

Kalmar around the world

CUSTOMER MAGAZINE ISSUE 2 | 2011

Turkey's Evyapport
expands with
Kalmar STS cranes

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Port of Le Havre gets a power boost

The gateway to the French market expands with a total solution from Cargotec.

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Cover: Evyapport, Turkey was photographed by Per Trané.

Kalmar around the world

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Foreword

Sky is the limit

The business actions we put into place in the Asia-Pacific region two years ago are now bearing fruit. This is a market that is incredibly diverse, which means we must tackle each country with specific applications.

As it stands, Cargotec's sales in Asia-Pacific make up about 40 per cent of the total company turnover. While new order intake fell in 2008 following the global financial crisis, we recovered our volumes last year. We now anticipate that this year will see volumes reaching pre-crisis levels. Next year looks even better.

This is good news for our stakeholders and shows the growth potential that the Asia-Pacific market represents to Cargotec.

In July, we announced an exciting joint venture with Jiangsu Rainbow Heavy Industries (RHI) in China. RHI supplies Cargotec hatch covers, cargo cranes and other products. In this partnership, we will focus on ship-to-shore cranes, rubber-tyred gantry cranes, rail mounted gantry cranes and marine specialty cranes.

We expect that the majority of the production will go to global markets but anticipate that sales to China will grow strongly. Increased sales to China could help to compensate for softer demand in western markets and thus provide Cargotec increased flexibility.

Growing domestic consumption in Asia will drive an increased demand for containerised cargo. This will give a boost to Cargotec products, including our line of Kalmar port cranes in the container-handling segment. We also see a growing market for the Hiab stiff boom cranes in Asia, as safety and productivity have become central to our customers' business operations.

The people who work for Cargotec are a vital part of our success. We are taking active steps to not only retain our talent but also help them grow. We want our customers to know that Cargotec offers excellent products that are backed with the dedication of the people who work for our company.

Ken Loh

Executive Vice President, APAC



Cargotec's expertise in container and heavy load handling is represented in the global marketplace by the wide range of Kalmar solutions. This includes ship-to-shore cranes, yard cranes, shuttle and straddle carriers, reachstackers, empty container handlers, terminal tractors, log stackers, forklifts and automation. One in four container movements around the globe is handled by a Kalmar machine. www.kalmarind.com



PORT 2060

Tomorrow's megaport

Fifty years ago, somebody envisioned the container as a new method of shipping goods. Now, Cargotec is already looking fifty years into the future.

TEXT Risto Pakarinen

Last year, **Ismo Matinlauri**, Cargotec Senior Vice President of Port Cranes, read Marc Levinson's *The Box: How the Shipping Container Made the World Smaller and the World Economy Bigger* and got inspired. If the past 50 years of shipping had been that fascinating, what would the next 50 years be like? What would the world look like in 2060?

He invited a few of his colleagues on a trip to the future, to imagine the world in 2060. "We got together about once a month for a few months, but it wasn't easy to let go of the existing world. We kept pulling ourselves back too much," says Matinlauri.

In the end, their vision for 2060 seems just as futuristic as a long-term vision should. "Port 2060 is about releasing our creativity," he says.

Megaports and nanofibres

The Port 2060 gives us megaports, offshore ports on artificial islands, supported by floating feeder terminals that can be moved around in line with changing demands. Con-

tainers are foldable and have built-in intelligence to communicate destination, contents and journey details. Container crane lift capacities have increased to 1,000–2,000 tonnes from today's 40–100 tonnes.

The majority of container vessels will be fully automated by 2060, and there are numerous energy saving features, including wave energy collectors and solar technology. Nanofibre technology has replaced steel wiring. Cargo handling systems use alternative energy sources or electric drives, and wheels have been replaced by air cushion or magnetic levitation technologies.

Is it inconceivable?

Maybe it is hard to imagine, but so would today's world have been for a group of thinkers in 1950. "In 1956, nobody thought that the shipping world would grow to be what it is today," Matinlauri says.

"In fact, it was thought that the customs and tariffs were the biggest obstacle for growth when it was the transport costs that could amount to 20 percent of the price of

a product. That's why there were bicycle factories in many countries, for example. There was no point in shipping bikes from one country to another," he adds, chuckling.

Containers changed everything

And then, along came the container. The box. "After that, there was no point in determining shipping costs by the value of the shipped goods, when everything looked the same," says Matinlauri.

Funny thing is the container was such a great invention that Matinlauri and his group believe that it will be front and centre even 50 years down the road. "It's stayed practically the same for 50 years, it's a little longer and higher than in the past, but it's such a standard that it would be difficult to switch to a completely new solution," he says.

Instead, he can see a future in which the container is made of a new material and in which it has artificial intelligence in some format.

Invisible intelligence

Once the group had put together their ideas, and their vision, they hired an agency to create a visualisation of the concept. Naturally, magnetically levitating

containers and megaports got most of the attention, but Matinlauri says the biggest new thing may be one that's difficult to visualise: artificial intelligence.

"We think that the future will be about automated intelligent systems, and unmanned operations, even if humans will still be a cost efficient and flexible alternative because we learn new things fast," he says.

That doesn't mean that the megaports wouldn't revolutionise the industry. And that is already happening. "There are already smaller floating platforms that are used as temporary loading stations in places where a big vessel can't get into the port," says Matinlauri.

Future is now

"A journey of a thousand miles begins with a single step," said Confucius. A journey into the future begins now. "Our customers use

In the future, containers will be made from new materials and have artificial intelligence.

our products for about a decade, maybe 20 years. The things we make today will be used in 2030," says Matinlauri.

"However, we didn't even try to link the Port 2060 vision to our current business model. We decided to look at things with a longer perspective on purpose so

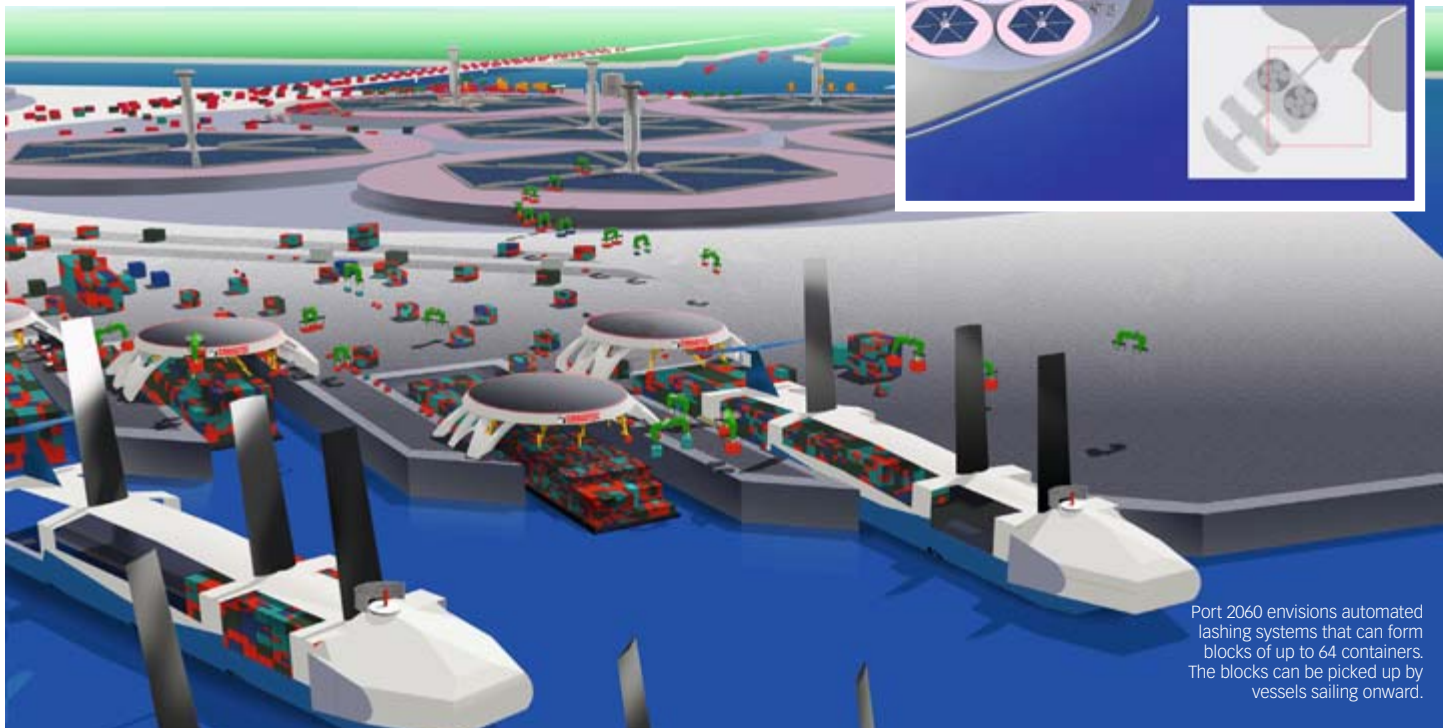
that we wouldn't shoot our ideas down simply because they may not have seemed possible today. Maybe they're not possible right now, but we have a shadow of a hunch that it may be possible in the future," he adds.

The Port 2060 findings and the concept was launched internally in the spring of 2011, and externally last summer, when the site went live. And the response has been encouraging, says Matinlauri. "There have been a lot of contacts, and we know that people are visiting the site. The video we made has created a lot of buzz. It's not something you see every day in our business," he says.

Be prepared today

The Port 2060 campaign will run until the end of the year. Until then, the group will gather comments from the field and draw conclusions on how to proceed. "The future as described might be much more exotic, or less so, but we need to be prepared for change whatever direction it takes. It might seem that 2060 is a long way away, but many of those who will be celebrating the centenary of the container are already alive today," says Matinlauri.

"This exercise is part of our ongoing drive to enhance our customers' operational performance. Now is the time to start preparing for the future," he concludes. ■




 **HIAB**

 **KALMAR**

 **MACGREGOR**


Cargotec improves the efficiency of cargo flows on land and at sea – wherever cargo is on the move.

Cargotec's daughter brands, Hiab, Kalmar and MacGregor, are recognised leaders in cargo and load-handling solutions around the world.

Cargotec's global network is positioned close to customers and offers extensive services that ensure the continuous, reliable and sustainable performance of equipment.

The company employs approximately 11,000 people.

www.cargotec.com

| Key figures, MEUR | Q1-Q3/11 | Q1-Q3/10 | Change | 2010 |
|----------------------------|----------|----------|--------|-------|
| Orders received | 2,391 | 2,013 | 19% | 2,729 |
| Order book, end of period | 2,349 | 2,395 | -2% | 2,356 |
| Sales | 2,310 | 1,828 | 26% | 2,575 |
| Operating profit | 159.1 | 92.9 | 71% | 131.4 |
| Operating profit margin, % | 6.9 | 5.1 | | 5.1 |
| Net income for the period | 114.5 | 54.2 | | 78.0 |
| Cash flow from operations | 78.0 | 193.4 | | 292.9 |
| Earnings per share, EUR | 1.86 | 0.82 | | 1.21 |
| Net debt, end of period | 362 | 264 | | 171 |
| Personnel, average | 10,613 | 9,588 | | 9,673 |

Cargotec partners with London Gateway

Cargotec and DP World have signed a contract making Cargotec a partner in supplying products and technology to the deep-sea container port London Gateway. This milestone project has created vast interest inside the industry.

London Gateway is set to become the premier logistics centre in the United Kingdom and Europe's largest logistics park. It will also be Britain's most environmentally friendly major port, offering a more cost effective, greener way of getting goods to UK consumers. The port is scheduled to open in late 2013 with an initial capacity of 1.6 million TEU.

Once complete, the new port and park facility will save UK businesses millions of pounds a year in land transport costs. An estimated 65 million road freight miles every year will be saved as many goods will no longer need to be transported from deep sea ports to

inland distribution centres. Instead, goods will be sent straight into the new London Gateway Logistics Park and then directly to shops and homes.

Giant leap forward

The Dubai-headquartered DP World is the world's third largest port operator. It has been planning the new port since early 2010 and is expecting to invest a further USD 1 billion in London Gateway over the next three years.

"London Gateway is a giant leap forward for the UK's supply chains and will benefit our customers tremendously through more efficient transportation of goods. It will also support wider business and economic growth in the United Kingdom," says **Mohammed Sharaf**, Chief Executive of DP World.

"London Gateway will provide the world

class service that our customers have come to expect from DP World across the globe, using the most advanced equipment and technology. London Gateway's location is unique, bringing the world's largest ships directly to Europe's largest logistics park and providing long-term value for our customers and UK business," Sharaf says.

As a partner, Cargotec will be providing 28 Kalmar shuttle carriers and 40 Kalmar automatic stacking cranes with related technology to be used in the port. "We are proud to be chosen as the partner in the heart of this landmark project and we are committed to London Gateway's success. With this co-operation, we are strengthening our position as a leader in the field of port automation," says **Harald de Graaf**, Executive Vice President, EMEA. ■



London Gateway, Britain's new global port, will be situated 25 miles east of central London.

Allcargo adopts RTG cranes in India

Rapid growth in container traffic moving through the Indian ports has prompted Allcargo Logistics to order four all-electric Kalmar E-One² rubber-tyred gantry (RTG) cranes from Cargotec.

First among South India's logistics operators, Allcargo is planning to convert its Chennai facility to all-electric RTG operations. It has to date operated using Kalmar reachstackers.

Following a sharp increase in throughput and subsequent space limitations, Allcargo is also planning a new facility near Mumbai.

Allcargo has opted for variable speed generators to reduce fuel consumption. The crane's design will also ensure longer service and maintenance interval and thereby lower overall running costs.

"We were able to capitalise on Allcargo's positive experience with Kalmar reachstackers and empty container handlers," says **Jonne Hankimaa**, Managing Director, Cargotec India. "It was also important to Allcargo that we can offer a local service support network, to ensure maximum uptime for the equipment."



Cargotec delivers port equipment to Venezuela

Cargotec will supply Kalmar port equipment units to Bolivariana de Puertos, S.A in Venezuela. The order includes 24 Kalmar DRF 450-65 reachstackers, 4 Kalmar DRF100-54 reachstackers for empty container handling, 19 Kalmar Ottawa 4x2 terminal tractors, 3 Kalmar DCF80-45 masted empty container handlers and 4 Kalmar DCE160-12 lift trucks.

Headquartered in Caracas, the capital of Venezuela, Bolipuertos is a government ministry operating six ports with annual cargo traffic of around 1,000,000 TEUs. Controlling the ports of La Guaira, Puerto Cabello, Guanta, Maracaibo, El Guamache and La Ceiba, it already runs a fleet of over a hundred reachstackers and other associated equipment, including a large number of Kalmar models.

"We are very proud to be selected as a key supplier to Bolipuertos and to secure such a groundbreaking order. It is extremely pleasing that the performance of existing Kalmar equip-

ment and the support we have provided to date has resulted in this significant deal and the continuation of our excellent working partnership," says Cargotec's Sales Director **Emilio Martinez**.

Cargotec wins a port automation contract in Los Angeles

Cargotec will supply ten state-of-the-art Kalmar automatic stacking cranes and 17 customer-specific automatic shuttle carriers to leading terminal services provider TraPac Inc, in Los Angeles, USA. The equipment will be delivered to TraPac, a subsidiary of Mitsui OSK Lines, in 2012 and 2013.

"This is our first large automation order in the Americas region and it strengthens our position globally in port automation," says **Lennart Brelin**, Cargotec Executive Vice President, Americas.

Dual-purpose forklifts move cargo in Italy

Cargotec will supply eight dual-purpose Kalmar heavy forklifts for the shipping firm Messina Line (Ignazio Messina & C S.p.a), which operates out of the port of Genoa in Italy. The specially adapted Kalmar DCF 420 models will operate on Messina Line's four new ships.

The deal is the result of extensive development work between the parties to produce a forklift that is at home both in the restricted space on board the ships and in handling and stacking containers in the terminal yard.

Due to the physical constraints of the new

ships' RoRo holds, the mast had to be less than 5,350 millimetres and capable of lifting 33,000 kilograms. As a result, the units are equipped with an extra-low triplex free lift mast that fits inside the confined space of the vessel.

Alternatively, for yard operations, the model needed to handle up to 35,000 kilograms and the ability to stack four containers high. The same versatile Kalmar DCF 420 forklift, fitted with inverted forks and a 20/40 top lift spreader, meets these criteria.

Serving customers better in Algeria

Early last year, Cargotec launched an important partnership in Algeria with a local cargo handling company called Remora. The local partner has invested EUR 350,000 in a stock of spare parts that is enabling more efficient service to Algerian customers.

"Having parts on the shelf is the key to ensuring efficient after sales service," says **Luk van den Broek** of Cargotec France.

Customers previously had to order spare parts from Europe and pay for them in euros. Due to Algerian customs regulations and bureaucracy, the minimum waiting time was two to three weeks. Now, they can buy the parts instantly in their local currency, and Remora's mechanics can serve them quickly on site.

"There is a huge potential market in Algeria. It has a long coast and a number of ports that are equipped with a strong fleet of Kalmar products. The partnership with Remora means significant progress in our after sales service," says van den Broek.



Cargotec breaks new ground in West Africa

Cargotec has received a breakthrough order for four Kalmar ship-to-shore (STS) cranes to various ports in West Africa. The contract with the Bollore group of France, through its Unicaf subsidiary, also includes an option for four more cranes.

This is the first ever order for Kalmar STS cranes to West Africa. The cranes, built to a single box boom type design, will have an outreach of 47 metres and a 30,5-metre rail span. Their maximum lift capacity will be 60 tonnes.

The order will provide STS gantry crane capacity in ports where handling is currently carried out primarily by mobile cranes or ship's own gear.

Bollore has 13 container terminals in Africa and plans to build more in the next few years to meet the needs of the fast-growing economies in West Africa, including Burkina Faso, Mali and other landlocked countries.

Cargotec strengthens its presence in China

Cargotec is planning a joint venture with the Chinese Jiangsu Rainbow Heavy Industries Co., Ltd. (RHI). The joint venture would provide leading heavy crane solutions globally, expand delivery capacity and grasp growth opportunities in the Chinese and global markets.

An important long-term supplier for Cargotec, RHI manufactures hatch covers, cargo cranes and other products. The joint venture would focus on ship-to-shore cranes, rubber-tyred gantry cranes, rail mounted gantry cranes and marine specialty cranes.

"This joint venture would be a strategically important step for Cargotec to expand its presence and offering as well as to improve competitiveness in China," says **Mikael Mäkinen**, President and CEO, Cargotec.



Simulator training in Brazil

The operators of the National Port Authority (Nampor) in Namibia visited Cargotec's



operations in Brazil last April for simulator training. Cargotec delivered six Kalmar E-One² rubber-tyred gantry cranes to Nampor in 2010, and the simulator training was part of the delivery package. Nampor manages both the Port of Walvis Bay and the Port of Lüderitz in Namibia.

With the Kalmar training, operators get to practise how to use the crane under simulated real-life conditions without taking a real machine out of service or compromising safety. The Santos Harbour in Brazil is one of the first venues to use the Kalmar simulator.

360°



Ottawa terminal tractors save fuel with MaxiMizer

Starting in 2012, all Ottawa-based diesel terminal tractors will be equipped with a fuel saving system called MaxiMizer as standard.

The system includes an electronic speed governor and utilises all six gears in the transmission. This reduces engine RPMs and, consequently, fuel consumption. "The MaxiMizer system allows Cargotec to provide a seamless integration of electronic control strategies developed separately by the engine and transmission manufacturers.

This delivers higher profits to our customers while reducing the environmental impact for all of us," says **Greg Lehman**, Chief Engineer, Medium Terminal Tractors.

By using the Maximizer, the customer can achieve a 15 percent reduction in fuel consumption (450 gallons less diesel fuel annually). This equals to a reduction of 100,000 lbs of carbon-dioxide emissions over 20,000 hours. Actual savings vary based on actual driving conditions and applications.

UniQ – the way for efficient terminals

The Kalmar family of cargo handling solutions and intelligent systems has a new member, UniQ. It is a customised solution for real-time equipment and operator monitoring, controlling and positioning as well as data collection and analysis.

The UniQ complete management tool for RTG cranes, SCs and SHCs was launched in November. "UniQ is a concept for developing manual terminal operations in co-operation with the customer. It provides a comprehensive set of fleet management tools," says **Mika-Petteri Kuro**, Commercial Product Manager for Special Products at Cargotec.

"Due to its modular structure, UniQ enables a step-by-step approach to fleet management. The customers have an opportunity to start with lower investment with one solution and expand the system later on."

The next step, UniQ for mobile equipment, will be launched in the third quarter of 2012. "UniQ increases the customer's profitability as well as operational safety. There is a strong market pull as a driver for this project," Kuro says.



Look for our new labels

Cargotec continues to implement its common visual identity by launching new product labeling. Before the end of this year, all new Hiab, Kalmar and MacGregor products will bear the Cargotec elephant logotype, along with the brand name and model designation labels.

"You can see our equipment in terminals and on ships and trucks all over the world. Just last year, we delivered over 15,000 Hiab, Kalmar and MacGregor products to customers. By using our elephant logo on products, we will get more brand visibility globally," says **Anne Westersund**, Cargotec's Vice President, Communications and Marketing.

The Cargotec elephant stands for strength, long life, reliability, trust and lifting. It also has a strong connection to nature and sustainable actions.

The logotype has a long history starting from year 1971.



Navis supplies Santos Brasil with quay crane OCR

Santos Brasil S.A. Terminal in Santos, Brazil has chosen the

navis[®]
Part of Cargotec Corporation

Navis STAR Technology Alliance as its quay crane OCR (optical character recognition) provider. The solution helps Santos Brasil make its vessel loading and discharge operations more productive and improve the accuracy on vessels' stow.

The Navis STAR Technology Alliance brings together Navis' terminal operating system (TOS) solutions with best-of-breed technology vendors (partnering with APS Technology Group for OCR). Navis is part of the Cargotec Corporation.

Kalmar Edrive® straddle carriers in active use in Le Havre

Cargotec has supplied 14 new-generation Kalmar straddle carriers to GMP for the French port of Le Havre. They are part of the port's extensive plans to make Le Havre the main gateway to the French market.

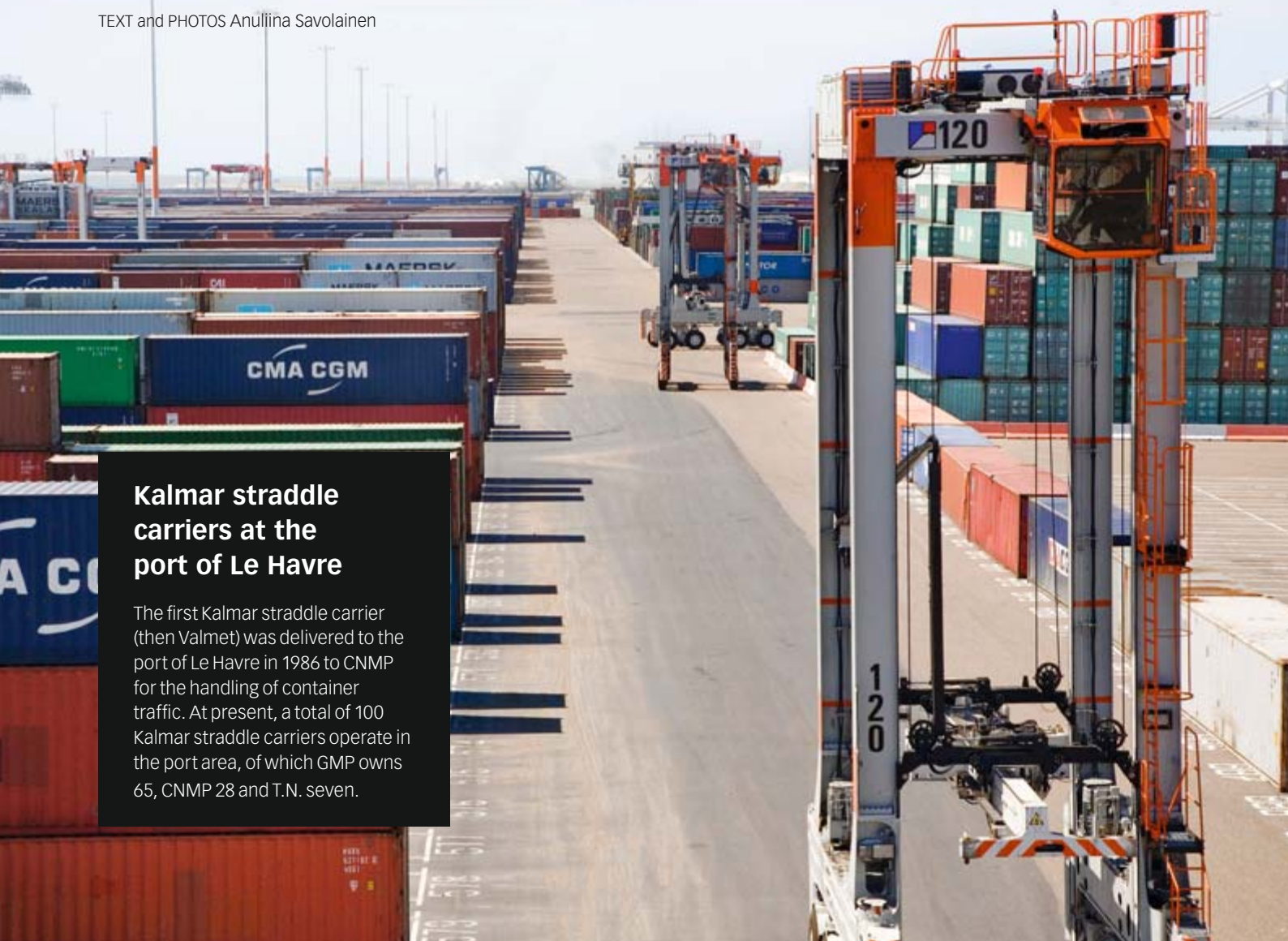
Générale de Manutention Portuaire (GMP) – a joint venture between terminal operator DP World and the CMA-CGM shipping company at the port of Le Havre in northern France – bought 14 Kalmar Edrive® straddle carriers from Cargotec at the beginning of this year.

The new 7+ generation straddle carriers are an ideal solution for mid-sized terminals with an annual goods flow ranging from 100,000 to 4,000,000 tonnes. GMP's new all-electric straddle carriers are equipped with twin-lift spreaders capable of lifting loads of up to 50 tonnes. The straddle carriers

TEXT and PHOTOS AnuLiina Savolainen

Kalmar straddle carriers at the port of Le Havre

The first Kalmar straddle carrier (then Valmet) was delivered to the port of Le Havre in 1986 to CNMP for the handling of container traffic. At present, a total of 100 Kalmar straddle carriers operate in the port area, of which GMP owns 65, CNMP 28 and T.N. seven.



are built to stack containers 4-high.

The units were delivered to Le Havre in early 2011 and are now in active use at GMP's Terminal de France.

"The new Kalmar straddle carriers are constantly on the move, as the operators like them and use them continuously," says **Louis Jonquière**, GMP's General Manager.

Cargotec was a natural choice for GMP because it has used Kalmar straddle carriers since 1990 – initially under the Valmet brand. At the moment, the company has 65 Kalmar straddle carriers.

Important gateway to northern Europe

Le Havre is the leading French port for container traffic and an important hub for world trade. It is located some 200 kilometres from Paris. GMP handles more than 55 percent of the container handling operations at the port.

Générale de Manutention Portuaire (GMP)

- GMP was founded in 1976 at the Quai de l'Europe to handle container ships at the port of Le Havre.
- As the number of post-panamax ships increased, Quai de l'Amérique was built and the volume of containers handled doubled between 1990 and 2000.
- Since the 1990s, GMP has participated in 'Port 2000', the extension project of the port of Le Havre, which also included the new terminal 'Terminal de France' that has been operational since 2006.
- GMP handles more than 55 percent of container handling operations at the port of Le Havre.

"Our aim is to direct more containers to Le Havre rather than to increase our market share. At present, more than half of all containers coming to the French market are unloaded at Antwerp in Belgium or Rotterdam in the Netherlands. Our main business objective is to get these containers to pass through French ports. Therefore, we have continued to invest in equipment, despite the recession," says Jonquière.

"Le Havre is the first and last port in northern Europe through which large container vessels pass. The strengths of the port lie in its direct access to the sea and its capacity to receive container vessels, which is similar to that of the nearby ports of Rotterdam and Antwerp."

Le Havre's assets also include its proximity to Paris, making it a low-emission option. In addition, according to Jonquière, social costs for employers in France are similar to those in the Netherlands – or even lower.

Part of greater Paris

Since the 1990s, GMP has participated in 'Port 2000', the extension project of the port of Le Havre, which also included 'Terminal de France'. This new terminal has been operational since 2006. It is a state of the art terminal situated at the mouth of the river Seine. The new straddle carriers were part of GMP's expansion project.

GMP has been affected by the recession that hit the shipping industry hard as well as by the French dock worker strikes, but Jonquière says that the company is set to invest heavily in the future and believes that their net sales will soon start to grow.

"We are waiting for our production to recover to the pre-recession level. We seek to keep our ship owner customers happy and improve our ability to receive larger, 15,000-container vessels at the port of Le Havre," says Jonquière.

GMP has used Kalmar straddle carriers since 1990.

During the past two years, GMP has also invested EUR 120 million in port facilities and four gantry cranes, among other things.

The extension plans of the port of Le Havre are connected to the extensive national Greater Paris project, which aims to include the port in the metropolitan area. The plans include a comprehensive transport network and a high-speed train track between the cities. Construction work related to the project launched by French President Nicolas Sarkozy will begin in 2012, and the high-speed train track, which will bring Le Havre within a one-hour journey from Paris, is expected to be completed by 2020.

Strict testing before the order

Cargotec's **Damien Cols**, Director, Global Customers, is very pleased with the order. "Since the early 1990s, we have supplied over 60 Kalmar straddle carriers to GMP. The company is part of a large group, and its shareholders, CMA-CGM and DP World, own port terminals around the world. The deal with GMP will bring us positive visibility," he believes.



Kalmar ESC W straddle carrier

- low-emissions and fuel-saving technologies
- the most eco-friendly model on the market
- electrically controlled engines with a variable speed generator system
- a modular and compact power electrics design
- a fuel-efficient visco fan

The order was preceded by long and detailed negotiations and a thorough testing phase. In addition to technical tests, GMP's operators tested and evaluated the ergonomics and transportation properties of different machines.

Kalmar scored best in all aspects tested. GMP ordered a total solution from Cargotec, which comprises both equipment and maintenance. "Ergonomic aspects are very important, as our operators use the straddle carriers on a daily basis. The durability and design of the units convinced us, and we can also use our existing spare parts resources. Kalmar straddle carriers are an excellent addition to our fleet," Jonquière says.

Comprehensive solution won the deal

GMP's decision was also affected by the extensive scope of the maintenance service solution offered by Cargotec and the proximity of Cargotec's service station in Le Havre. Cargotec will be responsible for the maintenance and inspection of the units.

Maintenance is carried out by Cargotec France, which is located in Le Havre and has 25 technicians. All work is performed at the customer's site, in a workshop

designed for this purpose. The new straddle carriers will be first serviced and inspected after 50 operational hours, then after 500 operational hours and finally after each 1,000 hours of operation.

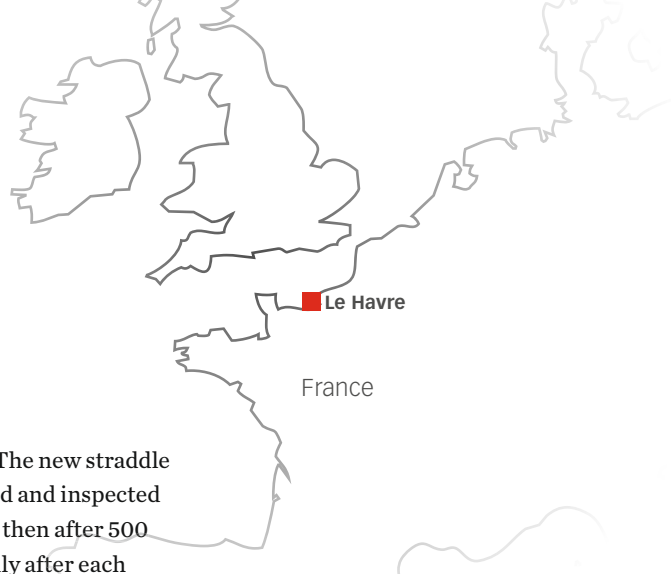
"The agreement covers preventive maintenance and corrective maintenance. This guarantees a long useful life," says Cols.

Louis Jonquière praises the open nature of GMP and Cargotec's relationship. He says that information flows smoothly between the parties, and that Cargotec's maintenance personnel is always there ready to serve at the site.

Eco-friendliness a strong asset

The eco-friendliness of the new Kalmar ESC450W straddle carrier also affected GMP's choice. GMP opted for Kalmar 7+ generation straddle carriers featuring electrically controlled engines, a variable speed generator system and a winch hoist system with full AC drives as well as a fuel-efficient visco fan. This combination further reduces emissions and fuel consumption.

"Our aim is to reduce emissions by 4 percent over the next three years. The new Kalmar straddle carriers will help us improve our productivity, as fuel consumption will reduce but speed will remain unchanged," Jonquière says.



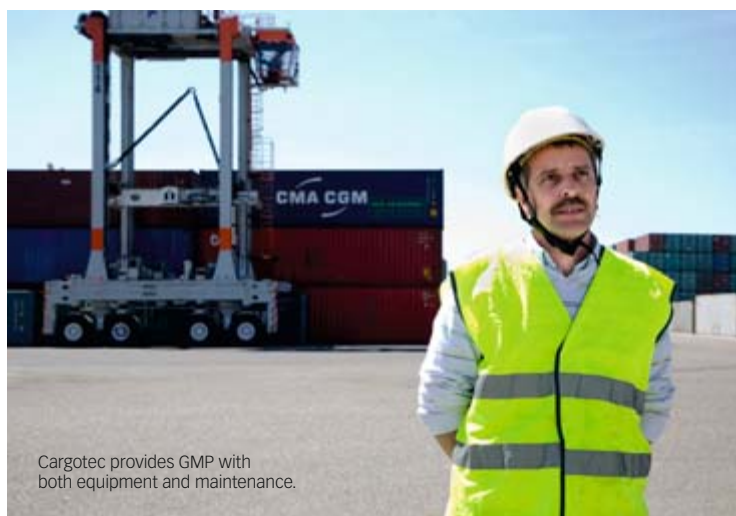
Future cooperation likely

At the moment, GMP is still recovering from their investment projects and waiting for their production to return to the pre-recession level, but Jonquière thinks it is possible that they will place an order for another four Kalmar straddle carriers

in the near future. "The recovery of our business operations has been slower than we expected, but an additional order is under consideration."

GMP also plans to boost their productivity by improving the organization of work in the terminals. Cargotec's recent acquisition, Navis – a leading provider of terminal operator systems – has been put on the shortlist for GMP's current tendering procedure. ■

Expansion includes a high-speed train track.



Cargotec provides GMP with both equipment and maintenance.



Welcoming even more cargo

Established only eight years ago, Evyapport has rapidly grown into one of Turkey's leading ports. In order to continue building on this success, the port decided to invest more than USD 80 million in extending its container operation. Cargotec is playing a key role in this effort, to be completed by the end of 2011, with the delivery of two Kalmar ship-to-shore (STS) cranes – the first Cargotec has delivered to Turkey.

“We aim to provide the best services to Evyapport customers and maintain our position as one of the most important ports in the region,” says **Sedat Topuz**, Evyapport Support Service Manager.

Strategically located close to the two major industrialised provinces of Turkey – Kocaeli and Istanbul – the port plays a significant role in the national economy. It caters to land and sea container transportation, tank terminals and roll-on/roll-off services.

To help further improve these services, the port’s extension includes a new rail connection, new equipment throughout the facility, a 178-metre extension to the current 200-metre dock and a 105-metre extension of the current port’s dock to 455 metres, where the new Kalmar STS cranes were installed.

The cranes began operating in September 2011, providing better, faster and safer service than the mobile harbour cranes they replaced. Cost efficient and designed to enable fast work cycles and quick ship turnaround, Kalmar STS cranes feature optimised hoisting speeds that deliver accuracy and efficiency with minimised energy consumption.

“Our STS cranes are reliable, with safe operation and limited maintenance,” says **Dick Eichhorn**, Sales Manager at Cargotec, Netherlands. One reason for this is the fact that they operate without hydraulics, which also eliminates the risk of oil leaks.

Shorter turnaround times

The new cranes are helping Evyapport to speed up its operations, which translates into shorter ship turnaround times – a key metric for any port. “We used to use four mobile port cranes at a speed of 48 movements per hour,” explains Captain **Ali Keskin**, Evyapport Operations Manager.

Now, with two STS cranes and two mobile harbour cranes in action, they hope to achieve 70. “We invested in these STS

cranes in order to increase our business volume for high-capacity vessels from line agencies that operate on the time-equals-money principle, and to make maximum and efficient use of our facilities. This will help us stay ahead in the region’s competitive container terminal management business,” says

Barış Yerge, Evyapport Sales and Marketing Manager.

The Kalmar STS cranes will help Evyapport achieve its target of increasing annual handling capacity from 400,000 TEU to 750,000 TEU by 2013. “The ships that come into our port will receive faster and safer service, reinforcing our position and increasing our importance as a well-managed container terminal by satisfying the companies that prefer our port,” says Yerge.

The new cranes are resulting in shorter ship turnaround times.



More handling capacity

This is precisely the kind of result that Cargotec is helping customers around the world to achieve, through a large product portfolio focused on supporting customers’ operations with environmentally sustainable and cost-efficient solutions.

“The primary market for STS cranes is Brazil, Russia, India and China,” says Eichhorn. “But we are also seeing sales in the Middle East, Africa, Central and South America, and Southeast Asia. Turkey is one of the few countries in Europe with good growth potential, and we expect this to continue for the next five to ten years.”

“Our relationship with Kalmar started six years ago with the purchase of a reachstacker through the dealer Toyota Istif Makineleri. We were happy with their honesty and hard work and have established a successful cooperation. Today, Evyapport has a large Kalmar equipment fleet with various Kalmar products,” says Topuz.

Evyapport currently operates a range of Cargotec products, including 10 Kalmar rubber-tyred gantry (RTG) cranes equipped with Smartrail® and an autosteering and container position verification system, as well as three reachstackers, two empty container handlers and several forklifts.

Reducing power consumption

“Cargotec has a good relationship with Evyapport, and they are very satisfied with the quality and performance of the equipment,” says Eichhorn. “The market is focusing more and more on quality and performance, but price is still an important factor. We are also seeing a growing interest in the environment and safety, as well as in reducing power consumption.”

For Evyapport, building on its rapid early success meant investing in the future. With comprehensive support from Cargotec, the port is well prepared to face the future with confidence and continue its impressive growth for many years to come.

“A well-managed container terminal means that customers prefer our port.”

Carved in stone

Kalmar machines are hard at work in the Swiss Alps. The DCF500 diesel forklift carries its weight as a part of the Truffer AG success story.

TEXT Vesa Eskola PHOTOS Per Trané and Emil Gustafsson





There is something very manly about stone quarries – big machines working on the building blocks of the Earth. In Vals, Switzerland a local company named Truffer AG extracts and processes high-quality natural stone.

Vals is located in the heart of the Alps, not too far from the famous Gotthard tunnel. Italy and France are both just around the corner. Here, fine-grained, light grey, slightly greenish gneiss stone is extracted from the rugged ground. It is then transported to the Truffer AG factory

and carved into beautiful decorative stones – perhaps to be used as a shower wall in a trendy spa.

The local gneiss was most likely granite long ago, in the era when the Alps started to shift into their current form. The African continent collided into the European and the earth rose, making a lot of skiers today happy.

And only few know this, but the Alps are actually still rising. Not much, a few millimetres a year, but still. The Earth is alive and moving.

Hard at work

Amid the huge stone blocks, an impressive looking Kalmar DCF500 diesel forklift is working. But even if the huge machine is a heavyweight champion, it moves like a featherweight, dancing around the massive stones.

The truck has an impressive lift capacity of 50 tons at a load centre of gravity distance from 1,200 millimetres. The reliable Volvo diesel engine generates 260 kW at 2,200 rpm. To tame the beast is nevertheless easy. The on-board ►

electronics feed information to the fully automatic transmission. Driving the huge machine is child's play.

Because of the advanced electronics, the DCF500 runs on optimum torque at low engine speeds. This means lower wear, less fuel used, lower emissions and minimal noise. What more could you ask for?

Well, strength and durability, both of which Kalmar is known for.

Today, the Kalmar heavy hitter carries a block of prestigious Vals Quartzine. This high-end stone has become a material valued by architects who are designing something special or customers who demand high-quality natural stone to give their homes that extra touch.

Just like in Therme Vals, the famous spa in this very same village, designed by Peter Zumthor. The spa building is made up of 15 different table-like Valser quartzite slabs, each five metres high. The gliding of the walls is formed of 60,000 one-metre long sections of stone. It is an impressive sight.

As the local stone is very valued both in Switzerland and abroad, it has kept employees of the Truffer AG busy. The quarry is one of the largest in Switzerland and perhaps the most advanced what comes to the technology used.

All the stone extracted is processed in the company's own factory. This has, needless to say, a positive effect in the local economy. The majority of the approximately 50 people working in the factory are locals.

The factory is run on two shifts. Logistics plays a major role and efficiency is key.

Using advanced technology

When Truffer needed a new forklift, they called the sales consultant **Reto Keller** of the

Swiss Kalmar distributor Bamag Maschinen AG in Regensdorf, near Zürich. They were very specific about what they wanted. **Pius Truffer**, the CEO of Truffer AG, says it best. "I'm very interested in sport cars, Ferraris, Porsches, Maseratis," confides Truffer.

"We wanted the Ferrari of forklifts and that's Kalmar. We have been using Kalmar machines for several years and experienced the quality and reliability of the machines and the good service support offered by Bamag. That is vital for us, because the quarry is located high up in the Swiss Alps."

As the village can only be reached via a small and curvy mountain road, the forklift had to be transported to Vals in pieces and assembled there. The delivery, the final drive to the village, was also an adventure.

The police had to close the narrow road for the occasion. The driver had to navigate hairy bends and narrow blind corners. In some places there were only millimetres to spare, when the DCF500 cruised through small villages, passing small local stone houses. A spectacle for the locals, for sure.

Worth the effort

But all this has, of course, been worth the trouble. Truffer sees the value of the machine not only in the work it carries, but also as a morale booster. "To have a machine like this here is a motivating factor for our employees. It is a rewarding feeling to drive the biggest forklift in Switzerland. It boasts the feeling of the employees, as they are an important asset for the company. They deserve the best machines there are."

After the forklift has carried the 30 to 40 ton stone block into the factory, a diamond-tipped blade with a diameter of up to four metres cuts it into something beautiful. It's not crude work. The tolerance, when cutting the quartz, is an amazing one-tenth of a millimetre, just like with the forklift. Fully welded for rigidity with strong mounting points, it also is made to last. ■

"We wanted the Ferrari of forklifts, and that's Kalmar."





Meeting a customer challenge

This year Cargotec was asked to deliver terminal tractors in Malaysia quickly. This presented us with a challenge. How can we build them locally? The answer was setting up new production in our existing plant.

In January 2011, Cargotec signed a contract for 90 terminal tractors with Westports Malaysia, a major container port, and had to find a way to manufacture them locally. The answer was to set up a new manufacturing area at the Bromma plant in Ipoh, Malaysia.

Being able to utilise Bromma's existing manufacturing capacity was the key to fulfilling the customer's requirements – and doing it fast. Production kicked off in March, and the first 55 units were delivered to Westports in July.

"I am tremendously impressed by the quality of production at our plant in Malaysia. We are getting a lot of interest from customers in the region and have recently signed a number of other significant terminal tractor deals," says **Carolyn Zhang**, Vice President, Terminal Tractors.

Up to the task

The terminal tractors delivered to Westports Malaysia are Kalmar Ottawa 4x2 tractors fitted with low-emission engines and right-hand drive. With industry-leading ergonomics, a proprietary steel-plate frame design and a lifting capacity of over 27 tons, the Ottawa 4x2 is a proven workhorse of port and terminal operations.

"The most important factor in our choice of Cargotec was their service and aftermarket offering," says **Ragupathy Arumugam**, Head Engineer, Prime Mover Section.

"We are currently extending our quay by up to 600 metres,

and this necessitated an increase in stacking area, rubber-tired gantry cranes and terminal tractor capacity. Locally produced tractors provide a significant cost advantage over imported equipment, since no import duties or sales taxes apply. However, price alone would not be the deciding factor if Cargotec's services were not up to the task."

Even more competitive

For the past few years, Cargotec already had the vision of running its own tractor production in Malaysia. There are several major ports in the area, and localised manufacturing allows Cargotec to serve its customers more competitively than ever.

"One of Cargotec's core values is global presence – local service. Having our terminal tractor plant in Malaysia is not only advantageous from an economic perspective, but it also brings us much closer to the customer throughout the whole delivery process. It's great to be able to check-in on the plant where your tractors are being manufactured, right in your own country."

Zhang adds that Malaysia has left-handed traffic, which means that by building terminal tractors for Malaysian customers, Cargotec can also cater to major markets such as Singapore or Australia.

"So, our location in Malaysia is absolutely strategic," adds Zhang. "Local presence and flexibility are the keys to fulfilling the customer's needs and creating value for them – anywhere in the world." ■



Blazing an environmental trail

Trelleborg Hamn AB, based at the Baltic Port of Trelleborg in the southern tip of Sweden, runs one of the foremost RoRo and ferry ports in Scandinavia. It serves as a crucial link between Swedish industry and major European markets.

Trelleborg Hamn AB has owned and operated the port since 2005. Cargotec's relationship with the Port of Trelleborg dates back over two decades, as Kalmar machines have been on the site for more than 20 years.

Currently, the port operates three Kalmar DRF450-75C5XS reachstackers, seven TR618i terminal tractors and one DCE90 forklift, each performing cargo handling duties on site.

Heavy traffic at the port

The Port of Trelleborg is an extremely busy intermodal handling port with six ferry lines connecting Trelleborg with Germany and Poland – one to Swinoujscie, one to Sassnitz, two to Rostock and two to Travemünde. In total, 13 RoPax vessels provide the services on these routes. Additionally, four dedicated rail lines transport goods in and out of Scandinavia.



Covering a vast area of approximately 700,000 square metres, the port receives about one vessel every two hours. Across the site, ten RoRo berths with different ramp systems and rail connections provide an excellent environment for efficient handling.

Additionally, the port operates a warehouse and logistics centre that totals 27,000 square metres, incorporating specific areas for transshipment, storage and third party logistics.

Last year was one of the most successful to date for the port, which saw the Kalmar fleet making approximately 60,000 lifts.

Each reachstacker averaged between 2,000 to 2,500 hours of service, working in the port's two combi terminals, handling trailers coming in via rail links from Norway and Sweden. The terminal tractors work alongside the reachstackers and are also deployed in the loading and unloading of trailers onto ships from Germany and Poland. These clocked up between 2,500 and 3,000 hours each.

Port expansion and environmental focus

So far, the figures for 2011 look impressive, yet the Port of Trelleborg continues to strive for growth.

The proposed major expansion of the port will allow it to handle bigger ships and manage their freight in a more environmentally friendly way. There are also plans to increase the intermodal handling capability with a combi-handling terminal situated along a new 1.3 kilometre pier.

It has also set out a major business strategy to become the most environmentally friendly port in the Baltic Sea. With this in mind, environment protection plays a major part in Port of Trelleborg's purchasing decisions. The port's personnel place extremely high demands on all equipment in terms of reducing fuel consumption, noise and emissions.

This increased environmental responsibility was integral to the recent selection of the Kalmar TR618i terminal tractor. Cargotec's focus on sustainability fits well with the Port of Trelleborg's vision.

The new model features Selective Catalytic Reduction (SCR) technology, which achieves compliance with the EU Stage IIIB emission regulations governing off-road equipment powered by engines above 129 kW. The SCR technology delivers near-zero nitrogen oxide and harmful particulate emissions, while providing customers with high power output, efficient fuel consumption and reduced running costs.



"Cargotec can offer us additional options that other manufacturers have problems delivering."

Anders Madsen,
Vice Managing Director
at Trelleborg Hamn AB

Great synergy – great service

The Port of Trelleborg purchased its first Kalmar reachstackers in 2005, and more equipment has been added since. In addition to the equipment supply, Cargotec also provides full-service support, including preventative maintenance for each machine at 500 hour intervals and 1,000 hour checkups. All are delivered at an agreed fixed price, allowing easy budget control for the customer.

According to **Anders Madsen**, Vice Managing Director at Trelleborg Hamn AB, the high standard of service makes Cargotec an ideal working partner. "We have a very close cooperation with Cargotec, especially with our local salesperson Owe Robertsson. Despite the size of this global company, the service is always personal. The support we receive is fast and responsive, so if we do have any problems, a Cargotec service representative is often on-site within an hour," he says.

Specialists demand specialist equipment

The performance, cost efficiency and productivity of the equipment will always be a crucial factor in demanding cargo handling applications. The Port of Trelleborg's repeat purchases of Cargotec machines is testament to their quality.

For Madsen, the ability to tailor products to the exact demands of the application is particularly important. "Cargotec can offer us additional options that other manufacturers have problems delivering. For example, each Kalmar reachstacker has a camera installed on its combi attachment, which significantly decreases the risk of damaging the goods," he says. The reachstacker also has automatic rpm reduction during nighttime, which allows the machine to operate 24/7 without disturbing its surroundings.

"Many of our drivers also appreciate Kalmar's rotatable driving seat in the terminal tractors, which is electrically controlled, compared to the hydraulic version on competitive products. This enables smooth operations and good visibility when reversing."

From a commercial perspective, fuel consumption is significantly lower with the Kalmar terminal tractors, with savings equating to approximately two litres per hour, says Madsen. "We would recommend the combination of Kalmar reachstackers and terminal tractors as an excellent choice for any high performance intermodal handling port." ■

At your service

With experience from hundreds of projects large and small, Cargotec Terminal Development can help customers the world over find optimal solutions for their logistical operations.

TEXT Randel Wells PHOTOS Olli Urpela



Timo Niemi, Managing Director of Cybercube

Now in its tenth year, Terminal Development has worked with almost 300 different terminals. Every year some 50 projects or more involving storage capacity, equipment fleet size estimates, and cost comparisons are completed and more than 100 layouts prepared.

The focus of these projects is on container handling systems and equipment where Cargotec has the most expertise. In addition to the core services, Terminal Development can also address a much broader scope thanks to its network of partners.

The big picture

Terminal Development works with partners to handle the full range of a customer's logistics challenges. The combined skill sets strengthen Cargotec's service offering and bring Cargotec closer to its customers.

EP-Logistics is a good example of this. A logistics consulting company, EP-Logistics works in three sectors: port and transport, trade and industry. They specialise in the planning and design of ports and logistics centres, bringing in key expertise to Cargotec Terminal Development service, particularly on larger projects.

Where equipment and container handling systems for containers is the key focus of Terminal Development, EP-Logistics has a broader perspective. They address the full range of requirements for an entire operation including quay, rail, gate and operational development and planning.

"As an equipment manufacturer, we have detailed know-how of the different handling alternatives, whereas EP-Logistics has more experience in the broader aspects of terminal operations and infrastructure," says **Jari Pirhonen**, Director for Terminal Development. "It makes sense for us to work together in bigger projects."

Matti Utriainen, Director for port and transport logistics at EP-Logistics agrees: "Both partners have special skills and areas of expertise. The customer gets the best available information from a bigger pool of knowledge."

Joint projects may be led by either Cargotec or EP-Logistics. "It is good for us to have this kind of flexibility, because sometimes customers want to have a consultant driving the development project," notes **Jyrki Luukkonen**, Manager for Terminal Development projects. "We can handle the project according to each customer's requirements."

Cargotec and EP-Logistics have had a relationship for many years. Recently, they have worked together on major projects in Russia.

The first was a 2008 study for a container terminal expansion project in St.

“The simulations also force us as a supplier to go deeper into the details of the customer’s operations and better understand what they are trying to achieve.”

Petersburg. The study addressed several key operational issues, including expansion of the site, gate capacity, quay capacity, as well as selection of future container handling technology.

Another more recent project was completed on the other side of Russia, in Vladivostok. There, too, the existing container terminal wanted to expand and further develop their operations. An important part of the development project was how to gradually implement rubber-tired gantry cranes (RTGs).

Earlier this year also a rail terminal consulting project was completed in the Moscow area.

Simulating reality

Large port projects, be they expansions or greenfield operations, require significant investments. Getting the plans right is critical both for operational efficiency and limiting risks.

Visualisation of logistics operations supports the decision-making process by quickly showing customers where there may be potential problems in their operational plans. Possible bottlenecks can be detected easier when utilising 3D terminal simulation. It also allows the customer to verify how realistic the modelling is.

For advanced, accurate simulations, there are no off-the-shelf solutions. Cybercube, Cargotec’s partner in simulation projects, has built up a large library of software modules, which are combined and

tailored for each project.

“Cybercube simulation software is used for port logistics, distribution centres, as well as underground mining operations,” notes **Timo Niemi**, Managing Director of Cybercube.

The first joint port simulation project was for Rauma Stevedoring in 2007. More recently, a large simulation project was completed for VTE Voltri in Genoa, Italy. The main goal was to help decide how many RTGs are needed to achieve the required level of vessel productivity.

The Voltri simulation covered all the container movements in the port, including vessel, road truck and rail operations, and represented a full week of activity based on the customer’s actual operations.

“One of the more complex aspects of these simulations is understanding the processes,” points out Pirhonen. “We have to know the logistical rules, such as traffic flows, positioning containers and choosing equipment for various jobs. This is one area where Cargotec’s Navis acquisition really helps as they have experience with these handling rules.”

Customer advantage

Simulations are used to assist customers in the planning phase but also increasingly as part of the bidding phase, especially when unmanned handling systems are in ques-



Matti Utriainen, Director for port and transport logistics at EP-Logistics

tion. The London Gateway is one such example. This big automation project required simulations already during the bidding phase. Cargotec and Cybercube have worked together on this and many other projects involving unmanned operations.

A simulation really helps customers eliminate risks in their investment plans. It is one more way of checking if those plans are realistic or not before the big decisions are made. “These are things which customers could never test live,” says Niemi.

“The simulations also force us as a supplier to go deeper into the details of the customer’s operations and better understand what they are trying to achieve,” adds Pirhonen. “While we can assist our customers in the planning phase, we naturally learn from each project. And with the knowledge we gain from working together with companies like EP-Logistics and Cybercube, we can aim to develop and offer even better solutions to our customers.” ■



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