



PORTS HARBORS

Official Journal of the International Association of Ports and Harbours

Armed against pirates?

Peter Hinchliffe calls for government action

China's expanding bulk

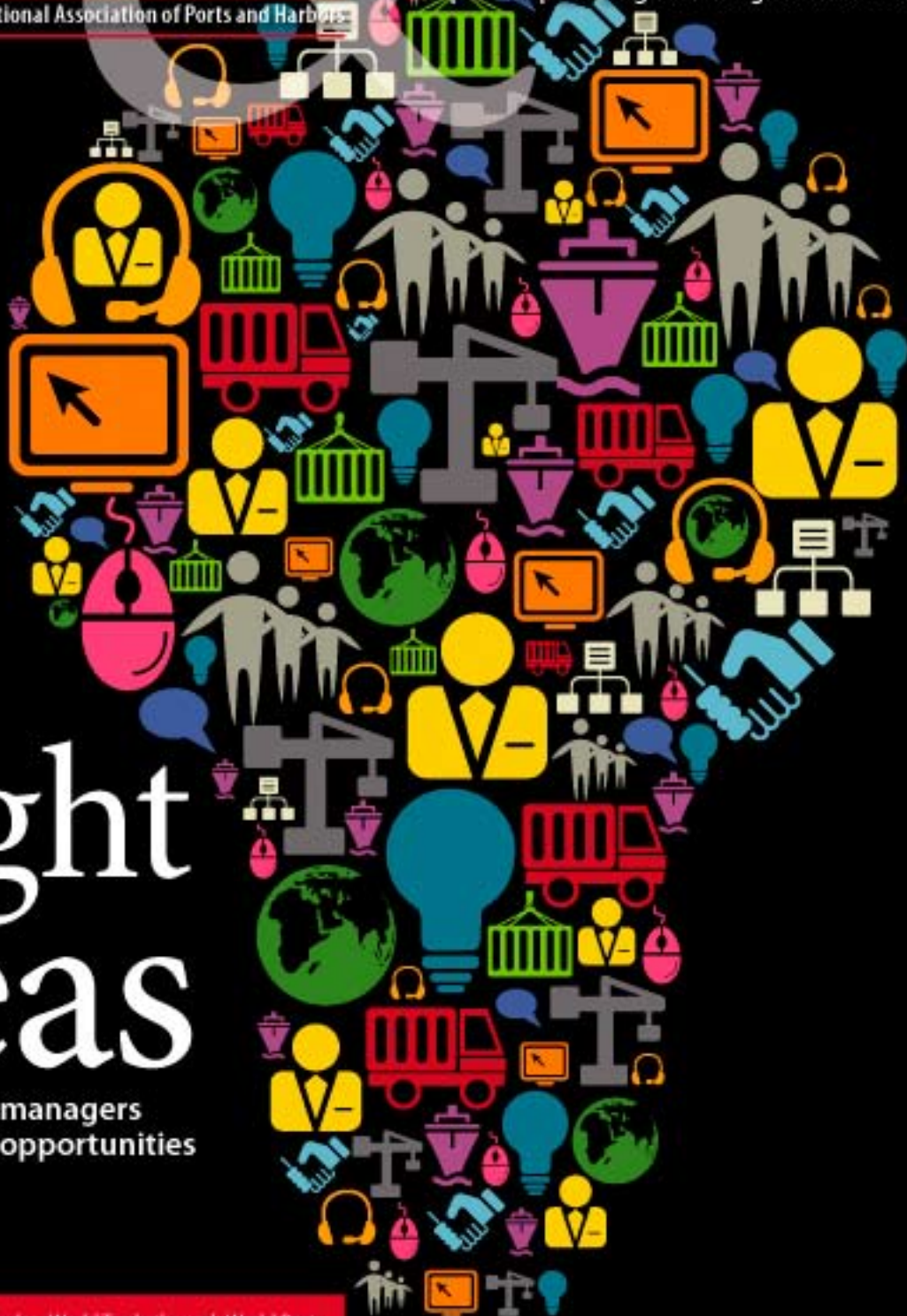
Infrastructure needed to cope with demand

Back on track in Ukraine

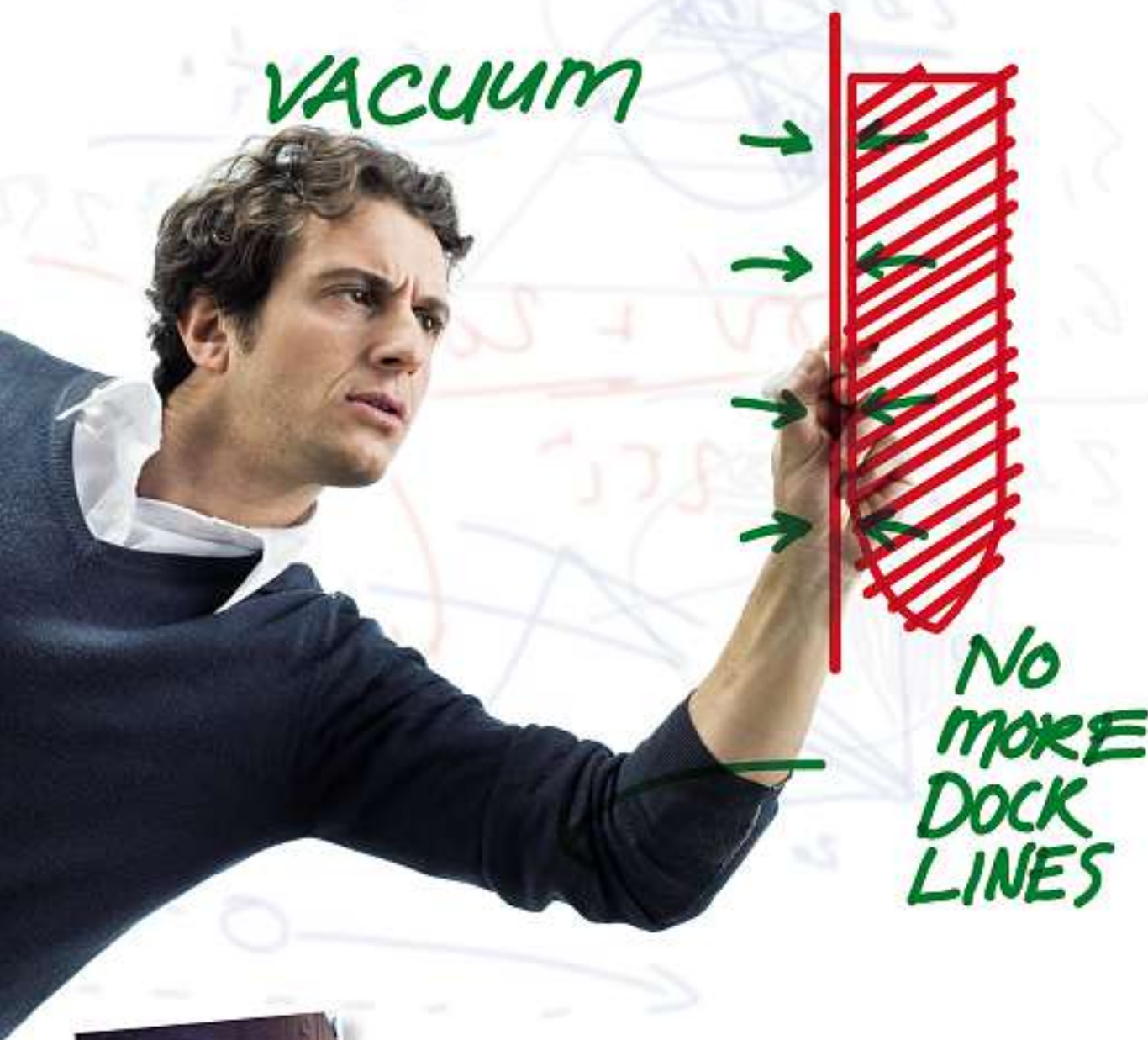
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Ports and terminals increasingly require more skilled personnel, making training essential to efficient operations

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November/December 2011
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The day after tomorrow

Secretary General Naruse says ports should do more to prepare for climate change

Susumu Naruse
Secretary General – The International Association of Ports and Harbors



At the invitation of Japan's IAPH Foundation, our president, Dr Geraldine Knatz, delivered an address at the association's annual conference in Tokyo in September. She stressed the importance of ports forging strong relationships with the customers and stakeholders, providing a flexible and efficient service and improving infrastructure, while staying green. She mentioned some of the strategies that Port of Los Angeles had taken, including a congestion-pricing programme at the terminal gate and a US West Coast port alliance to improve competitiveness.

Knatz underscored that as president she was "committed to doing everything possible to make sure that governments, shippers and the general public know what IAPH is and what we do and how our efforts benefit their nations, their business and their lives". She cited as an example the way the *Manual on Carbon Footprinting*, developed by the World Ports Climate Initiative,

has helped an IAPH member recognise and proactively address its greenhouse emissions.

While endorsing WPCI's efforts to mitigate global warming, I believe that measures to adapt to climate change are important too. In September I participated in an expert meeting on Climate Change Impacts and Adaptation – a Challenge for Global Ports,

organised by UNCTAD. Experts from all parts of the world delivered some interesting presentations, but I was not able to identify from them any best practices that had been implemented in ports. The best way for IAPH and other organisations to approach the issue is to accumulate best practices and case studies.

I proposed that efforts be made to identify research organisations that could carry out case studies to plan adaptation measures in several ports, utilising funds donated by agencies or states. It would be very costly for ports themselves to assess external forces of, for example, local sea level rises and intensified storm events.

As the forthcoming Africa/Europe Regional Meeting includes a Long-Range Planning and Review Committee meeting as well as a Port Forum, we can discuss these issues thoroughly in Antwerp in December. I look forward to seeing you all there. PH

Accumulate best practices to combat climate change

Port updates

CRANE GUIDANCE

Following our article on crane safety (*P&H*, Sep/Oct 2011, p6), TT Club has asked us to point out that a list of standard crane safety features is contained in its published document *Recommended minimum safety specification for quay container cranes*. The publication is a joint initiative of the TT Club, ICHCA International and the Port Equipment Manufacturers Association and it can be found on the website of each of the joint publishers.

MUNDRA EXPANDS

Adani-owned Mundra Port & Special Economic Zone has raised \$150M in foreign debt to finance its expansion. It raised external commercial borrowing for a tenure of six years and seven months, according to the Reserve Bank of India.

A Citigroup analyst commented that the zone is expanding the coal terminal's capacity to 100M tonnes a year from 60M, to exploit India's fast-growing demand for coal. The zone also plans a third box terminal.

SOCHI PREPARES

Sochi's new Black Sea terminal should be able to handle two cruise vessels up to 300m long, plus a ferry up to 180m long at the same time. Konstantin Saschenko, special projects manager of commercial developer OAO Sochi Commercial Seaport, told *P&H* that \$400M has already been spent on the region's newest cruise terminal. The target is to triple cruise vessel calls to about 100 a year once the terminal is complete in 2013 – in time for the 2014 Winter Olympic Games in Sochi.

PORT BOTANY LEASE

Port Botany said it has been offered to the private sector on a 99-year lease, after the state of New South Wales decided it could not afford to improve the port in Sydney, Australia. State treasurer Mike Baird said a similar deal last year – under which Queensland leased the entire port of Brisbane to the Q-Port Holdings consortium of private investors for A\$2.1Bn (\$2.2Bn) for 99 years – had shown a "strong private-sector interest in operating port facilities".



Photos: Port of Maputo

Maputo exports dry commodities including chromium ore (above) and coal (below)

Growth spurt for Mozambique

Dynamic economic growth and a huge demand for coal from manufacturing powerhouses such as China and India will drive the rapid expansion of Mozambique's main ports for the rest of this decade. The Port of Beira is expected to experience a dramatic increase in coal exports from a current maximum capacity of 6M tonnes to 20M tonnes a year when a new export terminal is built, according to Essar Group.

At the same time, the corridor linking the Port of Maputo to landlocked central South Africa and Botswana is expecting an increase in container and bulk cargo after a recent spurt of economic growth in Mozambique and its neighbours.

The development of the port of Beira coincides with expanded production at two major new mining projects in Tete Province. Brazilian mining giant Vale has already started shipping coal by rail to Beira from its Moatize mines, which, with an estimated 2.4Bn tonnes of reserves, are one of the largest untapped deposits in

“Transit is definitely the future of the Maputo Corridor”
Barbara Mommen
 CEO, Maputo Corridor Logistics Initiative

Photo: MCLU

the southern hemisphere. Riversdale Mining is planning to export the first coking coal from its Benga mine by early 2012, with a major increase in production expected the following year. A Riversdale spokesman said the mine's coal production is expected to reach about 10M tonnes in 2013.

Production at Benga should start by the end of this year, but export shipments may

be hampered by Beira's outdated railway and port infrastructure. “The existing coal terminal is being refurbished and should be operational by November, with a handling capacity of 6M tonnes annually,” Felix Machado, a



spokesperson for Beira port operator Cornelder de Moçambique, told *P&H*. The terminal would be used by both Vale and Riversdale, added Machado. "We are also looking for alternatives to accommodate [Vale and Riversdale], for example building new quays to accommodate them on a temporary basis while a new 18M-tonne coal terminal is under construction," he said.

At Maputo Port, huge demand for South African coal from China and other emerging economies has already seen the Matola export terminal treble its capacity to 6M tonnes. "Maputo continues to be a very complementary port [for bulk exports] to Richards Bay, which like Durban is very congested," Barbara Mommen, CEO of the Maputo Corridor Logistics Initiative (MCLI), told *P&H*.

Dynamic economic growth in Mozambique would boost Maputo's importance as a transit hub serving central southern Africa, Mommen predicted. Mozambique has recorded average annual growth of over 8% in the past decade and is Africa's fastest-growing non-oil economy, according to World Bank figures. "Transit is definitely the future of the Maputo Corridor and the only way you are going to get competitiveness and cost-effectiveness. Transit cargo will help fulfil the need for backhaul cargo and the additional cost savings that will make the corridor competitive," explained Mommen.

OCIMF targets ship-terminal interface

The Oil Companies International Marine Forum (OCIMF) launched the first phase of its Marine Terminal Information System (MTIS) in October, with the aim of collecting standard information on 10,000 tanker terminals. "Our goal is to raise the standards at marine terminals for safer berths and ship-shore interfacing," said OCIMF senior adviser Captain Bernard Lesegretain in Singapore at the first of four meetings to inform industry about its new MTIS. Similar events were held in Dubai, Houston and London in October. "We want to convince other players including local authorities, to get strong support and commitment from all of them," said Lesegretain.

After several initiatives focused on tankers, OCIMF decided in 2009 to look at the interface between ship and shore. "It's a project aimed at ensuring all marine terminals worldwide reach common high standards of safety and environmental protection," Lesegretain explained. "We're talking about more than 10,000 tanker terminals of all types, from product to LNG, big and small. A big part of the discussions was the lack of detail available about those small terminals."

MTIS is in four parts. First is the MT Particulars Questionnaire, launched in October. In English, with a common format and consistent units, it contains a range of questions about terminal approaches, berth measurements and transfer rates, for example. Terminal operators are not obliged to complete the questionnaire and can omit data as they choose, but completeness is the aim. Starting this month, OCIMF's 86 members will fill out the forms and send the questionnaire on to their terminals and any third-party terminals with which they work.

After six months, explained Captain Anuj Gupta, nautical technical adviser of OCIMF, "We

believe there will be sufficient data available on the website which can be effectively used by potential end-users, such as shipowners, ship-masters, shipping agents, local authorities etc." He added: "We have internal checks and balances to ensure that the data entered is correct."

In about April 2012, the MT Management & Self Assessment phase will start. "It will provide best practice and KPIs against which terminal operators can assess the effectiveness of their management process and systems for terminal and berth operations," explained Lesegretain. Towards the end of the year, the MT Operator Training System will be put in motion. That should identify and promote core competencies and knowledge requirements, together with verification processes, to assist terminal operators develop best practice training programmes.

Once these three elements are in place, the MT Assessor & Accreditation Programme will be launched, to give members confidence that the staff they use to conduct their management and self assessment are suitably assessed and accredited.

"MTIS is free of charge," stressed Gupta. Control of the data is left to the terminal operators themselves. "Databases are owned and managed by the terminals, because they provide the data, so they should have the control. However, we believe there's no reason why terminals should limit access to their data," he added.

MTIS seeks to set standards for tanker terminals worldwide, which should make it possible to improve terminal risk assessment. "One of the benefits for terminals to join this programme is to show their insurers that they're safe, so they can lower their cost," said Gupta. OCIMF also hopes that oil companies may require terminals to be part of this initiative.

Port updates

HEAT IS ON AT CAI MEP

A rush by liners and port operators to tap Vietnam's growth has stimulated competition at its new deepwater port, Cai Mep. Nine foreign operators secured stakes in the terminals amid optimism that rising cargo volumes would overcome poor infrastructure and potential overcapacity. Five out of nine terminals are operating, but the challenges have hit some operators hard, Paris-based consultancy Alphaliner said.

BAHIA TERMINAL GROWS

Brazil's Wilson Sons has secured \$80M in new financing to expand its Tecon Salvador box terminal. The money would come from the World Bank's International Finance Corp, which has already invested in the project, said the terminal operator. The expansion of Salvador container terminal, in the northeastern state of Bahia, is scheduled for completion in March 2012, with capacity doubled after paving, dredging and installation of new equipment.

VENEZUELA'S IRON DEALS

Venezuela's government has signed three co-operation agreements with China worth \$522M to boost iron ore production in Bolivar state, IHS Global Insight reported. The iron ore facilities are run by government-owned Empresa Socialista Ferrominera del Orinoco. Under a \$161M loan, Chinese Railway Communications Construction Co would extend the port of Paula, on the country's major inland waterway, the River Orinoco.

TAMPA ETHANOL HUB

The US port of Tampa has signed a joint-venture agreement with US energy company Kinder Morgan Energy Partners and railfreight operator CSX to create a new ethanol hub in Florida. Under the deal, Tampa Port Authority will build railway and support infrastructure able to handle 100-wagon train deliveries and a multi-product unit train offloading yard at the port's Hooker's Point terminal, allowing CSX to transport ethanol from Midwest producers to central Florida.

Port updates

UST LUGA BOX DEAL

Middle Eastern container terminal operator GulfTainer is to make its entrance on the Baltic Sea after signing a deal to help develop Russia's Ust Luga port. At a ceremony in the port of Sochi, GulfTainer vice-chairman Badr Jafar and Ust-Luga Port Company chairman Valeriy Israylit signed a deal that will see the operator jointly develop and operate Russia's most ambitious port project to help ease congestion at St Petersburg.

INDONESIA DEAL

Mærsk has signed an agreement with Indonesia's government-owned port operator Pelindo II for joint development of the country's infrastructure. The deal outlines a plan for the training and development of Pelindo II staff, as well as AP Møller-Mærsk providing consultancy support to increase operational efficiencies at one of the Pelindo II facilities. Mærsk said that focusing on new markets outside the OECD countries was part of its priorities for 2011.

APS TO ENTER BRAZIL

The Tecon Suape terminal at Port of Suape, Brazil, is to gain APS automation technology. "We are updating our information technology infrastructure to meet continued volume growth at the terminal," explained Sergio Kano, chief executive of the ICTSI-owned terminal. Equipment for the terminal includes APS's fully automated gate system, ship-to-shore crane optical character recognition and two tractor identification solutions.

SOHAR WELCOMES VALE

Vale Brazil offloaded its first shipment at the Omani Port of Sohar's new bulk iron ore jetty in September. The 400,000dwt vessel, was the first of its kind to dock at the 1.4km jetty. The jetty, designed and constructed by Royal Haskoning, has been operational since July and is purpose-built to receive shipments for Brazilian mining company Vale, where it converts iron ore into steel pellets on site, which are then exported to Asia, the Middle East and north Africa.



The charter was signed by five capital cities that are expected to benefit from development of inland waterways

Capitals unite on waterways

Five European capitals have pledged to co-operate on the development of their waterways as an alternative to roads for urban freight distribution. The five cities – Berlin, Budapest, Brussels, Paris and Vienna – formalised the deal by signing a charter in Brussels on 16 September and presenting it to the European Commission.

Entitled 'Connecting with the Waterways: a Capital Choice', the charter will be opened to other major European cities served by navigable rivers and canals. The initiative has been led by the Brussels-Capital Region, which was seconded in the project by the Brussels-based European Federation of Inland Ports (EFIP).

In a joint statement, the five signatories said that the growth of city populations and their associated urban freight traffic would sharpen the challenge of bringing goods into and out of Europe's cities in a sustainable and efficient way. They underlined the importance of major cities as

primary transport nodes within the Trans-European Transport Network, saying that, in signing the charter, they wanted to demonstrate their determination to play their roles to the full in this respect. "They want to be front-runners not only in organising sustainable passenger transport but also in achieving green and CO₂-free freight supply, distribution and logistics," the statement said.

EFIP director Isabelle Ryckbost told *P&H* that the organisation's inland port members were overwhelmingly in favour of developing the use of waterways for urban freight distribution, but added that they would need to press their case with city authorities. One problem ports faced was competition for space from other users – particularly those involved in sport and leisure activities – alongside urban waterways. "It's often a fight," she said. "Local authorities are not always as proactive as they could

be in thinking about rivers as a solution for sustainable freight transport." Most waterway freight-handling terminals are outside cities and this is normal, she said, but there should also be terminals inside cities.

Brigitte Grouwels, Brussels-Capital Region minister with responsibility for the port of Brussels and one of the initiators of the charter, argued that the Belgian port was particularly well placed to develop its urban transport role. In particular, it could make use of its existing intermodal links with the Brussels ring road, the railway network and the airport.

"By signing this charter, we take a big step towards a more sustainable future, both from an economic and an environmental point of view," Grouwels said. "We also make the link with other ports. In fact, it is only through co-operation and exchange of knowhow that we will succeed in making every port successful."

Long Beach dredging improves safety

The main channel and key turning basin at Port of Long Beach (PoLB) have been dredged to a minimum depth of 23.2m as part of a \$40M project, PoLB said in a statement in early October. The work was carried out by the PoLB and the US Army Corps of Engineers and the overall project should be completed by the

end of 2011. It will improve access for oil tankers visiting the crude oil terminal on Pier T and for the world's largest container ships.

Doug Thiessen, PoLB MD of engineering, said the project is critical. "It greatly enhances the port's capabilities and navigational safety," he said.

Software to reduce spreader downtime

More than half of a terminal's downtime can be attributed to issues with spreaders, claims spreader manufacturer Bromma.

Vikram Raman, the Swedish company's vice-president and commercial director, told *P&H* that incidents broadly break down into 60% spreaders and 40% other issues. A terminal's ability to offer a reliable service to its shipping line customers is critical for its success, the company suggested, so it becomes important to minimise the risk of spreader incidents.

Bromma has responded by developing its Green Zone software suite, which consists of two applications. The first, Fleet Doctor, monitors the operating functions of a spreader and uses

the data that flows to the software to check that the unit is operating within its 'green zone'. If the equipment is not performing as it should, Fleet Doctor moves into the yellow zone, alerting terminal maintenance staff of the need to address the issue. With traditional methods of inspection it can take maintenance staff a long time to identify the source of a problem, said Raman, but the Fleet Doctor tool can highlight the specific fault so that the technician will know what is wrong with the spreader before attending to the issue at the portside. He told *P&H* that the most common causes of spreader faults are loose wires or wire breakage.

The second application, called

Roadmap, uses information obtained by Fleet Doctor to identify risk areas in a spreader or fleet of spreaders. Bromma explained that it identifies the 10 fault areas that have affected performance most frequently and thereby helps the terminal's management team to plan maintenance scheduling and hence improve overall efficiency.

Green Zone software can be retrofitted to existing spreaders, but can only be used with the company's own products. Trials were carried out on eight spreaders for 18 months.

The company noted that more applications can be added to the Green Zone suite when customers identify additional needs.

Houston closes in on cleaner vessels

The Port of Houston Authority (PHA) recently received \$1.3M of state funds to support its joint effort with GE Transportation to deploy cleaner-burning engines for harbor tugs and ferries. GE has committed \$20M in matching funds, and PHA and other partners are seeking funding from various state and federal programmes for the remaining costs.

Fierce competition for limited federal funds has forced PHA to relax its schedule for meeting federal emissions standards required by the US Environmental Protection Agency. The port had estimated the cost of its Clean Air Strategy Plan at \$78M, based on potential grant funds from the US Department of Transportation. PHA had hoped to be awarded enough money to help vessel operators using the port to meet EPA's Tier 4 emissions

reduction standard, the deadline for which is 2016.

That plan had to be scrapped after PHA lost its bid last year for the DOT funding. The authority will now adopt the less strict Tier 3 engine standards for harbor vessels, which come into effect in 2014. "But even Tier 3 engine standards will save vessel operators 10% in fuel costs over existing technologies," Lily Wells, PHA's co-ordinator for the clean air strategy plan, told *P&H*.

Houston remains committed to its Clean Air Strategy Plan, which encourages the port's customers to cut emissions through government incentives and economic cost savings. Wells insisted: "We think it will end up making good business sense for port users and vessel owners to invest in cleaner technology. We're trying to set a Houston example of how other ports in the country should pursue clean air strategies."

Dredging

NO TO GEORGIA

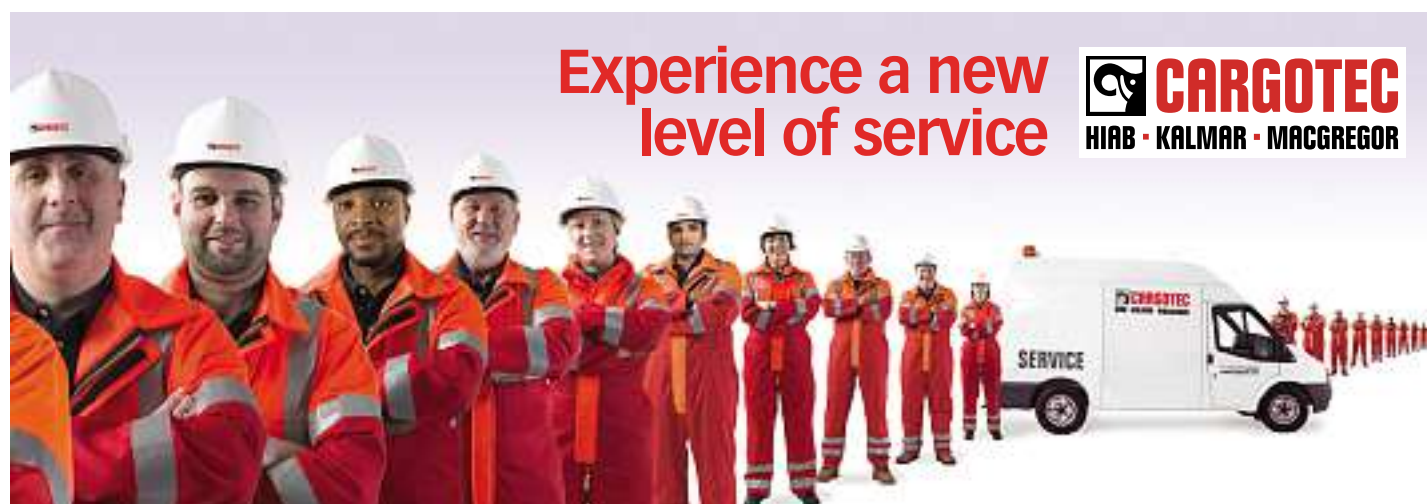
South Carolina regulators have blocked plans by neighbouring Georgia to deepen Savannah's harbor. In a letter sent on 30 September to the US Army Corps of Engineers, the South Carolina Department of Health & Environmental Control denied USACE a permit to deepen a 53km stretch of the Savannah River navigational channel to 14.6m from 12.8m. The river forms part of the boundary between the two states.

MOSAIC GREEN TO GO

The Tampa Port Authority Board of Commissioners has approved a joint project with the Mosaic Company that will ensure the company's berth channel maintains an adequate depth. The US Army Corps of Engineers will carry the dredged material from Mosaic's port berth along the Alafia River to one of the port authority's spoil islands.

VAN OORD AWARD

The International Association of Dredging Companies has given its 2011 Safety Award to Van Oord Dredging and Marine Contractors. After making an inventory of on-site accidents, Van Oord implemented a comprehensive programme to address overall safety. In its Work Safe campaign each process is addressed separately and a list of instructions written describing the safety issues related to that operation.



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AAPA BUILDS BRIDGES

Port of Virginia's executive director Jerry Bridges was named president of the American Association of Port Authorities in September. Bridges is responsible for marketing, development, finance and promotion of Virginia's marine terminal facilities located in the Hampton Roads harbor and the Virginia Inland Terminal located in Warren County. Before Virginia, he served as executive director at the Port of Oakland.

JOHN HAYES HONOURED

Port Botany's third terminal has been officially named Hayes Dock as a permanent tribute to the late John Hayes, who was general manager property and planning at Sydney Ports at the time of his death in 2002, after a short illness. He was also an IAPH 3rd vice-president. He twice held the position of acting CEO of the Maritime Services Board, first in 1991–1992 and again in 1994–1995.

HELSINKI NAMES MD

Helsinki City Council has appointed Kimmo Mäki managing director of the Port of Helsinki from 1 October. According to the council, Mäki's strengths are his versatile experience in the port and logistics sectors, including operator, export and logistics duties. He replaces Heikki Nissinen.

NEW ZEELAND CCO

Zeeland Seaports appointed Dick Gillhuis chief commercial officer as from 1 October. He reports to chief executive Hans van der Hart and will form part of the management team of the port company, which became an independent entity on 1 January 2011. He will play an important role in the continued development of Zeeland Seaports, drawing up and executing the commercial strategy of the Dutch ports group.

NEW CORRIDOR CEO

Barbara Mommen was appointed CEO of the Maputo Corridor Logistics Initiative, based in Nelspruit, South Africa, on 1 July. She replaces Brenda Horne-Ferreira, who takes on an advisory role with MCLI.



Photo: South Carolina State Ports Authority

Charleston becomes Jimco's third US east coast bulk transloader

Agribulk comes to Charleston

Growing demand for US agriculture exports in Asia and plentiful empty containers are major drivers for a new bulk transload operation at the Port of Charleston. The facility, operated by the Jimco Group and set up exclusively for exports, will use conveyor belts to tranship agricultural bulk commodities from railway hopper wagons and trucks into international shipping containers for export.

The transfer depot is next to the North Charleston Terminal on the South Carolina Public Railway, which will bring in railway wagons originating from the southeast and Midwest from major railway operators Norfolk Southern and CSX. "Our new Charleston facility gives farmers, agricultural interests and other bulk cargo shippers a new, cost-

effective way to get their product to overseas buyers through a productive, deepwater port," said Jimco president Jimmie Collins.

Several factors contribute to the attractiveness of containerising agricultural produce rather than shipping it in bulk or breakbulk. Smaller, less-than-shipload quantities make sense for some buyers, especially in more remote markets, and containers are easy to handle. Added to these advantages, strong demand for empty containers in the US interior for exports matches up well with Port of Charleston's ample supply of empty boxes.

"We have empty containers sitting at the terminal, so we have a ready supply of empties that can be used for the service", said South Carolina State Ports Authority spokeswoman Allison Skipper. She

noted that another benefit of shipping through Charleston are its 14.6m channels, which are deep enough to accommodate container ships moving box loads of commodities that are heavier than finished goods.

Jimco operations manager Brad Ashton said the Charleston facility will be run in a similar way to the bulk operations it has started recently at the ports of Savannah and Virginia, which could include expanding into imports. At Savannah, Jimco receives liquid bulk material imported in bag-lined shipping containers that are transloaded on to railway wagons. "Right now, we don't have anyone lined up for imports at Charleston," Ashton told *P&H*.

However, that flexibility could eventually help make the port more competitive, he said.

Strings attached to LNG go-ahead

Dredging conditions have been imposed on Western Australia's Wheatstone liquid natural gas project as part of its environmental approval, IHS World Markets Energy reported.

In the latest step forward for the Chevron-operated project, the state government has given approval but

has imposed 25 conditions, including immediate suspension of dredging should there be any sign of damage to the coral reef outside the defined operation area. The developers would also have to halt drilling at night during marine turtles' peak nesting and hatching seasons.

APMT takes on two more terminals

APM Terminals signed a \$1Bn contract on 31 August to build and operate a box terminal at Moin in Costa Rica, IHS Global Insight reported.

The first phase of the project will involve construction of a terminal with 600m of container berth, six ship-to-shore cranes and 40ha of yard. A 1.5km breakwater will enable year-round operation, said APM Terminals. In the final phase, 1,500m of quay wall and 80ha of yard will be built and water depth alongside increased from 16m to 18m.

The deal also involves a 33-year concession for APM Terminals, which announced that operations should begin in 2016.

Paul Gaillie, managing director of APM Terminals Moin, said: "The terminal will require up to 1,000

staff when opened, creating important new jobs and economic development in the entire Costa Rica/Caribbean region." IHS Global Insight noted that the project has been opposed by port unions, which argue that "there are already a number of state-run ports in Moin and that these should be improved before looking for newbuild investments". But it added: "The construction of this new port will be seen as a major boost to the Costa Rican economy, which continues to suffer from the global economic downturn that began in 2009."

In October the terminal operator also signed a concession to manage Gothenberg's Skandia Container Terminal for 25 years. APMT's bid was submitted on 7

September and commits the operator to investments of more than \$115M in the first five years of the Swedish terminal's operation, an APMT spokesman told *P&H*. Most of the investment will be directed towards infrastructure improvements to further the port's ambitions as a Nordic freight hub. Under the deal, "Gothenburg will consolidate its role as the major international port in Sweden," said Sven Hulterström, the port's chairman.

The deal is subject to approval from Swedish competition authorities. If the scheme goes ahead, the planned transfer of management and operations would start in the first quarter of 2012. In the past two years, the port has prepared its ro-ro, car and box terminals for privatisation.



Photo: Grand Port Maritime du Havre

Le Havre has introduced a barge service to collect ships' waste

Le Havre boosts waste handling

French west coast cargo port of Le Havre expects to see a substantial increase in the volume of ships' waste that it collects following the introduction of a new barge-based service.

The barge *Marpol Collector 1* was brought into regular service on 5 September by port waste

collection company Ships Waste Collection (SWC). SWC is a subsidiary of a locally based inland waterway operator, Compagnie Fluviale de Transport.

SWC is using the 480m³ barge to offer round-the-clock, seven-days-a-week service, collecting liquid waste and cargo residues

and transporting them to approved waste processing sites. Port operations manager Olivier de la Laurencie told *P&H* that the new service would enable the port to multiply the volume of ship waste collected by four or five times.

He admitted that SWC's arrival in Le Havre had created some concern among the dozen or so existing operators that offer lorry-based collections and feared losing business to the new company. He said, however, that SWC's objective was rather to generate additional business through the provision of a new waterborne collection capability.

The service begins as the port prepares to introduce a revised ships' waste and cargo residue plan from the start of 2012. De la Laurencie said that the plan is intended to give vessel operators greater incentive to make use of the port's waste disposal services.

The general level of ships' waste handling charges at the port, which he said were currently "much lower" than in other European ports, would be increased, but reimbursement mechanisms for exemplary owners would be reinforced.

Cash & cargo

DALIAN DIVES 13%

China's northern Dalian port posted net profits of Rmb338M (\$53M), a 13% drop from last year's Rmb388M. The decrease occurred even though revenues increased by more than 7% from Rmb1.6Bn to Rmb1.7Bn. The Hong Kong-listed port company said the drop in profits was attributable to lower oil throughput and a smaller margin on oil handling after an explosion at Dalian's oil terminal in July last year, which forced a temporary closure.

CMA CGM PROFITS SINK

French liner CMA CGM registered a 72% year-on-year fall in net profits to \$237M in 1H/2011, but said it expected to remain profitable over the full year. Net profits were hit by a 36% year-on-year increase in fuel costs but benefited from undisclosed asset disposals. Despite the sharp fall in net income, the group recorded solid increases in revenues and container volumes. Revenues rose 8% to \$7.3Bn, while container carryings increased 9.1% to more than 4.8M teu.

SUEZ REVENUES UP

The Suez Canal Authority has recorded a 16% year-on-year increase in revenues in the first eight months of the year, IHS Global Insight reported. The authority received \$3.6Bn in revenues between January and August this year, from \$3.1Bn in the first eight months of last year. The number of vessels using the canal increased by 11.3% during the same period despite the disruption caused by the Egyptian uprising, which caused several ports, although not the canal itself, to close.

INVESTMENT HITS PROFITS

Slovenia's sole port operator, Luka Koper, said it had recorded net profits of €3.4M (\$5M) for the first half of 2011, a 36% drop compared with the same period last year. But the company recorded operating profits for January to June of €13.2M, a year-on-year increase of 74%. The operator explained that a write-down in the company's investment in logistics company Intereuropa was behind the fall in net profits.

Guarding ships from pirates

Peter Hinchliffe wants governments to put more resources into combatting piracy, but accepts that ship operators may have to deploy armed personnel on their vessels



More countries are allowing armed personnel on ships transiting known piracy hotspots Photo: BARS

In September the global shipping community marked IMO World Maritime Day, the theme being *Piracy – Orchestrating the Response*. Most in the industry will wish that we could have celebrated the eradication of piracy instead. Since the crisis off the coast of Somalia began to escalate in 2008, more than 3,000 seafarers have so far been kidnapped and held for ransom, enduring months of captivity in appalling conditions.

The financial cost to the shipping industry has rapidly escalated as ransom payments have risen – in one case reportedly approaching \$10M for a single ship and its crew. Because of the high financial stakes, serious violence against hostages is reported to be increasing, as disturbingly shown in 2011 by the murder of captives at sea.

Governments in those countries with the largest military navies in the region appear to show little willingness to increase resources to the extent that would be necessary to have a decisive impact on the problem. The fact that almost no ships currently transit via the central Indian Ocean shows the degree to which control has been ceded to the pirates.

At a time when both financial and military resources are extremely stretched, many governments appear to be tolerating the current level of piracy. The dramatic political developments in the Middle East, and the recent famine in Somalia, have further diverted the attention of policy-makers from the urgent need to address the piracy crisis.

Relatively few crew members from the developed countries have so far been taken hostage or been among those 60 seafarers understood to have lost their lives, and this could in part account for the responses shown from governments. Yet the whole international community is dependent on international shipping, which transports about 90% of global trade. Counter-piracy efforts have also been discredited by the lack of appropriate domestic legislation in many countries, including any offence of 'intent to commit piracy', which has led to a continuation of the absurd situation that pirates who are captured by navies are often released back to Somalia.

EU and NATO forces, working closely with a diverse range of other countries, represent a hitherto unprecedented level of co-operation between the world's military navies. In particular, the operation to protect traffic in the Gulf of Aden has been a great success. Pirates have now evolved their tactics and expanded their operations throughout most of the northwest Indian Ocean, an enormous sea area of about 4M km². Ships have been attacked off the coast of India and as far south as Mozambique. Navies claim that such a large area can only be policed effectively with about 100 warships equipped

with helicopters, but at any given time only about 30 warships are in the region on counter-piracy duties, and only a proportion of those are available to protect merchant ships and their crews on any given day.

As a response to the crisis and in co-operation with the military, IMO and the UN Contact Group on Piracy off the Coast of Somalia, the international shipping industry has developed *Best Management Practices to Deter Piracy in the Gulf of Aden and off the Coast of Somalia* (BMPs). An updated fourth version (BMP 4) was published in August.

Experience has demonstrated that strict adherence to BMPs remains the most effective means of passive defence for ships operating in the high risk area. The International Chamber of Shipping (ICS) continues to urge all companies and ships to comply with the guidance in *BMP 4* to the fullest extent possible, with particular emphasis on registration with the military before every passage.

One important development in 2011 is the increasing use of private armed guards by shipping companies, many having concluded that arming ships is a necessary alternative to avoiding the Indian Ocean completely. The consensus view among most ICS national associations remains that, in normal circumstances, private armed guards are a clear second-best to military personnel on board. ICS has had to acknowledge, however, that the decision to engage armed guards, whether military or private, is a decision to be made by the ship operator after due consideration of all the risks.

Following this lead, IMO has now started to develop much needed guidance for flag states and industry on the use of private armed security personnel on board ships in high-risk areas. But many countries still refuse to allow the use of armed guards on vessels that fly their flag, or to embark or disembark them from their ports.

Private armed guards do not represent a long-term solution. Rather, their use actually

signals a failure on the part of the international community to ensure the security of maritime trade on which the whole world depends. The use of private guards does not mean that military forces are no longer required. They are needed more than ever and should be greatly increased in number.

The industry has recently proposed that the United Nations should agree to the use of UN armed guards on board merchant ships, particularly those carrying food aid, which would free up military vessels to protect other merchant ships. It remains of great concern that little real progress is being made towards developing any radical new strategy that will deliver immediate results.

The long-term solution will have to be found within Somalia itself, supported by practical measures such as the establishment of a local coastguard. In the meantime, the eradication of piracy remains the responsibility of governments, as stipulated by the United Nations Convention on the Law of the Sea. As governments find ways to eradicate the crisis, the shipping industry will be forced to look at all possible options, including alternative routes, which could have a dramatic effect on transport costs and delivery times.

Piracy is already estimated to cost the global economy \$12Bn a year. If increasing numbers of ships decide to divert around the Cape of Good Hope, this will almost certainly have a major impact on inventories and costs throughout the whole supply chain. It could also greatly damage the economies of Africa and the Middle East at this politically delicate time.

These issues are nothing compared with the humanitarian concerns of the shipping industry. It is simply unacceptable that seafarers have been killed, while thousands more having been held captive for months at a time. **P.H.**

Peter Hinchliffe is the secretary general of the International Chamber of Shipping, a friendly organisation of IAPH
More info: www.marisec.org

‘ICS has had to acknowledge that the decision to engage armed guards, whether military or private, is a decision to be made by the ship operator’

Peter Hinchliffe, secretary general, ICS



Photo: ICS



Get tough on your software

Automated terminals will boost ports' productivity, but terminal operators need to be certain about what they want, says **Robin Audenaerdt**, project manager for ports and terminals

Shipping lines are responding to their shipper clients, who in turn are responding to their consumers' needs. Consumers want their goods on demand and at a low price. This requirement has a knock-on effect at every level of the supply chain, which affects port and terminal operators.

Maersk Line announced that from mid-October it would compensate its customers \$100 a container if it was delayed by one to three days and \$300 if delayed by more than four days on its Asia-Europe services. The line is also investing in Triple-E ships, the first 10 of which are due for delivery in 2012/13. The 18,000teu vessels' designation represents economy of scale, energy efficiency and environmental improvement.

Operators will have to accommodate ever-larger vessels, even if not of Triple-E size, so that lines can maximise their economies of scale. These large-scale operations will affect a port's physical and technical infrastructure and may lead to new ways of working.

Most terminal operators today have a terminal operating system (TOS), which may range from a

'homebuilt' legacy system using Excel spreadsheets to customised cutting-edge systems from niche software developers. Whether or not these systems are fit for purpose depends entirely on the performance levels that an operator wants to achieve. As terminals fight to attract and keep customers, however, it is likely that the TOS will take on a wider role in ever more ports.

Many facilities are already broadening the implementation of their TOS, going beyond the basic loading and unloading of a ship to encompass customs, security and gate operations. One concept that has been explored but has not yet seen extensive take-up is that of the automated port. There are mixed opinions about this way of operating, but it can assist ports in meeting the high performance levels increasingly being demanded by lines. Operators that intend to develop an automated terminal should first of all understand the technical challenges involved.

Some vendors offer total solutions for automated and semi-automated terminals that bundle the TOS with other software systems. This reduces the number

Operators should be cautious when sharing core process information

of interfaces and therefore the scope for single-point failures. Operators should be aware, however, that if they tie themselves to a single vendor they will be limited to that vendor's products, including the basic architecture and discipline of the system. Some of the vendor's products may not be the best choice for the port. The operator should always be in the lead and be able to make informed choices.

Vendors need to be flexible and willing to customise their architecture. The interfaces with products from other vendors, even those from adjacent industries, should be available, transparent and simple.

The other option – potentially more complex and expensive – is to go for best-of-breed solutions sourced from a variety of vendors. For this to be successful, the operator needs to have a clear vision and strategy before they step into the market. The boundary where two different pieces of software meet and communicate, the interface, can pose a challenge if an operator has chosen to work with several vendors all supplying different software elements that have to work together to automate the terminal. A major challenge is to define that exact demarcation line between the software related to the physical automated equipment – the embedded programmable logic controllers (PLC) on the automated cranes and the navigation software for horizontal transport (the movement of containers between the ship-to-shore crane and the stacking equipment) – and the overall equipment control system (ECS) and the TOS.

In the past, the TOS controlled the planning and sequencing of work orders, whereas today an ECS can also sequence and take real-time decisions on scheduling these work orders for specific automated vehicles and cranes. Also, the software embedded on the equipment is capable of taking these decisions. All equipment and software vendors are offering solutions that extend the traditional boundaries between equipment, middleware and TOS. If a terminal operator is unaware of this, they might end up with a plate of 'spaghetti' interfaces. In short, look before you leap.

When a decision has been made on interfacing and the automated equipment has been selected, a TOS can be purchased and customised. This in turn will link into the ECS, connecting the equipment to the rest of the terminal's operations.

The second challenge is to identify an application that can govern the performance of the terminal. It needs to be smart enough to make the correct decision to achieve the highest performance against the lowest possible cost. Whenever decisions need to be taken in daily operations about dealing with exceptions to the estimated performance, an overview of the impact of these manual interventions is missing in the current landscape of applications.

For example, where there is currently no application to emulate and advise on whether adding an extra crane to a delayed vessel will cover its costs and if it will affect performance in the coming hours on other parts of the terminal, an external vendor with expertise in tuning, planning and scheduling algorithms can be introduced into the TOS environment. This would

give insight into the impact of decisions related to the terminal's key performance indicators and activity-based costing and it would challenge the existing TOS vendors on the quality of their algorithms.

The impact that a TOS can have on a facility is huge, but the information and communication technology (ICT) budget at an automated terminal is only 10% of capital expenditure. It has not been given its full recognition as one of the three most important aspects of daily terminal operation – operations, equipment and ICT – that are crucial for the successful implementation of a state-of-the-art facility. Increasingly, operators are looking for ways to reduce ownership costs by outsourcing systems and resources. They should be cautious about sharing too much information on core processes and how they handle exceptions, as doing so could reduce their competitive edge.

The more a container terminal is automated the more reliant it will be on the human brain. An automated container terminal's ability to handle exceptions is currently seen as one of the main drawbacks of the concept. The human brain is naturally equipped for resolving these scenarios as it can apply experience and insight, so operators will need to invest in training their

“The more a container terminal is automated the more reliant it will be on the human brain”

staff to enable them to take these decisions. Similarly, automation will increase operators' dependence on the human workforce, which will have to acquire a different skillset to be able to comprehend and drive this automated machine.

The port authority may not be directly involved in the procurement and purchase of automated equipment but it does play a role in facilitating exchange of cargo between terminals. It also invests in gate equipment and security and scanning measures, all of which can be incorporated into a TOS, whether it is a fully automated terminal or not. The port authority needs to work much more closely with its operator clients as they look together at ways to increase safety and security and decrease the operator's investments.

Automation will become a powerful instrument to drive performance at container terminals and ports, but its potential will be realised only if focus is directed to the integration between operations, equipment and ICT. Terminal operators that show strength of mind when working with vendors will get strong results. **PH**

Robin Audenaert is an independent project manager specialising in ports and terminals. Current projects include APM Terminals in Vado Ligure, Italy, and Amsterdam Airport Schiphol

More info: www.audenaert.com

Photo: Shutterstock



Putting weight on cranes

New technology in the world of integrated weighing systems for cranes has been developed in response to demand from customers, reports **Martin Watts**

Gottwald cranes can include systems to verify cargo weights

Weight measurement has always been a necessity for shippers, receivers, terminal owners and vessel operators alike when handling bulk dry cargoes. Traditionally, however, the means of determining weight have been based on commercial practicality and limited by operational technology. This means that basic

measuring techniques such as draught surveys, vehicle weighbridges and railway wagon weighing equipment, together with load cells for hoppers and conveyor belt devices, are normally employed to verify the weight data that are entered on bills of lading, cargo manifests and regulatory documentation.

Although these methods are long established and relatively simple to implement, the precise accuracy of measurement by these means is difficult to guarantee. Factors such as maintenance and calibration, weather, moisture content of certain bulk commodities and the availability of independent surveyors, can all affect the degree of accuracy that can be achieved.

The main commercial responsibility for weight measurement lies with the shippers and receivers, and



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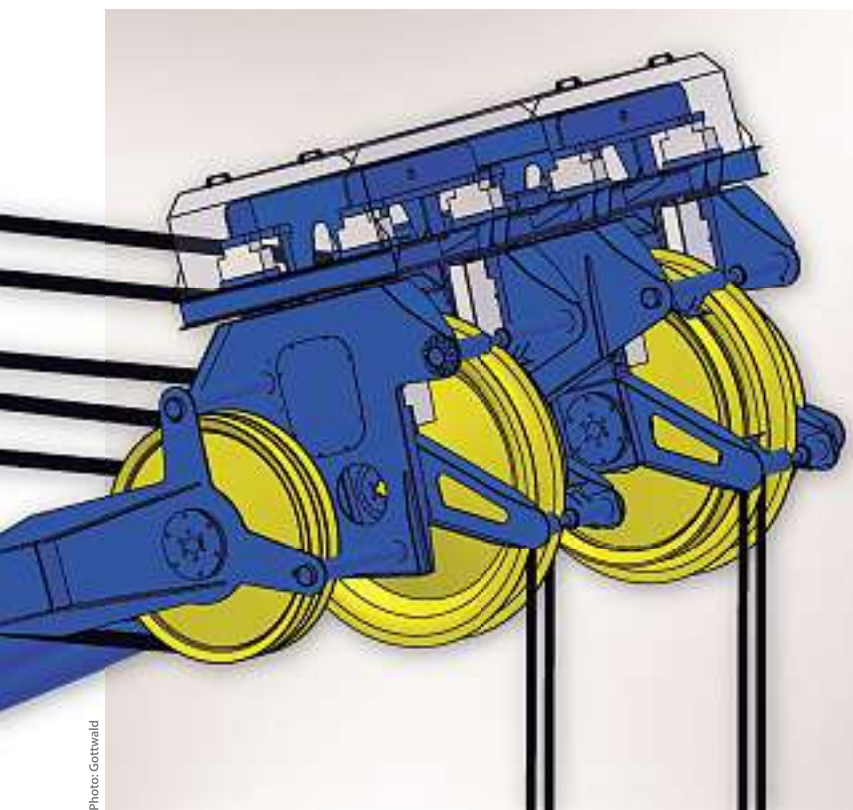


Photo: Gottwald

Gottwald's weighing technology installed on the boom head of a crane

fair trade between the two parties depends upon the availability of independently verified data. Commercial considerations are, of course, also linked to the value of the cargo, and the ability to record weight accurately is especially important in the handling of high-value commodities, such as some ferrous alloys, which can be worth more than \$1,000 per tonne.

Load measuring should not be confused with weighing. Weighing is the approved system for invoicing purposes and it is based on these measurements that bulk cargoes are bought and sold. Load measuring is primarily a safety tool to measure load forces on the crane's structure. Within the European Union, legal-for-trade weighing systems need to comply with the Measurement Instruments Directive (MID). The International Organisation of Legal Metrology (OIML) is responsible for providing the requirements for legal-for-trade weighing systems. The National Type Evaluation Program (NTEP) is the body responsible for these requirements in the USA. A weighing system also has to be type-approved.

Gottwald, a subsidiary of Demag Cranes, has introduced an integrated weighing system to its harbor crane range. Demag's product engineers, led by Dr Dirk Rother, developed the technology in response to demands from a European terminal operator that specialises in high-value cargoes and a US stevedoring company. The Gottwald system is designed to obviate the need for other weighing processes.

The system works by taking measurements from the rope pulleys at the crane boom tip; these measurements are then combined with a series of mathematic algorithms, which take into account

“The US has new accounting rules and more information will need to be produced to comply”

factors such as friction and vibration, to compute an accurate weight. The weighing procedure involves operating the lift at a reduced but constant speed so as to guarantee accuracy. All of the resulting data is displayed and stored in a secure crane cab terminal, from where it can be transmitted to printers or other processing systems for documentary purposes.

Thomas Kirsten, a member of Demag's marketing team, told *Ports & Harbors*: “The cargo weighing system is EU type-approved and, therefore, in countries that accept this certification these cranes can be moved around between terminals without the need for recalibration – a definite advantage where fixed equipment is either unavailable or not officially calibrated.” Kirsten was keen to highlight the value of the system for ship-to-ship or barge transfers, where the only option is draught survey (water displacement before loading or discharge), which is not always capable of producing the level of accuracy required by some shippers.

Liebherr is working with its existing cargo weighing technology. Marketing manager Joachim Dobler told *Ports & Harbors* that the company believes the future of weighing lies in draught measurement of the vessel or load cells installed in hoppers or conveyor belts. “In case of dispute,” he explained, “the draught measurement is applied as reference, because of the proven high accuracy.”

The St James Stevedoring Company recently purchased two Gottwald floating cranes fitted with the new weighing system. Company vice-president John Crane told *P&H* why the equipment is so beneficial: “St James is a midstream stevedoring operation that works in the Mississippi River in Louisiana. This means that draught surveys are very difficult to carry out because the river runs at 8kt or 9kt, so even moored vessels have a bow wave.”

He added that St James has a policy of being as transparent as possible to its customers. “We provide frequent and regular updates on the amount of cargo that has been transferred and shipped. The live information adds value to what we do,” he said. Crane also added that he is mindful of new regulation: “The US has new accounting rules, and business regulation designed to enforce greater accountability is on the way, and more information will need to be produced to comply.”

Regulation worldwide is becoming increasingly strict and the cost of compliance has been pushing companies to search for smart solutions. In the bulk cargo sector, this could mean greater demand for enhanced versions of traditional technology or entirely new integrated systems. **PH**



Photo: Liebherr

Liebherr crane alongside... the company stands by traditional weighing methods



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Dusting down at Saldanha

South Africa's only iron ore terminal can finally get the fresh water it needs to develop and at the same time keep dust at bay, reports **Terry Hutson**

After delays caused by objections and appeals from local residents and environmental groups, South Africa's Transnet has been able to commission a reverse osmosis desalination plant to help combat dust at the Port of Saldanha Bay iron ore terminal. Transnet's plans to use seawater drawn from within Saldanha Bay had suffered a setback in 2009 when authorisation for the plant was suspended pending a decision by the minister of water and environmental affairs.

The port is situated within the ecologically sensitive Saldanha Bay and is adjacent to Langebaan Lagoon, which forms part of the West Coast National Park. The port's iron ore and oil terminals, on the one hand, and the remainder of Saldanha Bay and Langebaan, on the other, have been described as a "fatal marriage of opposites". The lagoon is a designated Ramsar site (under the Convention on Wetlands of International Importance), but Saldanha Bay is South Africa's deepest natural harbor and was therefore earmarked by the government in the 1960s as a development node for the export of iron ore.

Creating the Port of Saldanha in the 1970s allowed an increase in the production of iron ore by the mining companies of Assmang and Kumba at the Northern Cape mines near Sishen, 860km from Saldanha at the end of a dedicated heavy-haul ore railway. The terminal's capacity is now 41M tonnes annually and there are plans to expand this further to 80M tonnes

The port's expansion has created considerable challenges in terms of dust control. Saldanha lies in an area devoid of water resources – other than the ocean – so fresh water has to be piped in from reservoirs. Transnet decided to address the problem by setting up a reverse osmosis desalination plant, which would desalinate seawater. The water would then be used to prevent the spread of dust when iron ore was being loaded into ships.

Environmentalists and local residents expressed concern about the potential brine content of the process water – a byproduct of desalination – that would be returned to the bay. Objectors said that they were opposed not to the desalination plant itself but to its location next to the lagoon. They maintained that the plant would, at its peak, have an output of 3,600m³ a day and would introduce nearly 1.6M m³ of brine byproduct a year into Saldanha Bay.

Transnet, however, maintains that the brine byproduct will not have any adverse consequences for either the bay or the lagoon. It told *P&H*: "Scientific studies completed during the environmental impact assessment indicated that the discharge of brine into the sea will not have a negative impact on the environment. This process also requires a licence from government."

The company said that it completed background monitoring of seawater quality before the plant was commissioned in order to establish a baseline and



Photo: Dreamstime

The Saldanha Bay iron ore terminal requires copious supplies of fresh water for dust control

"will continue to monitor seawater quality in order to identify impacts, if any, once the plant starts operating. Licensing for the discharge of brine into the sea will be authorised by means of a discharge permit issued from the responsible government department, who will review water quality reports as part of the management of the licence."

The R70M (\$8.7M) desalination facility will supplement the supply of potable water provided by the local municipality. The plant has been built and commissioned by Veolia Water Solutions & Technologies SA (formerly VWS Envig), a French-based company that specialises in reverse osmosis technology. Transnet says that approximately 36,000 kilolitres of water are required each month for the daily spraying of the iron ore stockpiles and other transfer points using sprinkler cannon systems. This assists in containing the dust, which would otherwise be blown into residential areas surrounding the terminal. The port, terminal and adjacent parts of Saldanha are characterised by a red ochre colouring that permeates buildings, roads and countryside.

Saldanha's new desalination plant will enable the facility to expand

South Africa's ore complex

Port of Saldanha Bay, in the Western Cape, is situated 140km northwest of Cape Town. It consists of a multi-purpose terminal, including one general cargo berth, two drybulk berths and two iron ore berths. It also has a single-berth oil terminal. Maximum draught in the iron ore berths is 21.5m at high tide so they are able to accommodate both Capesize and Panamax vessels.

The iron ore berths are serviced by the following equipment, all of which has a capacity of 8,000 tonnes an hour:

- Two tipplers for unloading iron ore cargoes from vehicles
- Three stack reclaimers that both stack cargo on to the stockpile for storage and reclaim for export
- Two conveyor systems, with a total length of 7km, to transport iron ore from the stockpile to the quayside for export; however, only a single conveyor can be used at one time
- Two shiploaders (one vessel at a time is loaded).

Source: Transnet and IHS Fairplay

According to Velile Dube, Transnet's terminal executive, other options were thoroughly examined, including obtaining recycled water from the municipality, but all were found to be unreliable, costly or limited in capacity. "Reverse osmosis plants provide a guaranteed source of quality potable water since they are not vulnerable in drought situations. The method is proven and reliable and there is access to good local expertise in South Africa," he said. An advantage is that the plant can be constructed in units allowing additional modules to be added to meet growing water demand.

Veolia's project manager, Thys Els, said the plant consists of a seawater intake system, seawater reverse osmosis units, clean-in-place system, an energy recovery system, and storage tank. Els explained: "The energy recovery system is a key element of the plant's design. In the desalination process, a higher pressure, and thus more power, is needed to reject the salt. Based on specialised technology that has only become viable in recent years, the recovery system directs unused energy from the reverse osmosis process to the beginning of the process, thus saving on power consumption." **PH**

More info: www.transnet.net



Photo: Terry Hutson



Growing China's bulk potential

China's capacity is growing at around 10% a year and expects to have 10% overcapacity by 2015. But what is needed most is efficiency, reports IHS Fairplay's China correspondent **Bouko de Groot**

Insufficient capacity, too few connections with the country's railways and an imbalance in northern and southern maritime infrastructure are just some of the problems that China needs to fix.

"China is in bad need of good-quality ports," said Yunfei Chen, deputy chief engineer of China's Port Development Institute (PDI), at August's Port Planning & Design China event in Shanghai. "Ports in the north of China are bigger than those in the south, yet a lot of coal is shipped from the north to the south," Chen explained. "Between them, there is no balance: the big vessels that can call on those northern ports cannot bring their cargo to the south."

China is a voracious coal importer. "Most of our coal imports are to the southeast of China," said Ping Luo, director of the Research Institute of Comprehensive Transportation of the National Development and Reform Commission. However, more than 90% of domestic coal imports go through the four big northern ports of Huanghua, Qinhuangdao, Tangshan and Tianjin. According to Luo, around one-third of China's coal is transported by sea, so by 2015 about 1.3Bn tonnes of coal will be moving through China's ports. There is a similar picture for iron ore. "China imports around 620M tonnes of iron ore, one-third

each to the north, middle and south," Chen said. Capacity in the south is limited, he admitted: "There is insufficient specialised equipment and there aren't enough large-scale ore terminals."

This lack of capacity in China's dry-bulk terminals is exacerbated by inadequate railway connections. Chen estimates that only two-thirds of ports are rail-linked and in most ports only about one-third of throughput is moved by train. Roads are still the primary link with the hinterland, although they too are far from perfect and severe congestion is common around ports. "Only 30% of coal is transported by rail; for iron ore it's about the same," said Chen. A positive exception is Qingdao, where two-thirds of its ore is moved by rail. "But," he added, "that still leaves 30M tonnes per year to be trucked along Qingdao's roads" – amounting to more than two truckloads every minute, 24 hours a day.

"There is a huge demand for railroad transport from ports," said Luo. "The biggest obstacle to properly integrating rail and sea is our overall system," she said. At every level a multitude of departments is involved – transport, railway, urban-planning and finance – and multiple jurisdictions – municipal, provincial and national. "For example, the railway is under our central government, while most port projects are at provincial or even municipal level," Luo explained. Chen agreed: "In port planning we need to include all parties: city, transport, urban planners etc. In the past, each party made their own plan without co-operating with the others; there was no combined overall plan." The current five-year plan will finally start this essential integration.

Earlier this year the Ministry of Transport finally signed a co-operation agreement with the Ministry of Railways.

North-south divide: major ore terminals

Region	Port/terminal	200,000dwt capacity	250,000dwt capacity	300,000dwt capacity	400,000dwt capacity
North	Dalian	—	—	1	1 (under construction)
	Qingdao	1	—	1	—
	Tangshan	—	4	—	—
	Tianjin	2	—	—	—
	Yingkou	1	—	1	—
Middle	Lianyungang	—	—	1	—
	Ningbo-Zhoushan	1	1	1	—
	Rizhao	1	—	1	—
South	Gulf of Tonkin*	1	—	—	—
	Zhanjiang	1	—	—	—

* Also known as Beibu Gulf

Source: PDI

Coal at Qingdao...

Chinese ports need to cater for the iron ore carriers of 400,000dwt

"Rail offers great possibilities, but it will still take three to five years to nurture this," estimated Luo. "That's the next step for any port in China: how to properly connect the ports to their hinterland," added Chen.

In the meantime, China's economy keeps growing. Improving the efficiency of the country's dry bulk terminals won't be enough, though: real capacity has to be added to the ports themselves. "We need to develop to cater to the large vessels – Dalian, Qingdao and a few others are already preparing for these 400,000dwt vessels," said Chen. No matter what the current issues surrounding these large ships may be, he believes they will come, if only because they cut transport cost by 20%. Therefore, he explained, "We should expand the current large terminals, such as those for 200,000dwt vessels, but that of course needs huge investment." China has at least a dozen ports where this can be done. "However, if you take

things like the necessary railroad infrastructure in consideration, then only Dalian, Qingdao, Ningbo-Zhoushan and Fujian province are suitable," he added. Of those, Dalian has the best prospects. "Qingdao is also working on terminals for 400,000dwt ore carriers, but more dredging still needs to be done there," Chen explained.

China's ports are growing and modernising and, said Luo, "small, scattered old ports disappear, being replaced by fewer, bigger modern ports". At the same time, heavy industries are moving out of the cities. Chen hopes the big users, like steel mills, will relocate right next to the new ore and coal terminals that will feed them. China's new plans to improve overall co-operation and efficiency will be a welcome change. But we'll have to wait until 2015 to see if all those words have actually been transformed into much-needed results. **PH**

Ningbo numbers up

South of Shanghai, the dual port of Ningbo-Zhoushan is competing hard with Shanghai for China's container crown. It is, however, already outshining its rival in bulk, being the biggest bulk port on the Yangtze River delta, both for crude oil and dry bulk. Half of China's central ore terminals able to receive 200,000+dwt vessels are in Ningbo-Zhoushan. The port has more big ore terminals than the whole of southern China.

Two years ago the then biggest ore terminal of Ningbo-Zhoushan, Beilun Port, which was able to receive 200,000dwt vessels, was revamped to make it more environment-friendly and efficient. Its annual throughput was raised by around 10% to almost 25M tonnes.

Its newest terminal was scheduled to start operations in October this year. The iron ore terminal able to receive 250,000dwt vessels is a project by Wuhan Iron and Steel Group, one of China's top steel mills. The steel mill itself is located around 1,100km up the Yangtze and has a designed capacity of 15M tonnes a year. At time of writing, around 70% of the terminal's equipment had been installed and tested, including the ore conveyor system.

Ningbo-Zhoushan seems to be unaffected by the global financial crisis. This July it handled a record-breaking 36M tonnes, including 6M tonnes of iron ore and 4M tonnes of coal. The first half year saw a 7.5% increase to 209M tonnes, which included 29M tonnes of iron ore and 19M tonnes of coal.



Illustration: Shutterstock



Singapore certifies port workers at national level

In a push to improve safety and job image, Singapore has set up a training programme targeting 10,000 of its port industry employees, reports **Bouko de Groot**

The Port Services Workforce Skills Qualifications (WSQ) Framework is a nationally accredited programme that was launched in June. It is the first-ever collaboration to include all the major players active in Singapore's port industry, including Singapore's Workforce Development Agency, PSA, Jurong Port and the Singapore Port Workers Union.

The scheme is specifically targeted at the large rank-and-file workforce. It provides a structured pathway for port employees to upgrade their skills and to specialise in selected areas of port operations through courses

that lead on to nationally recognised certification.

For the present, the Port Services WSQ Framework has two specialisation tracks, although other job functions will be added in due course. One of the two is Lashing Specialist, which focuses on efficient and safe lashing and unlashings procedures on board container vessels in compliance with organisational and workplace safety procedures. Skills that trainees will acquire on this course include coning and deconing, berthing and unberthing, water bunkering and facilitating the movement of containers aboard



Age profile of employees

Age	At PSA terminals	Nationally
Below 40	57%	46%
40–49	19%	22%
50–59	20%	20%
60+	4%	12%

Source: PSA

Singapore’s expanding port worker requirements are being addressed through its new training framework



Photos: Bouke de Groot

“A well-trained and motivated workforce is essential”

the vessel through close radio communications with the quay crane operators.

The other specialisation track within the current programme is intended for operators of mobile equipment. The training is focused on the safe and proficient operation of equipment such as prime movers and heavy forklifts within the container terminals. The course will provide trainees with advanced driving skills including the operation of double-stack trailers and the transport of hazardous materials on public roads.

The plan is to develop other categories for which a need is identified, such as operations supervision, crane operations and non-containerised operations. Through a combination of classroom teaching and on-site practical training, candidates can obtain certifications at three levels for each category. Each level of certification is pegged to a different occupational level, from operational through supervisory to managerial-executive level. Singapore-based companies that send their employees on these courses may apply for subsidies both for the fees and for absentee payroll support.

Matthew Chan, chief executive officer of Jurong Port, believes that the initiative represents “a major step forward for the port industry as it provides a clear framework within which our people can develop and hone their skills”. He expects the programme also to

help develop “the new competencies that are required by changing technologies and business needs”.

Another stakeholder in the project, the Employment and Employability Institute, noted that companies have been finding it particularly difficult to attract people into the ports industry. Singaporeans perceive the jobs as involving hard, unskilled labour and offering only limited prospects. The new training framework is expected to alter that perception, by raising the skill levels of port personnel, developing key competencies in port operations and enhancing career prospects.

According to the institute, the three levels of certification allow greater career advancement and also open up new opportunities for people to move into the industry. The programme complements a series of 27 other industry-specific training programmes that are already offered in Singapore.

The image change is much needed, because by 2018, when the new phases of Pasir Panjang Terminal should be operational, the port will require many more hands. Singapore will then have a total container handling capacity of 50M teu. “A well-trained and motivated workforce is essential for Singapore to maintain its status as a premier global hub port,” pointed out Puayhin Tan, who is leading PSA’s Southeast Asia region. He added that the training programme is “a powerful resource to enhance the competitiveness of our port employees”. PH

Photo: APM Terminals



Developing tomorrow's terminal leaders

APM Terminals has developed a management training course for its own employees. **Jem Newton** talks to one of the recent crop of graduates

In today's port business environment, job specialisation has both advantages and drawbacks. Specialisation enables you to do a very specific job with a high degree of competency. On the other hand, pursuing one specialist career path – even if you do it very well – makes it even more important to develop good business management skills and be familiar with other areas of port activity.

APM Terminals (APMT – part of the AP Møller-Mærsk shipping group) has tried to address these issues with its Magnum (Maersk General Management) scheme for top management performers working at its terminals around the world. After launching Magnum as a two-year course five years ago, APMT reduced the length to one year to make it more intensive.

Industry professionals working for the company

successfully completed the most recent course in Buenos Aires in March 2011, which included units in leadership, finance and port operations.

Silvia Iglesias is chief financial officer (CFO) at APM Terminals' Buenos Aires container facility, Terminal 4, and a graduate of the last course. "Magnum is a high-level, business-oriented programme aimed not only at developing the participants' managerial skills but also at giving them advanced knowledge in all aspects of the container terminal industry," Iglesias told *P&H*. Subjects include situational leadership, negotiation techniques, communication, team-building and cultural diversity.

For example, participants learn that commercial and financial strategies should be fixed taking into account the often conflicting multiple interests of all parties involved in different terminal locations, with the ultimate focus being on customers, she explained. "These ideas were discussed within the programme as part of many topics such as sharing global best practices, improving efficiency and reducing costs, ensuring profitability and developing strategic thinking. Therefore, from a certain point on during the programme, the company's business objectives became clearly and easily understood."

Iglesias already has strong financial expertise and experience as well as a Masters in Business Administration, but she said the Magnum programme provided her with additional intensive knowledge within her specific line of work and also how to relate her own area of expertise to APMT's business strategy.

"I found the management techniques particularly



Photo: APM Terminals



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helpful. Among them, the situational leadership method is a highly valuable managing tool. It illustrates to the participants the use of different leadership styles to motivate and develop employees, initiate and implement change within an organisation, diagnose employees' concerns and finally to understand the short- and long-term consequences of over- or under-management, as well as using the appropriate leadership style. In short, the diverse facets a leader must display in order to get his or her team focused, engaged, inspired and integrated," she explained.

These management tools gave her the necessary skills to lead her team towards the fulfilment of individual and departmental objectives. "The latter is an important outcome of the programme, which finds immediate, direct use in everyday work. In addition, the comprehension of APMT's broader goals, beyond those relevant to the business unit I am based on, let me better grasp my role as terminal CFO," she said.

A final outcome of the programme, she added, was the useful network of contacts it created within APMT: "Once the course is completed the network remains that allows the graduates to stay in touch to mutually engage in solving problems and devising strategies."

External communications director Tom Boyd added that the programme was aimed at developing dynamic leaders. Among its specific goals is the creation of a cadre of terminal managers and leaders who focus on achieving the results that matter to APMT's global organisation. He said the course also provided opportunities for the participants to gain experiential understanding of organisation-wide critical issues and their impact on company strategy.

The Magnum programme is split into three modules of two weeks each, spread over a year. "It's not only about the two face-to-face weeks per module; we also have on-the-job training with the business projects and coaching sessions," Boyd told *P&H*.

The three modules are held at different locations worldwide, usually near one of APMT's operating terminals. The programme has been developed in conjunction with leading Spanish business school ESADE, whose staff usually conduct the business

management elements of the course, while terminal executives manage the more hands-on aspects.

"The course is so linked to daily tasks and responsibilities that the learning material can be easily applied in a standard functional background," added Iglesias. "On the other hand, it requires from the applicants hard work, business focus and a very strong commitment to both their partners and trainers."

The third module ends with a written examination and a graduation ceremony. Attracting high-quality professionals to work for APMT was one reason for setting up the scheme, said Boyd, who hoped that participants will find the APMT business environment attractive enough to want to stay with the company.

The programme is also extended to employees of other terminal companies, such as joint ventures with APMT. It sees their participation as a way to foster better understanding of APMT's business philosophy. One of those who attended recently was Tao Li, vice general manager of Dalian Container Terminal, China.

"I am now able to think from APMT's perspective and that's very important for my future," she said in an interview on the company website, www.apmterminals.com. "I'm in charge of commercial business and marketing so I will try my best to find more and more opportunities to expand the business between APM Terminals and Dalian Port."

Iglesias encourages her colleagues to take the course if they have the chance. "The Magnum programme has been one of the most rewarding educational experiences I've ever had, not only for the variety of themes we went through and the high level of the teaching staff but also because of the unique cultural and professional environment it provides. It allows people coming from a number of countries and different lines of expertise to work together towards a common goal. I would definitely recommend applying for the programme to any of my colleagues who want to develop on the grounds of personal effort in a team-working atmosphere like APMT's," she said. **PH**

More info: www.apmterminals.com/careers.aspx?id=6689&image=8461

Criteria for Magnum participants

- Targeted individuals should be high performers in their current position (top 30%) and have a consistent history of solid performance.
- Candidates nominated for the programme should be individuals who are expected to take on greater responsibility within the next 12 to 24 months.
- Magnum is open to candidates at general manager level.
- Minimum of three to four years' experience within APM Terminals, other terminal organisations, and/or relevant fields.
- High level of flexibility, allowing transfer to another region.
- Excellent oral, listening and written command of English.
- Minimum of a college degree from an accredited university preferably specialised within the transport, maritime industry, business management or civil engineering fields.

Personnel with promise... Magnum participants have much to gain



Photo: APM Terminals



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Flexible security training

A US-funded training programme will play a wider role in improving port security thanks to a government-industry alliance, reports **John Gallagher**

Photo: Shutterstock

A US port security training programme known as PortStar, which has its roots in the academic world, is to be spread more widely through a partnership of government and the maritime industry. An alliance, struck on 31 August, combines the expertise of the National Maritime Law Enforcement Academy (NMLEA) and the National Association of State Boating Law Administrators (NASBLA) with the Moran Office of Maritime & Port Security (MOMPS). Its aim is to improve maritime law enforcement through personnel training.

PortStar, a major vehicle for the collaboration, was developed for US ports by Florida State University in 2009, following a \$6.2M grant in 2005 from the US Department of Homeland Security (DHS). The grant funding will allow security training to be rolled out “through our three organisations for pennies on the dollar, and at the same time incorporate all different types of training”, asserted Jeffrey Milstein, director

of field operations and special agent in charge of maritime at MOMPS.

PortStar consists of 480 self-contained lessons spread across nine courses that can either be taken online or with an instructor. They are intended for port workers, security guards and law enforcement officers. Ports can use the software to prove their staff’s compliance, but it also helps career progression for individual staff members, because the qualification is transferrable – it moves with them from one job to another.

The three groups share similar security aims and have a common goal: to create better security within the maritime environment. As Milstein noted, all three were working together informally on projects before the alliance was established. “By bringing us all to the table, we can provide a level of security where we’re able to do on-site training and get people on a vessel,” he told *Ports & Harbors*.



Getting port staff on to vessels is an important element of their security training

Port training includes a facility security officer (FSO) and vessel security officer course. "There's an online portal for the training they can take at their convenience. It's a little pared down from the typical class society training course, which is very broad. This covers solely port security and what a person would encounter in an operational environment, and it's approved by DHS and USCG [United States Coast Guard]," said Milstein.

"For an FSO, we'd bring people into facilities to see an operating working facility that's relevant to their training programme so they can get a 'boots on the ground' perspective.

"If it's a tanker operator, we bring them to an oil terminal; if it's a container operator, we bring them to a container terminal. Shipowners want people to get an understanding of how the [portside] facility works and the role they need to play with security," he told *Ports & Harbors*.

“Filling security gaps in everyday operations”

Jeffrey Milstein

Director, field operations and special agent in charge of maritime, MOMPS



Milstein maintained that the security training programme offered by the new alliance will prove to be a cost-effective way for both vessel and terminal operators to provide training to employees even during a time when many companies are reducing their workforces and cutting their training budgets.

NASBLA, which sets the standard nationally for private boating safety and law enforcement, is a critical component of the alliance because the US government has identified a threat to maritime security from small boats. "At the Port of New York you've got an oil tanker facility and a private yachting facility within 100ft [30m] of each other, with both playing a role in port security", Milstein pointed out. He is hopeful that the new alliance can help strengthen co-operation between the two sectors.

Another reason for seeking a broad alliance among maritime security partners is to fill training gaps that have opened in the decade since the Maritime Transportation Security Act came into force in 2002 in response to the al-Qaeda terrorist attacks on the USA of 11 September 2001. The US Coast Guard is considering new regulations that would update the Maritime Transportation Security Act of 2002, but in the meantime, said Milstein, "we're looking to fill gaps not just by the regulations but in everyday operations". He explained: "If one department is laying off staff, supervisors from other departments with no field experience are coming in and calling the shots. We can solve the problem by providing better training at reasonable cost. The key to security is not just about being compliant with the regulations but being secure."

PortStar is not just for US seafarers, maritime companies and ports, asserted Milstein. Although the syllabus is based on US regulations it is nevertheless applicable to international companies that wish to comply with the International Ship and Port Facility Security (ISPS) Code as they try to upgrade security in their own country. **PH**

Railing forward in Ukraine

IAPH member TransInvestService has proved itself as a private port operator. The container terminal's director, **Andrii Kuzmenko**, tells *P&H* about its future vision

TransInvestService (TIS) is today the largest private cargo port in Ukraine. Its location, separate from the main berths at the Black Sea Port of Yuzhny, near Odessa, has a history of bulk handling, having been built on the site of an unfinished import phosphoric ore handling complex. Development began in 1987 when Ukraine was still part of the Soviet Union, but operations had barely started when they were brought to a halt by environmental activists. Over the next seven years the terminal handled no more than a dozen vessels.

In 1994, three years after the dissolution of the USSR, the terminal was taken over by a joint venture of the Ukraine government and a private investor. Later the same year, the government sold most of its remaining share to the private sector, apart from two berths that remained the property of the state. From this background emerged TIS, which has established itself as a group of terminals that in 2010 was able to boast a combined throughput of 12.2M tonnes.

Its eight 15m-deep berths – six of them built on an adjacent greenfield site – offer a total quay length of 2,380m. Port infrastructure has benefited from more than \$350M of investment, mostly provided by shareholders through reinvestment of operational profit; less than 10% of it was financed by external loans. Work has included the dredging of 6.5M m³ of material from the harbor and excavation of another 7M m³ of material on the land side.

TIS was the first Ukrainian port to start handling Capesize tonnage regularly and it also has the largest grain terminal on the Black Sea, which in 2009 handled 4.7M tonnes. Other terminals handle coal (12M m² annual capacity), ore (in partnership with Ferrexpo) and fertiliser, and there are modern container and ro-ro terminals. That still leaves space to develop facilities along another 1,300m of potential quayline.

Developing the port's status as a private operator at the end of the communist era proved challenging, because the country's administration was devoid of legislation and business practices. There were no laws to regulate private terminals and no-one could comprehend that a private terminal could succeed. The Ministry of Transport paid little or no attention to the private sector, concerning itself solely with the development of state ports, while the state-owned ports believed that they alone should have the right to carry out stevedoring.

In its formative years, TIS found it extremely hard to get government officials to address ongoing issues. As the company developed and started to be recognised as a successful private stevedoring business, these challenges increased, because it was now seen as being in competition with the state ports. But these challenges only made the business stronger.

TIS has placed particular emphasis on developing its rail freight connections and has doubled capacity by investing in more than 6km of main line railway. The new link was finally commissioned in July, increasing Port of Yuzhny's rail capacity from 25M tonnes to 30M tonnes. This project was the first example in Ukraine of a public-private partnership arrangement for railway infrastructure development.

Ukraine has one of Europe's densest rail networks, which, if properly utilised, could present major opportunities for regional development – if the gauge problem can be overcome. Most of western Europe's railways are of standard gauge, with trains running on rails 1,435mm apart, but Ukraine's railways are built to the 1,520mm Russian broad gauge, which is also used in neighbouring countries such as Finland, Mongolia and Kazakhstan, as well as Russia itself. To transport goods by rail from a broad gauge line on to a standard gauge network requires either transshipment or the use of special adjustable-gauge rolling stock and gauge-changing railway infrastructure.



‘Ukraine’s railways could present major opportunities’

Andrii Kuzmenko
Container terminal director, TIS

Photo: TIS

Photo: Shutterstock/TIS

TIS maintains that, with a little adjustment to the region's railway facilities, it will be possible to reach Katowice, in southern Poland, thereby establishing a north-south corridor for bulk goods and containers towards the Black Sea for import or export. This route would provide a greener alternative to the present reliance on sailing around Europe and sending containers by road from Hamburg. One of TIS's goals is to handle daily block trains to various destinations – from Moscow and Yekaterinburg, to Riga and Warsaw.

The container terminal is TIS's youngest offspring and opened in early 2010 – but has not handled any boxes. Container volumes in Ukraine have fallen twice since the economic crisis, so the terminal has been put to use receiving inbound bulk cargoes such as coal and outbound pig iron and steel. Handling is effected by three ZPMC super-post-Panamax ship-to-shore gantry cranes with grabs and a newly installed quayside conveyor belt. The container terminal provides some much-needed deepwater capacity for the coking coal supply chain and last year handled in excess of 1.1M tonnes of coal alone.

Two other projects are in the pipeline. The first is a 20,000m² cold storage facility and the other is a 4km² industrial park, both of which will be built next to the container terminal. The cold store is being developed in partnership with a local importer of frozen seafood and will cater for the short- and long-term storage markets of frozen and chilled goods. It must be operational by 2013.

The industrial park is a project on a national, even international, scale and is a response to a trend of governments imposing import restrictions, which threaten producers' and manufacturers' access to overseas markets. TIS's solution is to reduce the geographical distance between

production and consumption by moving certain assembly, processing, repacking and distribution facilities closer to the consumers. The company envisages the industrial park acting as a point of entry to Ukraine, opening the way for a variety of goods to reach a market of 100M consumers across Russia, Central Eastern Europe (CEE) and the Black Sea countries. TIS believes its location to be one of the best available for this type of facility because of its depth, availability of additional surrounding land and proximity to the new container terminal. A single customs control zone could also be developed at the facility, which would simplify movement of goods and eliminate the need to cross public roads.

At the moment, TIS does not require any immediate investment, neither is it looking to benefit from land speculation. Its priority is to find an experienced partner that shares its logic to work together on project implementation. Key partnerships have already been established in other CEE countries – notably in Kaliningrad and Riga – that wish to pursue the same development plans.

TIS maintains that the region has the potential to support industrial parks to serve the Ukrainian, Russian and EU markets. The targets may appear ambitious, but TIS believes that a long-term vision is preferable to short-term benefits. Jumping from zero to 12.2M tonnes in 17 years was the first step in its development. The company has now set its sights higher and aims to achieve a 15M tonne-throughput in 2011. **PH**

More info: www.tis.ua/en



Dolphin-free berthing

Automated mooring systems can help reduce accidents and injuries, boost quay capacity and speed vessel turnaround, but are they worth the investment? **Stephen Cousins** reports

Sea conditions are harsh at the Utah Point iron ore loading facility in Port Hedland, Western Australia. Located in a narrow harbor neck, it is a place of fierce tides where hydrodynamic forces from passing ships can suck vessels from their moorings. The port looked to technology to find a more robust and reliable mooring solution.

Getting more capacity out of restricted quay space was an important consideration too, said John Finch, harbor master at Port Hedland Port Authority. "The facility was restricted in terms of space and we had to look at ways to gain capacity for larger vessels, as well as improve productivity and aid the safety of crew and dockside personnel."

The port opted to install 14 Cavotec MoorMaster

MM200B vacuum-based automated mooring units along the quay. Activated with a simple push of a button, either on the bridge or via a remote control on the dock, its mooring pads use suction to grab or release vessels quickly, thereby eradicating the need for mooring lines or related dockside personnel.

Turnaround times improved immediately, said Finch: "The average time to attach is less than 60 seconds compared with 30–40 minutes using a conventional mooring arrangement, and releasing ships takes just 20 seconds... We can berth vessels up to 266m length overall on a 270m-long berth, which means considerable extra throughput. MoorMaster enabled us to turn a Panamax berth into mini-Cape berth."

Cavotec's system is one of several automated and semi-automated mooring systems available to help ports boost efficiency, reduce vessel time in port and increase mooring capacity. Mooring alongside is one of the most dangerous marine operations and such systems help prevent vessels from breaking loose from their moorings, reduce injuries from manhandling of ropes and reduce the number of people needed at mooring stations both ashore and on board.

The most appropriate choice of automated system for a port will depend on each terminal's needs, the types of ships that call and operational requirements such as time schedules or the level of steadiness needed for support ramps and manifolds.

Some systems can be expensive, but perhaps no more so than conventional mooring arrangements, said Walter Vervloesem, chairman of the Independent Marine Consultants and Surveyors (IMCS) group of companies. "Conventional mooring requires human

MoorMaster automated mooring unit at Port Hedland utilises space to its best advantage



Photo: Cavotec

Left: EasyMoor installed at Port of Dover

Right: Shore Tension has been developed by Port of Rotterdam and Delft Technical University



Photo: Trelleborg



Photo: Shore Tension

resources, training of shipboard crew and shoreside personnel and expensive equipment such as winches, bitts on the ship, bollards on the quay and mooring ropes that all need to be installed, maintained and inspected," he explained. "In many cases, several tugs are required to moor, cast off and also keep vessels alongside during high wind or heavy weather."

Vervloesem suggested that ports need to consider:

- user-friendliness for shore staff and shipboard crew
- the mooring time and number of people needed on board and on shore for mooring, plus training
- the use of tugs and ships' engines, which affect costs and emissions in port
- the system's reliability in terms of breakdowns, maintenance, steadiness in relation to wind, waves, current and loading/discharge operations
- crew exposure to safety hazards and personal injury (shore personnel and shipboard crew)
- and the equipment's installation time.

Cavotec's MoorMaster is an automated system that requires no mooring lines or dockside crew and minimal tug boat support. Its vacuum pads are recessed in, or mounted on, the quayside and manage tidal and draught conditions by sliding freely on vertical rails. The pads react to strong wind, passing ships and increasing loads during cargo operations. They can also perform step functions, automatically detaching and reattaching elsewhere on the hull when required. This versatility enables ships to moor or cast off in seconds instead of an hour using mooring lines.

The system does have some drawbacks, however. Quay modifications are required for foundations, power supply and connection to network fibres. For most ports, the technology will only be suitable for regular, predictable traffic, believes Ben van Scherpenzeel, mooring expert at the Port of Rotterdam. "It makes sense to use MoorMaster at a dedicated berth, such as a ferry terminal, but a large container vessel, for example, doesn't have a dedicated mooring spot so it won't get the full benefits of the system, unless pads are installed along the entire quay, which is too great an investment for your typical port or shipowner."

Scherpenzeel also warned that mooring without lines can become problematic in certain docking situations: "When a captain is docking between two vessels, once he's between them it can be very tricky to keep in position using just the main engine, which could cause an accident. He really needs spring lines

secured on the shoreside before he comes alongside."

Rotterdam Port Authority and Delft Technical University have developed a hydraulic system, Shore Tension, which Scherpenzeel said can go anywhere on the berth without needing installation or external power. It is secured to the ship's bollard and to the existing shore bollard, tensioned via a hydraulic mobile system to create permanent tension in mooring lines.

The technology proved its worth during a recent incident in Rotterdam's approach channel that saw *MSC Nikita* lose power to its mooring winches and almost capsize in a storm. Scherpenzeel explained: "The vessel was sinking and its mooring winches were useless, so we brought her alongside and kept her in position using a shore tension system."

A similar 'no-line' approach is used by Mampaey's berthing system, which employs magnetic pads and hydraulics to attach and release vessels. Suitable for ship-to-ship and ship-to-shore situations, it needs power only when coupling and decoupling. It measures vessel distance, speed and angle of approach information, gathered by two lasers positioned onshore and displaying it on either a large bridge-mounted LED display or on a PDA, pager or computer screen.

Another option is Trelleborg's Quick Release Hook unit, which allows a variety of ship types to berth at a single quay location. Lines can be released remotely via a dedicated console on the berth, in the control room or even wirelessly.

The company's latest development is EasyMoor, a modified version of the quick release hook, which allows a single dockworker to moor a vessel without having to handle the mooring line. It has been used in the UK ports of Dover and Portsmouth and has undergone trials in the USA. "It's a big step forward to improve safety and keep mooring crew away from any ropes under tension," said Simon Wilson, MD of Trelleborg Marine Systems. "Unlike vacuum-based technology, our multi-hook arrangement will cater to a range of different vessel types, with varying hull flatness and different deadweights."

The European Harbour Masters' Committee released its video *The Missing Link, Improving the mooring process* in September, which aims to address a lack of knowledge of factors affecting safe mooring. **PH**

More info: www.cavotec.co; <http://shoretension.com>; www.trelleborg.com; www.harbourmaster.org



The World Ports Climate Initiative is a series of projects and aims championed by members of the IAPH Environment Committee to reduce ports' greenhouse gas emissions and improve air quality. Any port can get involved. **More info: www.wpci.nl**



Photo: Joachim Affeldt

Results of tests on *Margrethe Mærsk* published recently showed the switch to low-sulphur fuel cut its SOx emissions by up to 90%

ESI sulphur baseline adjusted

Changes are on the way for the Environmental Ship Index (ESI) website – <http://esi.wpci.nl> – all with the aim of stimulating the use of cleaner fuel.

In calculating the sulphur oxide (SOx) element of the ESI score, a sulphur content of 0.1% has been defined as the baseline below which extra points are given.

This value will be raised to 0.5% as from 1 January 2012 to promote in a very visible way the use of low-sulphur fuel and reward its use accordingly.

The ESI Working Group decided on this change at its meeting in September to address the fact that the current cutoff values for SOx concentrations in marine diesel oil/gasoil are governed by different requirements in different regions. In Europe they include

the sulphur emission control area (SECA) and EU Directive 99/32, which applies to inland waterways and ships at berth; in the USA they include its emission control area

(ECA), California Air Resources Board (CARB) requirements, and the individual requirements of San Pedro Bay, where the ports of Los Angeles and Long Beach are

located. All are different and will show no convergence before 2015, which therefore makes it complicated to carry out meaningful calculations. This is the major reason for changing the sulphur baseline to 0.5%.

In response to shipowners' requests, the submission of the data needed was simplified on 1 October by making standardised upload possibilities available.

The working group also welcomed the IMO's decision in July to make the Energy Efficiency Design Index (EEDI) mandatory for new ships and the Ship Energy Efficiency Management Plan (SEEMP) mandatory for all ships.

The ESI already recognises the importance of the SEEMP by rewarding its presence with bonus points, and an increase in this

Good results of emissions test

The USA's National Oceanic and Atmospheric Administration (NOAA) has released details of an emissions test conducted last year off California with the 115,993dwt container ship *Margrethe Mærsk*. The test showed that by switching to low-sulphur fuel at the same time as reducing vessel speed, air emissions can be cut by as much as 90%.

A Californian law in place since 2009 requires ships to switch to cleaner fuel as they approach within 24nm of the coast. The state also exhorts operators to participate in a voluntary speed reduction programme.

NOAA researchers found emissions reductions "even where none were expected, meaning even greater reductions in air pollution, and associated respiratory health effects in humans, than regulators originally estimated", NOAA said in a statement.

The test results are encouraging given that IMO will require emissions reductions starting in the coming year, and emissions control areas in Europe and North America will require operators to cut sulphur emissions by 10% by 2015.

Notable numbers

35%

of world tonnage has to ratify Ballast Water Convention

20

seconds to release a ship from an automated mooring

bonus is being considered. The feasibility of including the EEDI within the ESI score is being studied as well, although the working group would have preferred that the IMO should have already reached a decision on the Energy Efficiency Operational Indicator (EEOI).

SEEMP is intended to assist the shipping industry make cost-effective and environmentally sound improvements to their operations, whereas the EEOI is designed as its monitoring tool and benchmark.

Meanwhile, Rotterdam, which is one of the ports that originally developed the index, has announced that as part of its ESI programme it will be rewarding the 25 cleanest deepsea vessels that call at the Dutch port in the 2011–2012 period.

The port authority noted that, worldwide, 375 seagoing vessels have been recorded in the ESI: "This means that all these vessels score better than the statutory norm.

"However, the score required in order to qualify for the discount – 31 points – appears to be on the high side for the time being," it stated.

The port pointed out that only six ships have attained that score and just one of them, the vehicle carrier *Morning Carol*, has visited Rotterdam. The call makes this ship eligible for a discount of an estimated 5% on its port dues.

Port of Rotterdam Authority does not want to alter the 31-point limit but, in a joint move with the Port of Antwerp, it has proposed that in the coming year it rewards the 25 vessels calling at the port that are classified as the most sustainable according to the criteria of the index.

Ballast regs move closer to ratification

The Ballast Water Management Convention has inched further towards the ratification target required for it to become global law. In September, Mongolia and Palau became the latest states to endorse the convention, which is intended to prevent harmful invasive aquatic species being carried in ships' ballast water from one region to another.

However, the convention will only come into force 12 months after 30 countries representing 35% of world tonnage ratify it. The two latest signatories means the 30-country target has been met, but not the tonnage target. This now stands at 26.44%.

Once it comes into force, the convention will compel newbuilds delivered after 1 January 2012 to be fitted with type-approved ballast water treatment systems and ships built since 2009 to fall in line by their next drydocking. Eventually, most vessels above 400gt will be affected.

The IMO agreed the convention in 2004, but it has already missed several planned phase-in dates. "A state may, of course, make its provisions national law and apply them to its own-flag ships," pointed out IMO spokesman Lee Adamson.

David Tongue, International Chamber of Shipping director of regulatory affairs, is optimistic that the tonnage target will be met early in the new year. "It would be a prestigious thing to bring it into force, so there are a number of states now looking around that percentage – we only need another 8.5%," he told *P&H*.

Among the issues holding up full ratification, Tongue identified lack of equipment. "I think there's 17 [to] 18 systems now which have received type approval, and a number coming through.

"The big problem with the convention, as it stands, is the dates are fixed – the moment the convention enters into force, those ships that are required to have equipment fitted must have it fitted and working."

Countries will increasingly resort to regional and national action to protect their waters unless the convention enters into force quickly,

Tongue warned. For example, he said, in the USA "the main legislation is coming through, I understand in line with IMO. However there's a clause in that which says they're going to review it in a short time, and if 100 times more stringent is possible then they will require that."

As *Ports & Harbors* went to press a single nationwide ballast water discharge standard was approved in the USA that conforms to the performance standards set by the IMO. The regulation still has to pass a vote in the Senate before it can be signed into law.

Species that have become a serious infestation problem in areas where they are not indigenous include the North American comb jellyfish (top) and the Chinese mitten crab (below). It is likely that countries will resort to action at local or regional level to protect their waters



Photos: Dreamstime

\$1.3M

funding for Port of Houston Authority to invest in cleaner-burning engines

0.5%

Environmental Ship Index's new sulphur baseline

EU plans a new package for ports

The European Commission has given notice that it intends to make a fresh attempt to reform the competitive environment in European Union ports. Despite the failure of two previous attempts at reform in recent years, the commission has indicated that it will present a new package of measures in 2013.

Siim Kallas, European Commission vice-president responsible for transport, who made the announcement during a visit to the Port of Rotterdam on 8 September, said that the new package was designed to "help ports remain competitive and support the huge potential for growth in the port sector".

Before presenting it, Kallas said, the commission would organise a conference on the future of European ports in 2012, consult stakeholders and carry out a detailed impact assessment of the

Photo: European Commission

The package will create a more competitive environment

Siim Kallas
VP transport, European Commission



measures under consideration. The proposals would then be brought forward in 2013.

Kallas highlighted three main areas that need to be addressed at the presentation: ports services; cutting more red tape in ports; and, port financing.

He indicated that the package would include measures to create a "more open and competitive environment" in port services that

would reduce administrative holdups and make port financing more transparent.

Kallas's announcement created considerable initial surprise in European port circles, where the EC's failure to win support for earlier port packages in 2003 and 2006 are still remembered. The European Sea Ports Organisation (ESPO) recalled, however, that the EC had given notice that it was

planning a port policy review in the transport policy white paper it issued earlier this year.

ESPO chairman Victor Schoenmakers said that the organisation was ready to have an "open-minded dialogue" with the commission about the new package but warned against a 'one size fits all' regulatory approach, which past experience had shown did not work.

"We especially need legal certainty to ensure a stable investment climate in our ports," Schoenmakers said. "This can best be achieved through soft law measures combined with a case-by-case policy where manifest problems exist."

This seemed, however, to run directly counter to the thinking of Kallas, who said in Rotterdam that the soft law approach needed to be re-evaluated.

More info: <http://europa.eu/>

Container weighing arguments stack up at IMO

Calls to impose stringent mandatory controls on the weighing of freight containers were received favourably in September at an IMO meeting. The IMO Sub Committee on Dangerous Goods, Solid Cargoes and Containers debated the issues at its latest session, which were raised in a paper jointly submitted by the International Chamber of Shipping (ICS), the World Shipping Council (WSC) and the Baltic and International Maritime Council (Bimco).

These bodies argue that there is a "pressing need" for the International Convention for the Safety of Life at Sea (SOLAS) to be amended to require verification of the actual weight of containers before they are loaded on to a ship. Such an initiative, they point out, is backed by many IMO member states as well as by bodies representing the world's seafarers, masters and dockworkers.

The subcommittee requested that the three shipping industry organisations submit a "definitive version" of their proposal, taking into account comments made at the session,

in time for discussion at the next session early in 2012.

John Stawpert, ICS senior adviser, was delighted with the outcome. "Safe to say, nobody spoke against the proposal. You would need some sort of certification procedure, and it wouldn't need to be particularly complicated to say this weight is accurate at the point of stuffing. You would then have throughout the supply chain the options to double-check that. The simplest way is to put it over a weighbridge. It's not rocket science."

The proposals are driven by disappointment that ICS/WSC best practices guidelines, which IMO last year recommended that flag states make a carriage requirement, have so far had little discernible effect on shippers providing incorrect container weights.

Joint industry research estimates that 10,000 containers, often carrying dangerous and polluting goods, are damaged each year, including between 3,000 and 4,000 lost overboard. Containers with misdeclared weights, whether overweight or

underweight, put at risk the ship, the crew and port workers.

Container stack interaction can occur as a result of instability in the rows arising from excessive weights or wrongly applied vertical weight distribution, Bimco senior marine technical officer Peter Lundahl Rasmussen warned. "The normal loads on container stacks and rows could be amplified by the ship's movement and may thus exceed the safe working loads or breaking loads of the cargo securing gear at motions that are otherwise considered acceptable. Also stowing partly loaded containers at the bottom of a stack and an overweight container at the top could lead to collapse of a stack."

IAPH has also been following the container weighing debate and at its World Ports Conference in Busan in May agreed a resolution that called for IMO to require shippers to declare accurate weights for, and pack correctly, goods being transported in containers.

More info: www.iaphworldports.org

Notable numbers

\$12Bn

the estimated global cost of piracy

10%

rate at which China's capacity is growing per year, and overcapacity expected by 2015

Be part of the global ports' community with an IAPH membership



The International Association of Ports and Harbors (IAPH) is a global alliance representing over 200 ports in 90 countries. Together, IAPH member ports handle over 60% of the world's sea-borne trade and nearly 90% of the world's container traffic. It is a non-profit-making and non-governmental organisation headquartered in Tokyo, Japan.

IAPH provides a platform to develop and foster good relations and co-operation among the world's ports and harbors through forums where opinions and experiences can be exchanged. It promotes the role ports play in waterborne transportation and in today's global economy.

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A chance to influence decisions at IAPH's technical committee meetings

Networking opportunities at IAPH's meetings and conferences, plus reduced registration fees for these events

To apply for membership please email info@iaphworldports.org or visit www.iaphworldports.org



'World Peace through World Trade – World Trade through World Ports'

European ports launch PCS association

Freight forwarders and the major shipping lines now think globally and would ideally like to see the creation of one system linking all of Europe's port community systems (PCSs). The reality of such a network is still a long way off, but a first step was made with the launch in June of the European Port Community Systems Association (EPCSA), its first chairman Pascal Ollivier told *P&H*.

"We are 27 countries in the EU and each one does business differently, so a port single window for Europe is still just a dream. However, we want to start harmonising the way procedures are managed on an EU level. We can do that by holding meetings between EPCSA, the industry and the European Commission [EC]," he explained.

He said the PCS network was still in its infancy even in Europe and at present there was very little interconnectivity, even between



Photo: Port of Rouen

Rouen is connected to Le Havre and Paris by France's only PCS network

ports nationally: "For example, there are 10 PCS sites in France, yet only between Le Havre, Rouen and Paris on the River Seine is there good connectivity. That's because all the PCS systems were developed only to respond to local needs and local port community perspectives, rather

than with a global perspective."

He explained that the two main aims of EPCSA were to harmonise the way e-freight is delivered throughout Europe and to lobby the EC on any new directives being formulated by the two Brussels directorates that are of direct relevance to European ports and

their community systems: DG Move (transport) and DG Taxud (customs).

Last year, the European Commission held its E-Maritime Initiative public consultation exercise, which highlighted some of the structural problems that are hindering the development of Europe-wide maritime information systems. The consultation found that the sector was still too fragmented, partly for the same reasons put forward by Ollivier.

"There is a general recognition that the lack of common reporting templates or data structures, the lack of established procedures and the lack of data sharing and interoperability causes unnecessary reporting duplications, wastes resources and increases the probability of errors," the report on the consultation stated.

Ollivier added: "Before 2012, the EU will issue its first communiqué on E-Maritime and how it sees the way forward."

IMO updates its guidance on armed guards

IMO's Maritime Security and Piracy Working Group in September updated its recommendations to flag states for privately contracted armed security personnel (PCASP) following recommendations released in May. The guidelines, which are not intended to replace Best Management Practices (BMPs), include recommendations on selection and vetting of PCASP, their relationship with the master and management of firearms. The recommendations have been well-received by shipowners, particularly as flag states are increasingly approving use of armed security personnel on ships under their flags (see *P&H*, Sep/Oct, p43).

In September, India's shipping ministry ruled that Indian-flagged ships can deploy armed guards. The ministry issued guidelines for merchant ships transiting the piracy high risk area of the Gulf of Aden and the Arabian Sea that wish to deploy armed guards. Although it does not formally endorse the practice, the ministry stated that "shipowners may

deploy armed security guards" subject to various conditions. It pointed out that the roughly 35% of ships transiting the piracy hotspots that deploy armed guards are not being hijacked by pirates.

North of England P&I Club is developing a vetting programme for armed anti-piracy guards to help protect owners against legal and operational pitfalls. The scheme would cover the seven armed maritime security providers most frequently used by its members. North intends to send questionnaires to the security providers shortly, said senior claims executive Joanna Clark. The goal is to make sure that security contracts comply with P&I cover and that members obtain the best available service.

At present, shipowners have been complaining that it is a cumbersome process to select an onboard security team, because there is no recognised accreditation or quality standard for such guards. Clark stressed that owners must

still apply BMPs even when armed guards are deployed.

Commenting on the September IMO meeting, Peter Cook, director of the Security Association for the Maritime Industry, said: "The IMO is making great progress towards providing a structure for the maritime security industry. Importantly, the IMO has made recommendations and provided guidance for the use of armed security personnel, which is a necessary step towards creating a relevant structure for the industry to work within."

The International Chamber of Shipping has also issued a statement in which it says that it appreciates "the efforts of IMO member states and military navies to protect merchant ships and their crews from Somali pirates, but is deeply concerned that little real progress is being made towards developing any radical new strategy that will deliver immediate results".

See also Peter Hinchliffe's comments in Open Forum, p 10.

Notable numbers

10,000

the number of tanker terminals targeted by OCIMF's MTIS

10%

percentage of fuel savings under Tier 3 standards at Port of Houston

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Next year's programme for *P&H*

Has your port recently undergone a development which you want to promote? Could another port benefit from your professional experience?

Ports & Harbors is part of your IAPH membership and provides articles of interest to port professionals, keeps members abreast of IAPH activities and offers them the chance to share their experiences and insight with other ports.

The editorial team is pleased to consider any article ideas that you may have. Perhaps you can provide a case study on a recent port development or training initiative. Or maybe your port is working with government to extend its hinterland links, or has been privatised or merged with another company. If so, please tell us about it.

In 2012 we have a mix of technical and managerial themes planned, as follows:

January/February issue

Cover feature: Port and city

Feature: Hydrographics

Feature: Insurance

March/April issue

Cover feature: Europe and Asia regional focus

Feature: Vessel traffic management

Feature: Port design and planning

May/June issue

Cover feature: Asia and Oceania regional focus

Feature: Port cranes and yard equipment

Feature: Dredging and contaminated sediment

If you have any ideas for articles that you would like to discuss with the acting editor, please email Jem Newton at jem.newton@ihs.com.



Visit Jerusalem's many historical sites

Next year in Jerusalem

Israel Ports chief operating officer **Dov Frohlinger** sets the scene for next May's Mid-Term Conference in Jerusalem.

The Israel Ports Company (IPC) will be hosting the 2012 IAPH Mid-Term Conference in Jerusalem on 21–24 May 2012. Israel, located at the geographical crossroads of Europe, Asia and Africa, is proud to host the conference that aims to connect the major ports of the world through the common platform created by IAPH, sharing information and ideas with the goal of creating a stronger port logistics framework.

The IPC was created in 2005 as part of Israel's port reform programme. The company is responsible for the management and development of Israel's port infrastructure, both physical and informational.

Since its creation the IPC has completed two new container terminals, one in Ashdod and one in Haifa, with two more terminals planned for the next decade.

In addition to operating infrastructure, it is developing the port hinterland and has crafted initiatives to improve Israel's overall logistics structure.

The IPC has also been active in developing port technology and has received three IAPH awards in the past six years for its operational and security applications. Among

the projects it has developed recently is a mobile ship's crew security system used at all Israel's ports to verify mariner identity using biometrics, scanning technology and security profiling.

The company has also developed an automated paperless gate with electronic messages pre-authorising arrival at the gate for both export and import cargo. A nationwide maritime community system is in operation, used by the whole cargo community for all movement transactions.

The 2012 Mid-Term Conference will be held at the Inbal Hotel in the heart of Jerusalem. The standard format of the conference will be slightly modified to enhance the programme. The professional segment will feature presentations on global trade trends, their impact on port infrastructure requirements and the funding of such development projects. Also planned are other sessions covering the evolving role of the port authority, capacity measurement, customer service, port-community relations and environmental issues.

In addition to the standard presentations, a workshop session will be held during which conference participants will be able to decide which session to join. Sessions include a discussion

on how to prepare a strategic master plan, how to measure port contributions to a regional economy, tendering of engineering and construction projects and a special session on advancing the role of women in the port industry.

As is traditional, the various technical committees of the IAPH will meet on the first day of the conference. The organisation intends to publish the agenda of the various committees on the conference website and open them to non-members.

In addition to the professional part of the programme, the IPC will be highlighting the host city, Jerusalem, spiritual centre of three monotheistic religions, Judaism, Christianity and Islam.

The social programme will include professionally guided tours to the holy sites, as well as other historic and cultural landmarks, so that visitors can follow in the footsteps of Biblical personalities and sense the background to many of the stories told in the scriptures.

Accompanying spouses can participate in the above events and a secondary programme is planned to enable them to learn more about Jerusalem in depth.

More info: dovf@israports.co.il; the special conference website should soon be available at www.iaph-jerusalem2012.com



New executive committee

The following seven members were elected as the new IAPH Executive Committee (Exco) on 5 September as a result of elections held by each regional board membership. The Executive Committee is the chief executive body of the association, responsible for directing the association and supervising the secretary general. For a line-up of all Exco members please visit www.iaphworldports.org.

Bisey Uirab

CEO, Namibian Ports Authority (Namport), Namibia



Photo: Namibian Ports Authority

Dov Frohlinger

Chief operating officer, Israel Ports Development and Assets Co Ltd, Israel



Photo: Israel Ports

Atsushi Fujii

Technical officer, Ports and Harbors Bureau, Ministry of Land, Infrastructure, Transport and Tourism, Japan



Photo: M.I.T. Japan

Martin Byrne

CEO, Port Nelson Ltd, New Zealand



Photo: Port Nelson

Nasreen Haque

Chairperson, Karachi Port Trust, Pakistan



Photo: Karachi Port Trust

Ashley Taylor

President, Point Lisas Industrial Port Development Corp Ltd, Trinidad and Tobago



Photo: PLIPDECO

Jerry Austin Bridges

Executive director, Virginia Port Authority, USA



Photo: VPA



Interact with IAPH on Facebook

IAPH joined Facebook, the world's largest online community, in June to create a platform for the association and its members to share their success stories and promote IAPH project initiatives to Facebook's 'social network' of nearly one billion active users.

IAPH recently scoured the Facebook landscape in an effort to connect, 'like' and become fans of every IAPH member organisation presently on Facebook. IAPH's Facebook community is still relatively small, but as stories from member ports and organisations are shared, the community of followers will grow.

"The Facebook community has been invaluable for us in creating a new channel of interaction with people and organisations worldwide," said senior communications director at the Port of Los Angeles (PoLA) and IAPH conference vice-president Arley Baker.

PoLA's Facebook site has 5,700 followers, noted Baker, who added: "It enables us to converse and share information with people on a very direct and personal level."

IAPH invites you to send photographs and news from your organisation so that they can be shared on Facebook.

You can do this by sending information to Hiro Nagai at the IAPH Secretariat: h_nagai@iaphworldports.org. If your organisation is already on Facebook, you can share notes, news and photos on our Facebook Wall at www.facebook.com/iaphworldports.

Port in profile

Name: Ashdod Port Company

Country: Israel

Type: Deepwater commodities port

Tonnage handled in 2010:

18.5M tonnes

Inbound commodities:

Steel, wood, agricultural products, grain, sulphur, coal

Outbound commodities: Steel,

agricultural products, quarried products



Photo: Israel Ports



Photo: Port of Antwerp

Delegates who attend the December meeting will have a chance to explore the Port of Antwerp from the water

Rendezvous in Antwerp

The Port of Antwerp is well advanced with its preparations to give members of IAPH's Africa-Europe Region a warm welcome to the city in December. The regional meeting will take place in the city's Port House from 7 to 8 December 2011.

Keynote speakers include IAPH president, Dr Geraldine Knatz and Port of Antwerp Authority chief executive Eddy Bruyninckx.

Details of the programme are

still tentative but will include four work sessions over the two-day period. On 7 December, the first session will be devoted to the World Ports Climate Initiative, with presentations on three of its components: carbon footprint management, onshore power use and the Environmental Ship Index. The resulting discussion will also cover some of the other WPCI components, including the latest project, LNG-fuelled vessels. The

second session will discuss logistics integration and how ports can play a greater role in global supply chains. The director of Antwerp's recently launched port community system (PCS) will also discuss the development of EU standards in relation to PCS communications.

On 8 December, session three will be devoted to formulating a waste policy for Europe and Africa and a discussion of possible solutions. The final session will

consider innovative methods to promote co-operation between ports, focusing especially on the marketing of ports.

Lunch will be served for those who wish on an optional boat trip around the port, leaving from Quay 62. During the day there will be a regional meeting for Africa and Europe, which all members are encouraged to attend.

More info: www.iaphworldports.org/IAPHEvents.aspx

Membership notes

The IAPH Secretariat is pleased to announce that the following members joined the association

Regular member

JadeWeserPort Realisierungs GmbH & Co KG

Address Kutterstrasse 3, 26386 Wilhelmshaven, Germany
 Telephone +49-4421-40980-20
 Fax +49-4421-40980-88
 Email jwp-hm@jadeweserport.de
 Website www.jadeweserport.de
 Representative Axel Kluth, chief executive officer

Website www.schneider-electric.com
 Representative Paccou Remi, programme director
 Nature of business activities Business development

Pacific Consultants Co Ltd

Address 1-7-5 Sekido, Tama-shi Tokyo 206-8550, Japan
 Telephone +81-42-372-6051
 Fax +81-42-372-6398
 Email hiroshi.shimada@ss.pacific.co.jp
yasuo.kannami@ss.pacific.co.jp

Associate members

Schneider Electric

Address 38 EQI Eybens, 38050 Grenoble Cedex 9, France
 Telephone +33-4768-22852
 Fax +33-4768-22664
 Email remi.paccou@schneider-electric.com

Website www.pacific.co.jp
 Representative Hiroshi Shimada, director
 Nature of business activities Planning, engineering and design, architecture, water and sanitation, environment, management consulting and others, infrastructure studies





The meeting considered ways to raise awareness of IAPH

Americas Regional Meeting

IAPH Americas Regional Meeting was held on 13 September in Seattle, USA, in conjunction with the 100th American Association of Port Authorities Convention. This commemorative event was hosted by Port of Seattle, which is also celebrating its bicentennial year (1911–2011).

The meeting, chaired by regional vice-president Bill Johnson, discussed, among other matters, IAPH's efforts to utilise social media to raise awareness of IAPH and the latest IMO action on

controlling air and sea environments through, for example, the Energy Efficiency Design Index, Ship Energy Efficiency Management Plan and the Ballast Water Convention.

IAPH president Dr Geraldine Knatz highlighted the fact that the organisation's international coverage and perspective would help us to expand membership in the Americas region, given the global perspective that IAPH offers its members.

More info: www.iaphworldports.org

Annual report 2010–2011

IAPH has just published its *Annual Report 2010–2011* in digital format. It highlights the major outcomes and activities of the association over the past year, such as the conference, technical committees and WPCI. The report is available at www.iaphworldports.org.

Visitors to IAPH office



From left: H Nagai of IAPH, K Shinohara and Jan Fransen of Green Award, Secretary General Naruse, H Tokui of IAPH

Jan Fransen and K Shinohara of Green Award Foundation visited the IAPH office on 28 August. Whilst visiting the Tokyo office

they discussed and exchanged views on current updates on the Environmental Ship Index of WPCI with Secretary General Naruse.

Dates for your diary

A selection of forthcoming maritime courses and conferences



November

- 15–17** TOC CSC Americas – Panama
www.tocevents-americas.com
- 18–19** Institute of Chartered Shipbrokers: Towards Sustainable Shipping – Chennai, India
www.icschennai.org/events.htm
- 23–24** Dredging and Land Reclamation Asia 2011 – Singapore
www.dredgingasia.com
- 24** Wave forces on vertical breakwater, seawalls and wave walls course – Oxfordshire, UK
www.hrwallingford.com
- 24–25** 6th Thai Ports & Shipping 2011 – Bangkok, Thailand
www.transportevents.com
- 27–30** PMAESA African Ports and Maritime Conference 2011 – Swakopmund, Namibia
www.pmaesa.org/apmc2011
- 30–1 Dec** 4th Annual Global Ports Conference 2011 – London, UK
www.informaglobalevents.com/event/Global-Ports-Conference
- 30 onwards** Fundamentals of Maritime Trade and Transport – distance learning
www.informaglobalevents.com

December

- 1** Marine Scour Course – Oxfordshire, UK
www.hrwallingford.com
- 5–16** Port Logistics – Antwerp, Belgium
www.portofantwerp.com/apec
- 7–8** IAPH Africa/Europe Regional Meeting – Antwerp, Belgium
www.iaphworldports.org
- 8** Ports & the Environment – Amsterdam, Netherlands
www.millenniumconferences.com

January

- 17–21** India Maritime Week – New Delhi, India
www.indiamaritimeweek.com
- 19–20** Shifting International Trade Routes – Tampa, USA
www.aapa-ports.org/Programs/seminarlist.cfm
- 26–27** 4th International Forum on Maritime and Port Risk Prevention (MARISK) – Nantes, France
www.marisk2012.com



Photo: Port of Antwerp

People, planet and profitability

Antwerp's CEO **Eddy Bruyninckx**, explains his port's sustainability projects and invites members to join him in Antwerp for the next IAPH regional meeting

As you read this publication the Antwerp port community is putting the finishing touches to its first-ever sustainability report. The report is unique because it is a joint project by all stakeholders in our port. It describes how people, planet and profit can be reconciled with each other in a commercial environment.

Over the past few years our port has repeatedly shown that economy and ecology can go perfectly well together. At the same time as the port was expanding to become the second-largest in Europe, areas for natural development were being created on the periphery of the commercial and industrial sites. The result is a network of ecological infrastructure of which we can be proud.

Our port aims to be sustainable in all aspects. The introduction of the WPCI Environmental Ship Index to our port earlier this year, whereby we offer discounts for environment-friendly ships, our plans for a large-scale windfarm on the left bank and a biomass power station on the right bank are only some of the recent initiatives.

Port of Antwerp's sustainability credentials start with its location deep inland, enabling cargo to be unloaded much closer to its final destination. Moreover Antwerp sits at the centre of a vast network of transport infrastructure that connects it to the hinterland. In recent years we have made maximum use of this advantage and continued to develop it. Our already excellent sea access was further improved last year thanks to the deepening of the River Scheldt. All of these elements combined make Antwerp the best and most efficient choice for customers seeking to set up sustainable logistics chains.

We are currently organising the IAPH regional meeting in Antwerp at the beginning of December. I look forward to meeting many members there so that we can once again swap experiences and ideas about the challenges facing us. And for those who cannot attend I will take this opportunity to wish you a satisfying end to the current year and a New Year full of exciting projects. **R&I**

“ Our port aims to be sustainable in all aspects ”

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