.

Cargotec has supplied Kalmar forklift trucks to each of the SCHÄFER sites with the current fleet consisting of two 10-tonne, one 12-tonne and two 16-tonne forklifts.

NEW ADDITION TO FLEET. As part of an ongoing enhancement of its fleet, SCHÄFER has also purchased a Kalmar DCE 160-12 model to transport pipes from the production facility to the storage area at its Rheinsheim plant.

Like all of the forklift trucks employed at SCHÄFER it is equipped with a Terminal West attachment bracket, which allows for a quick and easy change from fork to clamp operations.

The DCE 160-12 model is part of the Kalmar medium lift truck series, which

The forklift trucks are typically operated up to 1,000 hours per year and the in-house workshop attends to the day-to-day maintenance of the machines.

comprises forklifts from 9 to 18 tonnes payload with a load centre of 600 to 1200 mm. Adaptable to virtually any use and load, these versatile machines range from 15,000 to 25,000 kg depending on their specification.

Of particular use in this plant is the clamp operation afforded by the DCE 160-12. Using a Stabau 360° clamp, the machines can move DN2000 pipes which have a unit weight of 10 tonnes and a face-to-face length of 3,250 mm. The cutting edge forklift is equipped with the comfortable Spirit Delta cabin, a mast for 4,000 mm lift and a conventional lever operation.

EXTENDING MACHINE LIFE. The forklift trucks are typically operated up to 1,000 hours per year and the in-house workshop attends to the day-to-day maintenance of the machines. This ensures a long service life, despite this challenging application. SCHÄFER's Kalmar fleet is also monitored and serviced by the highly skilled Stapler Center from Pieckert in Empfingen, Germany.

FACTS

Customer
Schäfer, Germany

Cargotec solution
10, 12 and 16 tonne forklift trucks with clamps for handling concrete pipes

Metal Plating Industry Benefits from Heavy Forklift Trucks

In the 1950s, the chemical group Dupont pioneered a method for connecting previously incompatible metals using a process called explosive plating – enabling engineers to combine the properties of the different metals involved.

THE BASIC PRINCIPLE OF EXPLOSIVE PLATING. Metals such as steel and titanium cannot be joined using conventional methods. However, given the right conditions, if two plates are overlapped at a distance of a few millimetres and then an explosive charge is ignited flatly on the upper plate, the two material structures can be joined inseparably due to the speed with which they are forced together.

Today, the US-based Dynamic Materials Corporation (DMC) is the global market leader and operates three production plants in Europe. The largest European facility is in Burbach, Germany. Here, steel is combined with the added strength of titanium to produce sheets of highly durable metal for use in commercial boiler manufacture and the automotive industry.

Several bespoke Kalmar machines play crucial materials handling roles for DMC, transporting metal sheets to the underground bunkers and abandoned mining galleries which are used to offer the best protection against the noise and shock caused by the explosions.

THE ROLE OF CARGOTEC. Working closely in conjunction with the DMC, *Heinrich Kraft,* Sales Manager for industrial handling equipment at Cargotec, has configured three special heavy forklift trucks. These trucks are used to carry the metal sheets down to the underground "explosion chamber" and then load the completed sheets for onward transportation. The sheets can be up to 4,000 mm in width, 8,000 mm in length and weigh 20 tonnes.

According to Heinrich the operation is extremely delicate, despite the significant weight of the materials involved:

"These are extreme applications, because the underground visibility is a problem. The sheets have to be moved with highest precision, since even the smallest vibration can undo hours of meticulous preparatory work."

THE MOST POWERFUL 33-TONNE FORKLIFT TRUCK IN EUROPE. For the last four years, the Burbach plant has used a Kalmar DCD 250-12 forklift truck. It features roller guided, hydraulically adjusted, 3,000mm forks and a 4,200 mm wide fork carriage. This machine is used in the preparation hall and for loading vehicles with the finished products.

In addition, Kalmar has developed a bespoke DCE 330-12 LB model, which is believed to be the most powerful 33-tonne forklift truck in Europe. Normally, Kalmar heavy-load forklift trucks are designed for a load centre of 1,200mm, which is common in this class. However, as *Wolfgang Kasper* from the DMC's R&D division explains, this would not be suitable for this application:

"In order to take the gigantic sheets and steel panels underground into the 'explosion chamber', we needed a machine with 33 tonnes of bearing load at a lifting height of 2,000 mm that could also fit beneath the 3,400 mm ceiling! Only Kalmar machines could match the conditions."

The resulting machine features a unique single pole with 2,000 mm lift. The inner pole and fork carriage are taken from a 42-tonne machine and the pole has six pole rollers instead of four. The forks are 2,700 mm long and can be extended to 4,500mm with giant gusset shoes.

ARDUOUS WORKING CONDITIONS. A further consideration for the machine specification was the atmosphere in the mining gallery, which contains a very aggressive nitrate. The machine was applied with a 200µ thick coat of varnish and is additionally protected with a "sea water sealant." However, this and further coatings can only delay corrosion, so an innovative central lubrication system was installed, using the same principle as a self-regenerating diesel particle filter.

Furthermore, the six tyres of the DCE 330-12 LB have been foamed to be able to move the sheets and lay them down into the sand bed calmly. In this way the pitching movements are reduced dramatically. Xenon lights and a residual speed reduced to 15 km/h are other characteristics of the 33-tonne machine.

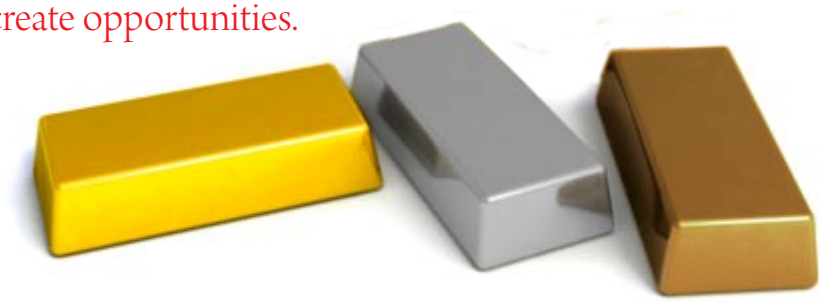
FACTS

Customer
DMC, Germany

Cargotec solution
Tailored forklift trucks for handling metal sheets

Flexible Fleet Management Products Pave the Way through the Downturn

Changes in the global economy over the last year have decreased the predictability of business activity. Despite the obvious difficulties faced by some organisations, this economic climate can also create opportunities.



For those customers who decide to seize these opportunities, but do not want to commit resources to purchasing the machines they need, Cargotec can offer affordable solutions that assist through this uncertain period.

Cargotec offers Fleet Management products which offer "pre-owned machines" and "short-term rental" as alternatives to the purchase of new machines. With these flexible Fleet Management products, customers can still use premium Kalmar equipment and benefit from their proven reliability and service. At the same time, they can avoid large capital outlays or long term commitments.

MACHINES FOUND ON WEBSITE, WWW.KALMARUSEDEQUIPMENT.COM. Over the past three years, the Cargotec's Fleet Management concept has grown into a substantial business.

"A key factor in this is has been the systematic data collection about the machines' usage and customers' requests that enable pro-active response to customers. The number and types of machines can easily be adjusted depending on the cycles in the customer's business," commented *Arno van Gils,* Director, Fleet Management at Cargotec.

ARNO VAN GILS

One of the latest initiatives is to publish the complete stock of machines available on a centrally co-ordinated website. Every customer or subsidiary can easily search for machines in stock that meet their requirements.

The Fleet Management team, based in Antwerp, Belgium is capable of submitting a quotation within 24 hours. Specification details, inspection reports and photography are attached to give a complete impression of the machine. This straightforward way of working enables the ability to find a matching solution for every customer quickly.

MACHINE CONDITION IS CLEARLY CATEGORISED. The condition of each used machine is categorised as "Gold,"Silver" or "Bronze." Each machine comes with a full condition report and Gold category machines are granted a one-year full warranty.

"We are extremely positive and optimistic about the future for Fleet Management, even in the current economic climate. Our customers can keep abreast of the latest developments by logging into the Fleet Management website: www.kalmarusedequipment.com," Arno van Gils said.

DID YOU KNOW?

Five facts about Fleet Management that you might not know....

1. Fleet Management offers a wide range of pre-owned equipment worldwide.
2. Fleet Management manages a fleet of 500 units, varying from small lift trucks up to straddle carriers. Approximately 200 of these units are actively rented out at any given time.
3. Fleet Management is often used for bridging new deliveries ensuring seamless operation for customers.
4. Fleet Management has grown as a business by over 50% in the last three years.
5. Fleet Management has a bright future! There is a growing demand for all kind of used machines and an increasing global potential for quality rental machines.

The Right Parts at the Right Time

When it comes to working closely with customers, Cargotec's Istanbul-based Turkish Kalmar dealer, Toyota Istif Makineleri A.S is leading the way.

Over the last four years, the company has increased its parts turnover by a staggering 400%, which is a tremendous achievement in any circumstances, but especially impressive given the competitive nature of the business in which it operates.

CUSTOMER FOCUS. According to dealership owner, *Ender Erkul*, the company's success is largely attributed to a strategy of building close working relationships with its key customers and striving to exceed their needs:

"We have worked hard to understand precisely what our customers need and have structured our spare parts service to meet these demands.

Zafer Akbilmez, Parts Manager, Toyota Istif Makinelery A.S.

Siwe Fritzson, Kalmar Parts Area Sales Manager and Ender Erkul, General Manager of Toyota Istif Makineleri A.S.

"Of course, every company has different operational requirements and we have to tailor our service accordingly, but the fundamentals are the same across our customer base.

"They all require competitively priced parts which are available when they need them. They expect us to help them identify the right components and then deliver them quickly. So we do, often on the same day as the order comes in," says Ender Erkul.

MAXIMUM UPTIME. Ender Erkul's company has an excellent track record of helping its customers maintain maximum machine uptime. They have recently introduced a system that keeps customers informed on the status of their spare parts order so that they can anticipate when deliveries need to be made.

Parts manager, *Zafer Akbilmez*, believes that keeping the right parts in stock helps

"They all require competitively priced parts which are available when they need them. They expect us to help them identify the right components and then deliver them quickly. So we do..."

ENDER ERKUL, General Manager
Toyota Istif Makineleri A.S

to ensure the productivity of their customers' machines:

"Over time they prefer to buy from us than the competition as we prove to be a reliable and honest source of supply. They know they can trust us to deliver a genuine part, at a competitive price, quickly and efficiently.

"They don't have to tie up capital on large stock holdings because they know we will service them as and when they need it. The growth in business that we have experienced has come mainly from the establishment of parts agreements with our key customers. This helps to cut down on the cost of administration, time and resources and means we can both operate much more efficiently," says Zafer Akbilmez.

CONTINUED SUCCESS. Ender Erkul anticipates the growth of his company will continue and is making significant investments in the business. He has recently opened a new workshop where a dedicated team of service specialists can repair all brands of equipment. This is another diversification that has contributed to the growth of the parts business:

"We now supply parts for a vast range of brands and many types of equipment. The key for us has been to develop a clear understanding of the market from the customer's perspective," concludes Ender Erkul.

MALAYSIA

Colin Swee

Insight into Malaysia

Colin Swee, Cargotec's Managing Director for Kalmar in Malaysia, assesses the latest market conditions and opportunities in the region.

The Malaysian economy is definitely in a period of recovery. For 2009, GDP is expected to be 3% and in 2010, the projection is for an increase to 3.5%. Malaysia has a strong oil and gas sector, which along with agriculture, in particular palm oil, has helped to support the economic growth.

Container traffic in Malaysia is on the increase with two dominant major ports. During this year, Port Klang is expected to reach 8.2 million TEUs, which constitutes a 3% increase on 2008. PTP is expected to grow by between 3 and 5% up to 7 million TEUs.

In terms of container handling equipment, the majority of ports are dominated by ship-to-shore cranes and supported by rubber-tyred gantry (RTG) cranes. Most ports also utilise Kalmar reach stackers and terminal tractors for the fast and efficient placement of both laden and empty containers.

SIGNIFICANT SUCCESS. Cargotec's Kalmar solutions are widely known in Malaysia with a significant share of the new equipment market. It is also highly focused on fleet maintenance services and crane retrofit projects. Having placed a major emphasis on these areas in recent times, the company has several major success stories with STS cranes and RTG retrofit projects, including over 250 pieces of equipment under its maintenance supervision. The level of experience and expertise in this area truly makes the Malaysian Cargotec technical team unique in the region.

The investment group responsible for infrastructure developments in the state of Sabah visited Cargotec headquarters in Finland. Sabah, the second largest state in Malaysia, is one of the five development corridors highlighted in the government's economic master plan. Investment in new ports and both oil and gas exploration is ongoing.

Equipment Servicing and Maintenance in Albania

Cargotec was awarded a five-year equipment servicing and maintenance contract by the Durres Port Authority (DPA) in Albania.

Initially, Cargotec will be a service and staff provider preparing and maintaining the cargo handling equipment workshop and workshop machinery, including the management of the parts inventory. As the collaboration develops, Cargotec's role will increasingly progress as the Port Authority's consultative partner working in DPA's favour while the port transforms from a primarily cargo handling entity to a well-equipped and specialised container and ro-ro operator.

Durres is the biggest port in Albania, handling some 80% of the country's seaborne trade. Annual growth rates over the last decade exceeded 10%.
The port is part of the Pan-European Transport Corridor VIII linking Albania with FYR Macedonia, Bulgaria, Turkey, Greece and Italy.
The port also serves a major industrial zone alongside the main highway to Tirana, Albania's capital. This zone has attracted many foreign investors and generates considerable business for the port.

Sales and Service Networks Expanded in Morocco and in Denmark

Cargotec has strengthened its sales and service activities in Morocco by acquiring the port service and equipment related division of Maghrepic S.A.. Maghrepic has been Cargotec's dealer representative in Morocco with a long experience in service and spare parts. Following the deal, Cargotec will employ 44 people, most of whom are service technicians. The acquisition supports Cargotec's aim to grow sales and the service activities in Morocco.

Cargotec also agreed to acquire assets of a Danish sales and service company Arne Holst & Co. A/S. The company is situated in Kvistgaard, North of Copenhagen in Denmark. Arne Holst & Co. has been a valued agent and service provider for Kalmar products and parts and for MacGregor lashing equipment for over 20 years. Through the acquisition Cargotec strengthens its presence in Denmark.

NEWS

KALMAR

More information about orders on our website
www.kalmarind.com

Kalmar Shuttle Carriers to Algeciras Mega Terminal

Cargotec was awarded a contract to provide a fleet of shuttle carriers to TTI Algeciras S.A. in Spain. These 20 Kalmar SHC240H shuttle carriers have a single-lifting capacity of 40 tonnes and can stack containers 2-high.

The shuttle carrier fleet serves the needs of the new Algeciras terminal by providing fast and flexible transportation between the ship-to-shore (STS) cranes and automatic stacking cranes (ASC).

The TTI Algeciras terminal, with more than 1,200 metres of quayside, will be able to serve vessels carrying up to 10,000 TEU. The terminal is expected to handle more than 1.5 million TEU annually once it is opened for operation in 2010. The new terminal serves as a hub for transshipment between Africa, Northern Europe, the US east coast and South America. TTI Algeciras is owned by Hanjin Shipping.

Two Ship-to-Shore Crane Orders for Latin America

Infrastructura Portuaria Mexicana is preparing to better serve its clients with the expected revival in the global economy by increasing its capacity by purchasing newer and more efficient equipment in Altamira terminal with the addition of the new

Kalmar ship-to-shore (STS) crane. The crane has an outreach of 49 metres, 19 metres backreach and 37 metres hoisting height.

The new Kalmar STS crane for Port Autonome de la Guadeloupe's Port de Jarry in Guadeloupe will extend crane capacity by providing sufficient hoisting height to load and unload the larger vessels that are entering the port. It has an outreach of 43 metres, 25 metres backreach and 33 metres hoisting height and will be equipped with a separating twin lift spreader.

Forklift Trucks to Greece and Germany

Cargotec has received an order for seven Kalmar forklift trucks from Thessaloniki Port Authority in Northern Greece. The order consists of three Kalmar DCD250-12LB forklift trucks with a capacity of 25 tonnes and four Kalmar DCE180-9 forklift trucks with a capacity of 18 tonnes. All seven are for the expansion of the general cargo terminal in the port of Thessaloniki. The order also includes coil rams.

Kalmar forklift trucks will also be delivered for ArcelorMittal Steel in Germany. This order consists of 13 units of DCE150-12 and includes a service contract.

Orders for Kalmar RTGs

TURKEY. Six Kalmar E-One² rubber-tyred gantry (RTG) cranes were ordered by Evyap Port in Turkey, to assist with the port's continued expansion. The recent order will bring the total number of Kalmar RTGs ordered by Evyap to ten.

PORTUGAL. Three RTG cranes were ordered by Liscont Operadores de Contentores, SA in Lisbon, Portugal, currently operates seven of these Kalmar RTGs.

VIETNAM. Saigon Newport Company (SNP) in Vietnam awarded Cargotec a contract for a further six all-electric Kalmar E-One RTG cranes, destined for the 1st phase of its Tan Cang-Cai Mep International Container deepwater port near Ho Chi Minh City. These are identical in design to the twenty top-performing E-One RTGs ordered by SNP in 2007.

NAMIBIA. Six Kalmar E-One² RTG cranes will be delivered to Namport in Namibia for increasing operational efficiency at their Walvis Bay port. The RTGs will be fitted with twin lift spreaders which provide a capacity of 50 tonnes to further increase handling efficiency and supports faster ship turnaround times.

Cargotec Partners with TCS also In Charity

Cargotec's customer Tilbury Container Services (TCS) is engaged in supporting the wider communities they belong to with charity work. Cargotec has now supported this valuable charity work by a donation in the UK.

TCS and Cargotec are also committed to the advancement of eco-friendly container handling technology and TCS is currently using a Kalmar 7th generation ESC W straddle carrier fitted with the new Pro Future™ hybrid technology package.

Cargotec selects and proceeds with sponsorships that strengthen corporate values, brand and recognition, and are related to the business environment the company operates in.

Change of Legal Company Name in Hong Kong

The legal company name of Kalmar Asia Pacific Limited in Hong Kong has been changed to Cargotec Asia Limited (卡哥特科亞洲有限公司) with effect from 3 November 2009.

The name change is in accordance with Cargotec's country reorganisation initiative and One Company approach. The change will help expand and streamline Cargotec's business in Hong Kong and China under one company operations.

The office and contact information will remain unchanged:
Cargotec Asia Limited
2/F, Yoo Hoo Tower
38-42 Kwai Fung Crescent
Kwai Chung, Hong Kong
Phone, +852 2944 8383. Fax: +852 2944 9966

Reachstackers for Handling Gas Pipeline Sections

Cargotec has been awarded a contract by Norwegian Group AS for seven Kalmar reachstackers equipped with special attachments for handling pipes. The reachstackers will be used for handling gas pipeline sections for the Nord Stream Project that will supply Europe with additional gas from Russia via two parallel pipelines of 1,220km long. The order also includes a service agreement.

KALMAR

Kalmar. The essential part of your business.

The best machines deserve the best parts service and that's exactly what you get with Cargotec providing genuine Kalmar parts. Wherever you operate around the globe, you can rely on our support to reduce downtime and maximise the productivity of your equipment. Our high value parts service is simple to access and offers next day delivery, saving time and cost. So, don't take the risk of ordering parts from a less reliable source, always specify original Kalmar parts - the essential part of your business.

Cargotec *improves the efficiency of cargo flows by offering solutions for the loading and unloading of goods on land and at sea – wherever cargo is on the move. Cargotec's main daughter brands for cargo handling Hiab, Kalmar and MacGregor are global market leaders in their fields.*

www.cargotec.com ▪ www.kalmarind.com