



# PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

**The robots are coming**  
The future of automated terminals

**The great Arctic thaw**  
Business opportunity or false hope?

**Taking on ballast water**  
What do the new rules mean for ports?

## Green revolution

Onshore power means more sustainable ports

# Make downtime a thing of the past.



Cavotec's innovative technologies enable ports worldwide to operate safely, efficiently and sustainably.

We manufacture automated mooring and shore-to-ship power systems, Panzerbelt cable protection systems, crane controllers, marine propulsion sliprings, power chains and connectors, radio remote controls, motorised cable reels and steel chains for the ports industry.

Cavotec is a global engineering group that manufactures power transmission, distribution and control technologies that form the link between fixed and mobile equipment in the Ports & Maritime, Airports, Mining & Tunnelling and General Industry sectors.

To find out how Cavotec can support your operations, visit [www.cavotec.com](http://www.cavotec.com) or contact [info@cavotec.com](mailto:info@cavotec.com)

 **CAVOTEC**  
Inspired Engineering





# 20

Cutting the cost of onshore power to make both port business and its environment more sustainable

Image: Shutterstock/  
iStockphoto/H Kidd

July/August 2012  
ISSUE 04 VOL 57

## REGULARS

**Comment:** Secretary General Naruse heralds the start of a new era for IAPH at the Mid-term Conference in Jerusalem **3**

**News:** Top ranking for New Zealand's Tauranga; arbitration breakthrough in Singapore; Haldia struggles with its draught **4**

**Open Forum:** The US Coast Guard discusses the recent measures taken to ensure safety and security in US ports **10**

**Cover Story:** P&H looks at the implications of more LNG-powered ships; cutting the cost of onshore power; what will opening up the Northern Sea Route mean for Arctic ports? **18**

**Maritime Update:** Ashdod and Los Angeles join ESI; IMO targets piracy; safer tankers mean longer dwell times **32**

**IAPH Info:** Jerusalem conference report and resolutions; new chair and vice-chair elected; MoU signed with ESPO **36**

**Last Word:** The chair of the Women's Forum explains the new body's objectives in an industry still dominated by men **40**

## FEATURES

**Gate automation:** Gate technology systems have taken on a new role of aggregating downstream data tasks **12**

**Robot terminals:** Ensuring the efficiency of the next generation of automated facilities needs an attitude change **14**

**Port finance:** Vietnam needs better planning and public-sector leadership to ensure successful PPPs for its new ports **16**

**Florida ports upgrade:** The US state is upgrading box ports, anticipating a lift from Panama Canal expansion **26**

**Taking on ballast:** A master mariner looks at the likely implications of ballast water management legislation **28**

**Rotterdam networks:** Benelux ports are starting to collaborate with ports in emerging economies as a way to secure their future growth and prosperity **30**







← **TRANSTEC 2012** →

**THE  
BIG PORTS  
&  
SHIPPING EVENT  
FOR RUSSIA**



**RUSSIA**  
**St. Petersburg**

★  
**October 2-4  
2012**

***FEATURING THE BIG PORTS DEVELOPMENT  
PROGRAMME OF THE RUSSIAN FEDERATION***

COMPETITION FOR PORT BUSINESS IN RUSSIA

THE CRUISE MARKET AND RUSSIA -  
EXPANDING THE HORIZONS

GREATER ECONOMY, GREATER  
EFFICIENCY - THE NEXT GENERATION OF  
SERVICE SHIPS

THE PORT CYBER WORLD

COMBINING THE INTERESTS OF PORTS,  
SHIPPING AND SHIPPERS

MODERNISATION OF PORT EQUIPMENT  
AND TECHNOLOGY

FACING THE ARCTIC & ICE CONDITIONS

WATCHING THE ENVIRONMENT,  
WATCHING THE CLIMATE



*Contact Dolphin Exhibitions:*

Tel: + 44 1449 741801 • Fax: + 44 1449 741628 • Email: [info@dolphin-exhibitions.co.uk](mailto:info@dolphin-exhibitions.co.uk)

← ★ →  
**[www.transtec-neva.com](http://www.transtec-neva.com)**



# PORTS & HARBORS

Official Journal of the International Association of Ports and Harbors

## PORTS & HARBORS

Published bi-monthly by the International Association of Ports and Harbors (IAPH), edited and produced by IHS Fairplay.

## PUBLISHER

**Susumu Naruse**  
Secretary General, IAPH  
info@iaphworldports.org

## EDITOR

**Penny Thomas**  
penny.thomas@ihs.com

## ACTING EDITOR

**Jem Newton**  
jem.newton@ihs.com

## SUB-EDITOR

**Stephen Spark**

## HEAD OF SALES

**Adam Foster**  
adam.foster@ihs.com

## DESIGN

**Roberto Filistad, Hannah Kidd, Karen Frazer**

## PRODUCTION

**Sarah Treacy, Elisa Hembry, Kriss Holliday and Martyn Buchanan**

## IMAGE SERVICES MANAGER

**Jo Agius**

## EXECUTIVE EDITOR

**G. Paul Gunton**  
paul.gunton@ihs.com

## EDITOR-IN-CHIEF

**Tony Slinn**  
tony.slinn@ihs.com

## ASSOCIATE EDITOR

**Aya Fujinami**  
IAPH  
ph@iaphworldports.org

## EDITORIAL & PRODUCTION

**IHS Fairplay**  
Sentinel House, 163 Brighton Road,  
Coulson, Surrey CR5 2YH, UK  
Tel +44 (0)20 8700 3700  
Fax: +44 (0)20 8763 1007  
Web: www.ihsfairplay.com

## SUBSCRIPTIONS

**International Association of Ports and Harbors**

Price Japanese ¥12,000 (US\$120 / UK£80 / €90) or per issue ¥2,000, postage included. Visa and MasterCard accepted or for Bank Transfer. You do not have to be an IAPH member to subscribe – contact the IAPH.  
7th Floor, South Tower,  
New Pier Takeshiba  
1-16-1 Kaigan, Minato-ku  
Tokyo 105-0022, Japan  
Tel: +81-3-5403-2770  
Fax: +81-3-5403-7651  
Email: ph@iaphworldports.org  
Web: www.iaphworldports.org

Printed by Warners  
Midlands plc, The Maltings,  
Manor Lane, Bourne,  
Lincolnshire PE10 9PH  
ISSN 0554-7555



## COPYRIGHT

© 2012 IHS. All rights reserved.

No part of this publication may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or be stored in any retrieval system of any nature, without prior written permission of IHS Global Limited. Applications for written permission should be directed to jem.newton@ihs.com.

Any views or opinions expressed do not necessarily represent the views or opinions of the International Association of Ports and Harbors (IAPH), IHS Global Limited or their affiliates.

## DISCLAIMER OF LIABILITY

Whilst every effort has been made to ensure the quality and accuracy of the information contained in this publication at the time of going to press, IAPH, IHS Global Limited, their affiliates, officers, employees and agents assume no responsibility as to the accuracy or completeness of and, to the extent permitted by law, shall not be liable for any errors or omissions or any loss, damage or expense incurred by reliance on information or any statement contained in this publication.

## ADVERTISEMENTS

Advertisers are solely responsible for the content of the advertising material which they submit to us and for ensuring that the material complies with applicable laws. IAPH, IHS Global Limited and their affiliates are not responsible for any error, omission or inaccuracy in any advertisement and will not be liable for any damages arising from any use of products or services or any actions or omissions taken in reliance on information or any statement contained in advertising material. Inclusion of any advertisement is not intended to endorse any views expressed, nor products or services offered, nor the organisations sponsoring the advertisement.

## THIRD-PARTY DETAILS AND WEBSITES

Any third-party details and websites are given for information and reference purposes only and IAPH, IHS Global Limited and their affiliates do not control, approve or endorse these third parties or third-party websites. Further, IAPH, IHS Global Limited and their affiliates do not control or guarantee the accuracy, relevance, availability, timeliness or completeness of the information contained on any third-party website. Inclusion of any third-party details or websites is not intended to reflect their importance, nor is it intended to endorse any views expressed, products or services offered, nor the companies or organisations in question. You access any third party websites solely at your own risk.

# A new era begins

Secretary General Naruse looks back at a successful Mid-term Conference

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



IAPH embarked on a new era at its Board Meeting in Jerusalem. The board unanimously adopted five resolutions (see p38 for details). They were to urge states to ratify IMO's Ballast Water Management Convention; to establish the IAPH Women's Forum; and to enter into an MoU with the European Sea Ports Organisation in addition to PIANC, the AAPA and OAS-CIP.

Most importantly, the board adopted new vision and mission statements plus the objectives needed to achieve that mission. The vision is "The Global Ports' Forum for Industry Collaboration and Excellence," while IAPH's mission statement is "Promoting the interest of ports worldwide through strong member relationships, collaboration and information-sharing that help resolve common issues, advance sustainable practices and continually improve how ports serve the maritime industries." A new IAPH logo is under discussion and will be officially unveiled in a few months' time.

A new technical committee has been created. The Port Finance and Economics Committee will assist ports in sharing information about financial and economic issues.

All the IAPH technical committees vigorously discussed many issues, including the latest developments at UN agencies and results of the studies being undertaken by each committee. A preparatory meeting of the IAPH Women's Forum exchanged members' views about promoting women in the industry.

“The conference was unforgettable”

views about promoting women in the industry.

The Port Forum was held within a thoughtful framework that encompassed contemporary themes and superb speakers. Together with social activities highlighting the historic city of Jerusalem, the conference proved to be an unforgettable event. I am sure all the participants returned home with excellent memories of both the business and social events. On behalf of the IAPH secretariat, I would like to express my deepest appreciation to our host ports organisation, the Israel Ports Development and Assets Co Ltd, and the government of Israel.

In the midst of economic uncertainty, we have to move forward. Taking their cue from the new vision and mission statements, the technical committees need to become more vigorous, collaboration with sister organisations will be strengthened, and women's position in the industry should be promoted. The association is determined to address the challenges that lie ahead for the global ports industry. **PH**



## Port updates

### NORTH & SOUTH DIVERGE

Growth prospects for containerised cargo handling in Europe are diverging, according to Global Port Tracker's *North Europe Trade Outlook*. Its authors, Hackett Associates and Germany's Institute of Shipping Economics and Logistics, forecast a 2.8% gain on the import side for northern Europe but only 1.4% for Mediterranean and Black Sea ports. The gap in exports will be even wider, with the northern side of the continent forecast to achieve 6.2% growth on outbound containers and a 0.5% dip for southern gateways.

### NEW SAFETY RULES

EU transport commissioner Siim Kallas committed the European Commission to presenting new safety rules for passenger ships before the year's end. He said the proposals would extend existing EU rules to domestic passenger ships built of materials other than steel, including certain smaller vessels, sailing ships and historic vessels, which are important to the tourism sector.

### TRANS-PACIFIC LID

First-quarter optimism that 2012 could see a turnaround in US Trans-Pacific trade is giving way to a more sober assessment that too much capacity chasing too little freight will keep a lid on a revival, despite predictions of a strong peak shipping season. Economic data shows that US unemployment remains too high, bank credit is tight and fuel prices are continuing to rise, said Robert Sappio, managing director of consultancy Alvarez & Marsal.

### DUTCH ONSHORE POWER

On 13 June 2012, Dutch infrastructure and environment minister Melanie Schultz van Haagen activated the first shore-based power connection for sea-going vessels at the Stena Line terminal in Rotterdam. Stena Line ferries will now obtain their electricity from the mainland and no longer have to run their engines for power. This investment will improve the air quality considerably in the immediate vicinity of the ferry terminal.



Photo: Port of Tauranga

Tauranga: benefited from a strike at Ports of Auckland

## Tauranga's star in the ascendant

New Zealand's best-performing port, Tauranga, has been a NZ Stock Exchange star for many years. Its shareholders – including its 55% owner, the regional council – will be delighted with a June year-end result that is confidently expected to show record results for profit and cargo including a container volume that may well have doubled from 590,506teu last year to more than 1M teu, striding ahead of the 870,000teu registered by Ports of Auckland (POAL).

It is to POAL that Tauranga owes

much of its increased business.

The latter was registering volume increases on its own merit, having secured six new container services in the past year, but its 2011/12 results will also reflect substantial container volume outflow, worth an estimated NZ\$30M, from Auckland to Tauranga as a result of protracted industrial action at POAL from late last year. That includes business lost from Maersk and Fonterra, NZ's largest exporter. Considerable container volumes were diverted from Auckland to

Tauranga while the strikes were on.

Port of Tauranga's CEO, Mark Cairns, admitted that the container deluge stretched his port to capacity and beyond. At the height of the POAL dispute in March and April this year, Tauranga was handling some 20,000teu a week, double its normal volume. "An NZ\$150M capital expenditure programme in place since late 2011 will bring on significant tranches of new capacity, but we could never have foreseen or been prepared for what would happen at Ports of Auckland," he said.

With a few measures introduced to cut congestion and increase handling speed, Tauranga coped. While negotiations continue, POAL's container terminals are back in action and many shipping lines have reinstated their Auckland calls, easing congestion at Tauranga. Cairns paid tribute to his workforce: "I am so proud of my team here; we handled this volume increase with largely the same size labour resource."

As a landlord port contracting out stevedoring, Tauranga's labour costs are said to be one-third of POAL's while productivity is far higher. Its Sulphur Point box terminal is ranked seventh in the world for crane productivity. Cairns praised his staff for their 'can do' approach. "We have a modern, well-designed container terminal but I attribute 80% at least of our productivity rating to the culture here: that everyone wants to say 'yes' rather than 'no' to a customer."

## Clarification

Dear Sir,

### ***"Maldives seeks outside investment"*** **(P&H May/June 2012, p6)**

We are extremely saddened to read from the above mentioned article that you made mention of a presidential coup in the Maldives earlier this year. The allegations are false, for we did not have one. We had an official resignation of the then President and as per our constitution the Vice President took the oath as President. Such false, unfounded reporting would impact on the integrity of a report in an Official Journal of the International Association of Ports and Harbors.

Maldives has been a member of the Association for more than

20 years, and we have fully participated in most of the activities of the Association.

Maldives Ports Limited is *not* 'taking a wait and see approach'. Our port development plans are going ahead as planned. As CEO I would appreciate if you could make the correction in the next issue. Should you require more information on any port development or any matter, please feel free to email us, we would be glad to clarify your doubts and queries. But we would most sincerely request stop the publishing of false information about Maldives.

Kind regards

**Chief Executive Officer**  
**Maldives Ports Limited**

## ECA's shortsea challenge

A bulk operator has confronted lawmakers with the financial realities for US shortsea shipping of stricter marine fuel emissions regulations. They will take effect on 1 August when the use of 1% sulphur fuel will be mandated within 200nm of US shores – and on 1 January 2015 that limit will plunge to 0.1%.

At a session of the Maritime Subcommittee of the US House Transportation and Infrastructure Committee, Paul Cozza, president of Massachusetts-based CSL International, said that the 1% sulphur requirement for marine fuel used by vessels in the North American Emissions Control Area (ECA) will increase operating costs by “millions of dollars”.

Cozza estimated that, as a shortsea coastwise carrier that operates 90–95% of its voyages wholly within the ECA, his company's fuel costs would increase by 5% this year. Those costs will increase as much as 50% in 2015, he predicted, saying this could “trigger a modal shift, causing an unintended

increase in land-based congestion and emissions that far exceed current shortsea emissions”.

Cozza asked Congress, the US Environmental Protection Agency and the US Coast Guard to consider adjusting the 0.1% requirement to exclude less-polluting vessels of 20,000hp or less that operate between 50nm and 200nm of the coastline.

Introduction of the ECA has spurred Miami's cruise industry to lobby for more leeway. However, one shipping group operating inside the ECA has been quiet: Jones Act coastwise petroleum carriers. Bob Lintott, MD of ISOBunkers and chairman of IBIA, explained why at this year's Connecticut Maritime Association conference. “In the US, tugs burn gas oil,” Lintott said. “The US has managed for many years to have lower ship-induced NOx, SOx and PMs along its coasts than many other industrialised countries.” He ascribed this benefit to a combination of Jones Act manning plays and the US gas-oil distribution system.

## Breakthrough for Singapore

The Baltic and International Maritime Council (BIMCO) plans to include Singapore among the arbitration venues on the electronic version of its contracts. Deputy secretary-general Søren Larsen told *P&H* that the move recognises Asia's increasing influence in shipping. He said: “Many shipping contracts are executed in Asia, so we feel it's time to include Singapore as part of our standard dispute resolution clause.”

The development will place Singapore alongside London and New York as arbitration venues in the electronic version of BIMCO's contracts. Parties are also entitled to nominate a free option. Many BIMCO contracts are executed through the council's internet document editing application.

BIMCO has asked the Singapore authorities to draft the wording for the dispute resolution clause. These will then be presented to BIMCO's Documentary Committee for final approval.

London will remain the default arbitration venue if the parties do not fill in a choice on the forms. “London is, by far, still the most used arbitration centre,” explained Larsen, who noted that it accounts for 70% of global cases.

Singapore Maritime Foundation

board member Henry Mytton-Mills, who chaired the committee that drafted the Singapore Ship Sale Form, told *P&H*: “This development is testament to Singapore's growing prominence as a key maritime arbitration hub and its recognition by the global maritime community.”

Singapore Chamber of Maritime Arbitration's executive director, Lee Wai Pong, said: “Two to three years ago, having Singapore among arbitration venues on BIMCO contracts would have been unthinkable. It is a seminal moment for us in the industry to reflect on how far Maritime Singapore has come, that we are on the fringes of being accepted internationally in contracts.”

Larsen said: “There are a number

of appropriate arbitration centres other than London and New York. Singapore has proven to be an appropriate venue in Asia, with sufficient arbitrators to handle sophisticated disputes and its laws are based on English laws.”

Chris Lowe, of law firm Watson, Farley & Williams' Singapore office, agreed: “Singapore's breakthrough is not an overnight development, but a reflection of market trends and an endorsement of the fact that maritime players are now recognising Singapore as a leading jurisdiction for arbitration.”

Adding that it was now possible for other Asian cities to request an inclusion in BIMCO contracts, Larsen suggested: “I am sure Hong Kong and even Shanghai could come forward.”

“It's time to include Singapore in contracts”

**Søren Larsen**  
Deputy SG, BIMCO



Photo: BIMCO

## Port updates

### SHAPE UP, PORTS

APM Terminals' head of project implementation, Søren Sjøstrand Jakobsen, told delegates at the Future Ports conference in Stockholm that higher productivity to meet customer demand is critical. Close to 80% of the new box ship capacity entering service in the next couple of years will be of super-post-Panamax size. Shipping lines cannot afford these vessels to remain in port for days, he said.

### NEW REEF ROW

The battle between Australia's federal government and the Queensland state government over port development and its impact on the Great Barrier Reef is intensifying. Prime Minister Julia Gillard has written to Queensland's premier, Campbell Newman, criticising approval of the Alpha Coal project in the Galilee Basin without proper assessment of the potential impact of the mine and associated port infrastructure on the Great Barrier Reef.

### CAI MEP HOLDS UP

Fewer vessels are calling at the Vietnamese port of Cai Mep, but cargo volumes are not dropping, Steen Davidsen, general director of Cai Mep International Terminal, told *Ports & Harbors*. “The reduction in calls has indeed taken place, but it has meant that the current calls carry bigger volumes, so it is not that Cai Mep is seeing a reduction in volume compared to last year. It is my perception that overall volumes have actually grown,” he said.

### JWP DELAYED

The commissioning of Germany's new deepsea container terminal in the port of Wilhelmshaven, JadeWeserPort, has been pushed back to the end of September. The decision was taken jointly by the states of Lower Saxony and Bremen, the public landlords and infrastructure investors of the facility. Operations at the new container terminal had been going to start on 5 August, but construction flaws in the 1,000m quay wall disrupted the original schedule.

## Dredging

### MERCATOR DEMURS

Terminal operator DP World's plan to bring bigger ships to India's first international container transshipment terminal at Vallarpadam in Cochin Port may be delayed by at least two years after dredging contractor Mercator stopped work on deepening the channel in May. Cochin Port Trust has now engaged Dredging Corporation of India to complete the work.

### DUTCH WIN IN TAIWAN

HollandMT has been awarded the contract for engineering and supply of dredging equipment for a newly built 2,400m<sup>3</sup> trailing hopper suction dredger for Kaohsiung Harbour Authority in Taiwan. The dredger will be constructed by Ching Fu shipyard in Kaohsiung and delivered in 3Q/2013.

### WESER APPEAL

A call for a quick start to the €50M (\$63M) Weser deepening project was launched by 90 port and logistics service providers, ship operators and shippers. The project will deepen the river by 0.4–1.0m to allow box ships to access Bremerhaven carrying 1,800teu extra. The alliance said that the Weser ports in northwest Germany – Bremerhaven, Bremen, Nordenham, Brake – could face major market share losses should work be further delayed.

### 'KIT' DREDGERS IN CAPE

Two cutter suction dredgers are almost ready for service at Damen Shipyards, Cape Town, where they were constructed from prefabricated shipbuilding kits for stock to meet customer demand at a reduced delivery time. Damen recently commissioned the first of the pair.

### FOX RESUMES

Environmental dredging has resumed on the Fox River, Wisconsin, PCB removal project. Dredging stopped in July 2011 after NCR stopped paying for the work while it haggled over cleanup responsibility with partner Appleton Paper, which is sharing the project costs. A federal judge recently denied a motion that would have continued to delay the \$650M project.



Photo: Port of Le Havre

Wetland restoration in the Seine estuary

## Greening Le Havre

The Port of Le Havre has been implementing pro-environment policies for some years and has committed itself to sustainable development. Its two-track approach ensures that port activities are developed but their impact on the environment is reduced and the area's eco-system is protected.

To reduce greenhouse gas emissions within the port, the port authority has prioritised public transport and expects railways and waterways to double their modal

share by 2020. It is constructing a multimodal terminal designed to handle up to 500,000 intermodal transport units while cutting CO<sub>2</sub> emissions by about 500,000 tonnes a year by 2020. It will come on stream by 2014.

Developing waterway transport is one of the drivers behind an economic interest group that Le Havre has set up in conjunction with the ports of Rouen and Paris. Called HAROPA – Ports de Paris-Seine-Normandie, this will offer a sustainable logistics solution for

this area of northwest Europe, which has a population of 25M.

Le Havre port authority has developed an incentive policy to encourage and reward clean shipping and has been involved from the start in the formulation of the Environmental Ship Index (see *P&H* March/April 2012, p36).

In common with most estuaries, the Seine is an important habitat for a variety of species and nearly 20% of the Le Havre port area is environmentally protected. The port authority has developed a major scientific programme to complete a full inventory of the different species on its terrain. Following the Working with Nature approach developed by PIANC, the Port of Le Havre integrates environmental aspects into the earliest stages of its development projects. The same approach is used for all the port's major projects, such as Emerhode, which will improve barge links and avoid traffic congestion.

The port is also keen for its stakeholders to reduce their environmental impact and Le Havre encourages environmentally focused businesses to set up in its enterprise zone. Examples include Osilub, which recycles waste oil from engines into basic oils, and Coderes, a company that recycles waste into fuel.

## EC promises a 'flexible' port review

European Commission vice-president Siim Kallas has reassured European ports that the EU ports policy review will be flexible and allow a large degree of autonomy. "The ports policy review will not be a one-size-fits-all approach. After all, there must be sufficient flexibility to take local circumstances into account. It is certainly not for the Commission to tell ports how their business should be run or to suggest particular business models," said Kallas. "The review is about having greater transparency and fewer restrictions, to remove barriers for new entrants wanting to tender fairly and openly for port services. Fair competition is a healthy requirement for improving port performance generally and for the system's overall efficiency."

Kallas was speaking at the annual conference of the European Sea Ports Organisation (ESPO) in the Polish resort of Sopot, between the ports of Gdańsk and Gdynia, which were hosting the event.

At the same event, ESPO chairman Victor

Schoenmakers emphasised that legal certainty needs to be balanced with sufficient flexibility to allow port authorities to operate successfully in a dynamic industry. "This is the most important challenge to resolve," he said.

During the conference, ESPO presented a manifesto advocating a "renaissance" of port management and policy. It calls for a change of management culture among port authorities, to one that combines a dynamic business policy with good corporate governance and transparency, both within and beyond the port area. The manifesto also invites governments to devise frameworks that guarantee independent port management and recognises the EU's potential to be a positive force by ensuring a level playing field and legal certainty and by fostering growth and development of ports.

Other topics addressed included port authorities' financial prospects, public-private partnerships, concessions and regional investment opportunities.



## Panama approves new box terminal

The Panama Maritime Authority (AMP) has granted permits to a private development group for the construction and operation of a new container terminal at the Atlantic entrance of the Panama Canal. Jones Lang LaSalle is acting as development adviser to the project consortium.

With an estimated construction value exceeding \$600M, the Panama Colón Container Port (PCCP) is expected to become one of the largest private maritime infrastructure projects in Panama and the first terminal to be built on freehold land. It will serve both the expanded canal and Panama itself. Super-post-Panamax ships that pass through the canal will be able to call at the PCCP terminal to tranship cargo to and from feeder ships serving existing ports of call.

"Transshipment terminals will have a significant impact on the new Panama Canal era," said John Carver, head of Jones Lang LaSalle's ports, airports and

global infrastructure group. "Too many seaports do not currently, and may never, have the harbor depth required to take advantage of the trend towards post- and super-post Panamax vessels. PCCP is the first terminal to be engineered specifically for the expanded Panama Canal and will provide a critical new link in the global supply chain, further enhancing Panama's already strategic designation as one of the world's primary global transshipment hubs," he added.

The four-berth terminal will be able to handle box ships up to 18,000teu and is designed for an initial throughput of 2M teu, with complementary warehousing and logistics facilities. PCCP is set to open in late 2014 to coincide with completion of the canal's third set of expanded locks.

Jones Lang LaSalle is now administering the bid tender process for the initial dredging and related marine construction.

## Haldia struggles with draught



Photo: Chris Mackey

**Iron ore stockpiled outside Haldia Dock**

Haldia Dock Complex (HDC) in West Bengal is struggling to increase productivity to keep up with the demands of India's industries for steel and coking coal but suffers restricted draught. Excessive shoaling of the River Ganges caused by changing river patterns has reduced operational depth at 17-berth HDC from 14m to 7.5m in recent years, restricting movement of bulk cargo vessels.

The lack of draught is a concern for HDC's major users, including state-owned Steel Authority of India (SAIL), Tata Steel, Bhushan Steel and Strips, Electro Steel Castings and other importers of coking coal from Indonesia, Australia, New Zealand and the

USA. The producers fear that this will hamper the large-scale expansion needed to meet India's rising demand for steel. Damodar Nayak, HDC's manager port operations, admitted: "Receding draught has been the sole issue in the way of us increasing productivity for our users."

Imported coking coal for SAIL and Tata Steel is handled by private operator ABG Haldia Bulk Terminals through leasing agreements at berths 2 and 8. The company has six grab-fitted mobile harbor cranes plus dumpers and wheel-loaders.

"We have been given a productivity target of 20,000M tonnes by the port, which we can

easily achieve. However, with ships calling at the berths following their dead freighting at the other east coast ports of Paradip, Dhamra and Gangavaram, we are able to provide 18,000M tonnes per day of productivity," Captain Baiju Nuni, deputy GM operations at ABG Haldia Bulk told *P&H*.

As industrialisation grew in West Bengal and other mineral-rich eastern states in the early 1980s, the government set up Haldia as a bulk cargo handling port under the jurisdiction of Kolkata Port to meet the huge demand for imported coking coal for the many steel plants in West Bengal and Bihar. HDC was also intended to transport coal, moved to the port by rail from east Indian coalfields, for the many thermal power plants located on India's east coast.

Given the logistical importance of Haldia, with 2,500 vessels calling at the port every year, river channels between the port and sand heads are dredged regularly. Recently, the Eden river channel was opened to ease ship movements to and from the port.

Because the Ganges has a fluctuating tidal window for ships, the Kolkata port authority is planning a new trans-loading facility at the mouth of the river.

## Cash & cargo

### TIL GETS A STAKE

Vladimir Lisin's United Cargo Logistics Holding (UCL) has sold a 20% stake in the St Petersburg Container Terminal to Terminal Investment Limited, giving TIL its first foothold in Russia's busiest box port. SP Container is part of UCL's stevedoring division and operates the container terminal Lisin owns at St Petersburg. UCL called the deal "the first step in a long-term strategic partnership between two companies".

### GREEN CONVERSION

APM Terminals' programme to convert rubber-tired gantry (RTG) cranes from diesel to electric power announced a year ago has moved ahead with the signing of a €1M (\$1.3M) contract with German-based Conductix-Wampfler to retrofit RTGs at Container Terminal 1 at Thailand's busiest container port, Laem Chabang. By reducing diesel fuel consumption in the existing RTG engines, the terminal expects to reduce CO<sub>2</sub> emissions by 1,300t/year.

### AQABA EXPORT OUTLET

Jordan's state-run Aqaba Development Corporation has announced a contract for 75M dinars (\$106M) to develop and operate a new export terminal in the Red Sea port of Aqaba, *al-Arab al-Yawm* newspaper reported, adding that the terminal will be used for industrial exports mostly from its producers Arab Potash and Jordan Phosphate Mines.

### PIER FOR FAW

Iraq has invited international bids to build a breakwater and service pier for Grand Faw Port in Basra province, the transport ministry stated. Bids are due by 15 July and the project will be financed by the Iraqi government within its 2012 budget. Bidders should have a traded capital of at least \$259M.

### PIPAVAV EXPANDS

The board of APM Terminals-owned Gujarat Pipavav Port has approved the expansion of port at a total cost of Rs10.97Bn (\$200M). It told local stock exchanges that the project cost will be raised through a mix of debt, equity and internal accruals.

## People

### MOROOKA HEADS ICS

Masamichi Morooka has been elected to succeed Spyros Polemis as chairman of the International Chamber of Shipping. He will be responsible for liaising with other international bodies including the IMO and ILO. Morooka joined NYK in 1975 and rose to become president of NYK Group Europe in 2005. He was elected vice-chairman of ICS in 2009.

### MYLLY FOR EMSA

Markku Mylly has been elected executive director of the European Maritime Safety Agency (EMSA) for a term of five years, taking over from Willem de Ruiter. Previously, Mylly was MD of the Finnish Port Association and before that he was director general of the traffic department at the Finnish Maritime Administration.

### NEW TRANSNET GM

Transnet National Ports Authority has appointed Herbert Msagala as general manager port operations with effect from June. He has been given responsibility for providing effective and efficient port services in support of TNPA's strategic objectives.

### VREE AT APM TERMINALS

APM Terminals has appointed Ben Vree as CEO of its Europe region from 13 June. Based in Rotterdam, Vree will lead a business that encompasses a combined container volume of 6.7M teu in 2011, representing 36% of the company's total throughput.

### CRYE LEAVES CLIA

Michael Crye left the Cruise Lines International Association in June. He was a powerful strategist and lobbyist for the industry, dealing with regulatory challenges that included emissions control, post-September 2001 security and safety concerns after the *Costa Concordia* tragedy.

### NEW INTERTANKO MD

Katharina Stanzel, deputy MD of Intertanko, will become its MD from 1 July. At the same time, current MD Joe Angelo will revert to his previous post as deputy MD, the association said.



Photo: Stephen Spark

*Costa Allegra* overstayed her welcome at Port Victoria

# Seychelles rises to multiple challenges

Seychelles has been in the front line of the fight against Somali piracy in the Indian Ocean, which has damaged the fishing industry, cut cruise calls from 50 to 30 a year and increased the price of imports. Despite this, Seychelles Ports Authority (SPA) has expansion in mind and in hand, CEO Lt Col Andre Ciseau and business development manager David Bianchi told *Ports & Harbors*.

Port Victoria, on the main island of Mahé, comprises the industrial fishing port and the commercial port. The latter has one quay of 370m, which in early March was occupied for 10 days by the crippled cruise ship *Costa Allegra*, which suffered an engine-room

fire and complete power failure while *en route* from Madagascar. As a result, several vessels were unable to dock, highlighting the port's vulnerability to disruption.

Bianchi told *P&H* that the government has agreed in principle to a southward extension of the quay, although funding and formal approvals need to be finalised. Alongside depth of 9.5–11.5m will be dredged to 14m.

The quay extension is envisaged as an interim measure. Six years ago ambitious plans for an entirely new port on reclaimed land to the north were unveiled, costing at \$200M in 2006, most of which would have to be raised from the private sector. The global trade

recession and Somali piracy have caused the plan to be put on hold.

Construction of a new port and associated dredging on the island of Praslin are nearing completion, however. The aim, Ciseau said, is to alleviate congestion at the existing quay, which will be turned into a small marina. Modernisation of the quay on La Digue is planned, too.

Ciseau highlighted the realities of operating a port in such an environmentally sensitive part of the world: "We have a natural sort of aquarium next to our port [in Praslin] – you can feed the fish right there and from time to time you will see the sea turtle rise up and come on to the jetty. This is a very important aspect for us." Even in Victoria, the Seychelles' capital, port workers can catch mackerel straight from the quayside, Ciseau said, adding that he is keen for SPA to play an active role in Ports Environmental Network-Africa (see *P&H* March/April 2012, pp26–27).

The biggest environmental concern is the potential for an oil spill, particularly as Seychelles has started licensing areas of its EEZ for oil and gas exploration. None of the island states possesses sufficient resources to deal with a major spill or maritime disaster. Ciseau said that the Indian Ocean Commission has developed a Regional Oils Spill Contingency Plan to pool the various countries' resources. "It remains to be seen whether we have the heavy-lift capacity to shift this heavy equipment. This is a very big challenge for small countries such as ours," he cautioned.

# Salalah expansion announced

Oman's Ministry of Transport and Communications has awarded a commercial bid representing investment of 55M rials (\$143M) to more than double the Port of Salalah's general cargo handling capacity. The project will increase dry bulk cargo handling capacity to 20M tonnes and liquid cargo to over 6M tonnes annually. The current annual general cargo handling capacity is 5.5M tonnes.

"We are committed to making the resources available to enable Salalah to assume a major role as a regional hub for liquid and general bulk cargoes, in addition to containers, as we meet growing demands for increased economic activity in the Dhofar region

and the growing international investment projects in Oman," said Port of Salalah's CEO, Peter Ford.

Salalah was the second-largest container port in the Middle East in 2011, with a volume of 3.2M teu.

The planned expansion of the general cargo terminal includes the construction of an additional 1,200m of multipurpose berth with 18m draught and liquid commodity loading facilities. The new liquids terminal will expand Salalah's role in handling important industrial commodities such as fuel, methanol, monoethylene glycol and caustic soda. Major dry bulk commodities handled at Salalah include limestone, gypsum, cement and plastics.



## Transnet a partner for Africa

South African port operator Transnet Port Terminals (TPT) intends to capitalise on Africa's enormous growth potential by forming partnerships with other African ports and promoting the country as a regional hub for the rest of the continent. Acting CEO Logan Naidoo said the state-owned port operator had previous experience outside South Africa that could help to position African ports as the engines of their respective economies.

The project is in support of nine strategic transport sector objectives set out by the African Union and New Partnership for African Growth. These are focusing on improving the efficiency of transport infrastructure, services and major transport corridors to strengthen the economic and social development of the

continent. TPT initiatives include offering port terminal services, consulting, training, equipment maintenance and IT systems to other African ports, and regional port planning and port pairing initiatives with other African ports.

"South Africa, as the most developed country in Africa, offers the infrastructure and services to unlock the region's frontiers," Naidoo said. "By facilitating the supply of goods and providing essential infrastructural services, TPT can play a vital role in the government's Growth Path strategy, which seeks to widen the market for South African goods and services through a stronger focus on exports to the region's rapidly growing economies."

He said TPT's past experience outside South Africa includes assistance with terminal operating



TPT can play a role in the growth strategy

**Logan Naidoo**

*Acting CEO, Transnet Port Terminals*

systems, port consultation and training programmes in ports in Namibia, Kenya, Cameroon and Mauritius. The former Portcon International consultancy arm of sister division Transnet National Port Authority also carried out work in Ghana between 2001 and 2004. The training programmes and facilities offered at the Transnet School of Ports in Durban have also attracted participation from ports in the wider region.

The potential represented by a billion consumers helps explain how the continent has become one of the world's fastest-growing economic regions. This has created massive demand for infrastructure, goods and services, and international terminal operators are moving rapidly into Africa's ports. More than \$689M is earmarked for port upgrades in Kenya, Mozambique and Tanzania over the next three years.

## Climate a threat to cities

Around three-quarters of Europeans live in cities and most of Europe's wealth is generated in its cities and ports. Urban areas are particularly at risk from climate change, however, and a recent report from the European Environment Agency (EEA) said the continent needs to adapt to climate change. The report warns that delaying adaptation measures will be cost more in the long-term.

The report is the first Europe-wide assessment of urban vulnerability to climate change. It argues that the distinct design and composition of urban areas compared with rural areas results in diverse climate change challenges for European cities. For example, cities' extensive artificial surfaces and lack of vegetation exacerbate heatwaves. This 'urban heat island' effect leads to far higher temperatures in cities than in the surrounding area.

"Many cities are now facing impacts such as water scarcity, flooding and heatwaves, which are expected to become more frequent and intense than they

used to be," EEA executive director Jacqueline McGlade said. "Cities need to start investing in adaptation measures using ideas and best practice from around the world. The longer political leaders wait, the more expensive adaptation will become."

According to the report, roughly one-fifth of European ports and cities with more than 100,000 inhabitants are highly vulnerable to river floods. Because cities are heavily interconnected, urban adaptation requires concerted action at all policy levels. The report therefore draws attention to the important role of European and national policy in helping cities adapt to climate change.

Such a framework includes a coherent, climate-proof policy, a stronger territorial approach targeted at the specific regional challenges, a capable set of institutions and access to funding. It also calls for more knowledge to support a multi-level approach to urban adaptation.

More info at: <http://climate-adapt.eea.europa.eu/>



### Our people are just as easily accessible as our ports

● Zeeland Seaports has many strengths. The location on open sea, the depth of 16.5 metres, the congestion-free connections with the hinterland and the facilities. But one important reason to choose a port is still missing from this list. The people. Anyone who gets to know Zeeland Seaports becomes acquainted with professionals who are proud of their ports. Proud of their profession. And, as you know, pride is what fuels motivation. We know what is important to our customers in our ports, and it is effort that often makes the difference. In the boardrooms and on the quays, people who really know their stuff are there to brainstorm with you.

Call our commercial department, who will be happy to put you in touch with the right terminal operator. We are available day and night on +31 115 647400 [www.zeelandseaports.com](http://www.zeelandseaports.com)

driven by dedication





Photo: USCG



# Protection of US ports

**Lieutenant Commander Kevin Lynn** and **Patricia Adams**

describe the measures taken by the US Coast Guard to ensure safety around US coasts and installations

Under its Maritime Prevention Program, the US Coast Guard has the longstanding priority of protecting US ports and the vessels that use them. Members of the Coast Guard accomplish this by working with representatives of the maritime port and shipping industries to ensure there is both an understanding of, and compliance with, safety and security regulations. Assuming a proactive, prevention-minded posture is an important factor in reducing casualties associated with fire, improper cargo transfers and inadequate security measures, among others.

From a port facility perspective, rules are in place to govern port operations so that maritime commerce can occur safely and securely. They cover cargo stowage and segregation rules designed to prevent the spread of fire; conferences between persons in charge before cargo operations take place to ensure there is alignment on the scope, duration and procedures of the transfer; and permitting actions necessary to protect port workers and the general public from explosive cargo handling evolutions. The table (below) provides a breakdown of existing regulations and their general purpose.

Compliance with these regulations is a duty of the port authority, owner or operator and the Coast Guard ensures this compliance by conducting facility safety inspections, security examinations and cargo transfer monitors. Interactions with the Coast Guard should not be limited to these events, however. When

challenges in meeting the prescribed regulatory standards arise or novel concepts are introduced, it is essential that port and vessel operators engage early with the local captain of the port to outline the issues and discuss potential solutions. Often, acceptable alternatives can be implemented so long as they provide an equivalent level of safety or security protection.

New salvage and marine firefighting regulatory requirements that originated in the Oil Pollution Act of 1990 (OPA 90) were implemented on 22 February 2011 and can be found at 33 CFR 155.4010-4055. In keeping with OPA 90, planning by shipowners for more robust salvage and marine firefighting resources increases the capability to save lives and property and prevent the escalation of potential oil spills to worst-case discharge scenarios.

The shipowners have set up contracts and funding agreements with resource-providers to handle the salvage and marine firefighting risks presented by tanker vessels in each of 41 USCG captain of the port zones around US coasts where their ships operate. These resource-providers can provide personnel, equipment, supplies and other capabilities for performing the salvage and/or marine firefighting services identified in the response plan.

These contracted services must be capable of handling the risks presented by the owner's vessels and of arriving on the scene within defined timeframes. These preparedness requirements apply to tankers and will be extended to non-tanker vessels when a current

## Marine incident response times

Pre-contracted service	Timeframe (hours)	
	0–12nm	12–50nm
<b>Salvage – assessment and survey</b>		
Remote assessment and consultation	1	1
Begin assessment of structural stability	3	3
On-site salvage assessment	8	12
Assessment of structural stability	12	18
Hull and bottom survey	12	18
<b>Salvage – stabilisation</b>		
Emergency towing	12	18
Salvage plan	16	22
External emergency transfer operations	18	24
Emergency lightering	18	24
Other refloating methods	18	24
Making temporary repairs	18	24
Diving services support	18	24
<b>Specialised salvage operations</b>		
Special salvage operations plan	18	24
Subsurface product removal	72	84
Heavy lift	estimated	estimated
<b>Marine firefighting – assessment and planning</b>		
Remote assessment and consultation	1	1
On-site fire assessment	6	12
<b>Marine firefighting – fire suppression</b>		
External firefighting teams	8	12
External vessel firefighting systems	12	18

Source: USCG

regulatory project has been completed.

The resource-providers have identified locally available resources that can meet the timeframes on behalf of their clients (see table above). The very short timeframes for firefighting response, in particular, have required more assets to be made available and others repositioned, local capabilities have needed to be identified and co-ordination arranged with public firefighting entities. Vessel response plans must work within the framework of the national response plan and area contingency plans.

With regulations in place for waterfront facility safety and security, vessel salvage and firefighting, the Coast Guard has taken the action necessary to safeguard US ports from preventable accidents. The USCG is strongly encouraging the maritime industry to continue its pursuit of excellence in accident prevention. Together, the Coast Guard and the maritime industry can work to keep shipping and port operations running safely. **PH**

## Hazardous cargo regulations

<b>33 CFR 126</b>	Facilities handling dangerous cargo – cargo handling, stowage and segregation, explosives permitting, fire protection
<b>33 CFR 127</b>	Liquefied natural/hazardous gas facilities – permitting, transfer equipment, operations and emergency manuals, fire protection
<b>33 CFR 154</b>	Facilities transferring oil and hazardous materials – operations manuals, response plans, cargo transfer and response equipment, vapour control systems
<b>33 CFR 156</b>	Transfer operations of oil and hazardous materials between facilities and vessels, pre-transfer conference and documentation
<b>49 CFR 100-185</b>	Responsibilities for shipment of hazardous materials, containerised cargo, explosives and stowage/segregation
<b>33 CFR 101-106</b>	Security assessments and plan, access control, worker identification credentials

Source: USCG



Photo: DIS

## Portal to the future

Port gate systems are becoming increasingly sophisticated and are aggregating downstream data tasks in ways undreamed of by the systems' pioneer developers, says **Scott Berman**

**A**utomated gate systems (AGSs) are proving to be an attractive option for ports and terminal operators as they seek to implement governmental and internal security policies and goals, lower costs, improve efficiency, standardise processes and gain from a wider ring of potential benefits that do not end at the entrance.

Finding the right solution isn't necessarily easy, however, as Bengt-Olof Jansson, chief technology officer of Copenhagen Malmö Port (CMP), can testify. CMT opened ro-ro, combi and container terminals in southern Sweden a year ago, and Jansson's responsibilities for the \$152M project included leading the effort to select an AGS for the new facility. The changing technologies of automated gate systems and the diverse needs of the new terminals meant that the detailed decision-making process took two years.

Jansson was part of an internal project group that included IT personnel, technicians, operations staff,

terminal operators and security staff. They made several visits to ro-ro and container terminals within Europe to learn from their AGS experiences.

CMP eventually chose quite a versatile AGS, explained Willem Dauwen, business development manager at the system's supplier, Belgium-based CAMCO. He explained that it "caters to the needs of ro-ro as well as container terminal operations. High-definition pictures rule out doubts about damage claims, and accurate and fast optical character recognition [OCR] data speeds up the gate processes."

High-tech pedestals – which CAMCO terms kiosks – and matching licence plate recognition cameras are used to automate check-in and check-out procedures. The kiosks are equipped with a card reader, a VoIP (voice over internet protocol) intercom and a ticket printer. They provide user-friendly messages to guide busy truck drivers through the port clearly and simply.

Malmö is not alone in its effort. Ports and terminals





**OCR gate system  
in operation at  
Noatum Terminal,  
in Valencia, Spain**

around the world are recognising the benefits that AGSs can provide, said Benjie Wells, vice-president, cargo services, for automated gate supplier HTS Americas. "Increased automation has dramatic effects when applied to gate processes. Automated collection of data reduces human intervention, decreasing transaction time and increasing accuracy," he said. Among their other benefits, Wells explained, are that "as transaction time is decreased, the overall turnaround time of trucks decreases, thereby increasing terminal services while reducing truck emissions".

In the case of AGSs, one size does not fit all: they have to be customised for the precise location, size, type and configuration of the facility. Each variable can affect how automation will handle a process. Accordingly, explained Wells, HTS's systems have varying degrees of automation to suit each customer's unique requirements. In the case of terminals that have high levels of gate automation, such as Spain's TTI-Algeciras and Euromax in Rotterdam, HTS systems "tie truck RFID [radio frequency identification] tag data to driver identification as well as appointment or truck transaction," said Wells.

Dave Walraven, a port solutions executive for Dutch supplier Dalosy Industrial Systems (DIS), highlighted an advanced system featuring OCR for Noatum Container Terminal, Valencia, Spain, and described a project developing AGS for Khalifa Port Terminal, Abu Dhabi. For the latter project, Walraven noted, DIS is deploying a solution called "the zero error principle, which covers the full tracking and control over container movements in non-automated areas. It starts with OCR at the automated gate, and then uses RTLS [real-time locating systems] and GPS to detail all containers and their movements, and match them against job orders." According to Walraven, this ensures that "operator input is eliminated and any errors are pre-defined and handled centrally".

Looking ahead, the trend is for automation to extend beyond the gate. Walraven expanded on the theme: "Terminal operators are looking for solutions to increase the reliability of data, increase productivity and make operations safer, and they are selecting vendors that can do it all, including waterside automation and centralised exception handling, where a clerk handles both waterside and landside exceptions." Also gaining attention now are full traceability features – as at Khalifa – crane OCR and what Walraven termed "a one-stop shop for automatic identification solutions".

Dauwen at CAMCO also cited crane OCR among the capabilities that are gaining, along with fingerprint readers on kiosks, position detection systems, automatic handover systems, door and seal detection, and IMDG label recognition. Also coming up, he reported, are second-generation cameras equipped with diagnostic processors that trace exceptions or anomalies, so that any problems can be identified and addressed promptly from remote locations.

"The demand for a broader terminal automation approach has been growing," Dauwen said. "Gate operation is no longer a story on its own; it's a strategic piece of the broader puzzle." He continued: "The integration of gate automation in the complete



Photo: HTS

terminal operation process is needed for swift overall operations, a process that can only work through flawless interfaces with terminal management systems, customs and access control, among others."

The end result of a thoroughly automated, and carefully integrated, gate system at a port or terminal, Dauwen added, is "a safer, more accurate and more efficient daily operation".

Back in Malmö, Jansson reported that the AGS, on which CMP spent about SKr7.5M (\$1.1M), has "worked out well". In retrospect, he said, port officials would have given more information on gate procedures to truck drivers new to the system and would have adjusted some lanes and pedestal positions to ease the traffic flow in the first days. He identified the most challenging internal aspect of the process of choosing AGS features as getting "hands-on people interfacing with IT people". Yet, Jansson added, considering the benefits of the system, it was time well spent. **PH**

## Additional gate data

Benjie Wells, VP cargo services of HTS America, said that gate systems can gather additional data that play crucial roles in downstream automated processes, such as:

- Trailers' container configurations, to speed instructions to auto-stacking cranes
- Hazmat placards, to facilitate safe handling in the terminal and on vessels
- Door location, to assist yard storage and vessel loading
- Damage inspection image capture, which can substantially reduce claims.



**Israel Ports is now using automated gate technology at Ashdod**

Photo: Port of Ashdod

# The robot revolution

The next generation of automated terminals will feature state-of-the-art technology to boost productivity, speed turn-around and reduce accidents. But getting it right requires a step change in attitude, **Stephen Cousins** discovers



**A digital impression  
of the fully  
automated box  
terminal at  
Rotterdam's  
Maasvlakte 2  
expansion**

It is almost 20 years since the world's first automated container terminals were opened in 1993. Way ahead of their time, such facilities were designed when most contemporary terminal operators still pinned slips of paper to wall charts to manage container movements and plan shipside operations.

Fast forward to today and automated terminals have advanced to the extent that operators have access to a vast array of automated equipment solutions, from quayside gantry cranes to container yard rail-mounted gantry cranes, shuttle carriers and automated guided vehicles (AGVs).

These systems run on complex logic systems and software designed to ensure the safest and most efficient use of yard space, vessel, gate and rail productivity. In market areas with high labour costs or a lack of qualified operatives, automated facilities can offer savings, while the need for fewer personnel brings down the associated risk of accidents.

Recently opened facilities include APM's \$500M semi-automated terminal in Virginia – the most

advanced in North America – the stack at Antwerp Gateway Terminal and the Euromax Container Terminal in Rotterdam, which features the largest semi-automatic quay cranes in the world and high-speed AGVs that can carry two 20ft boxes at a time.

Terminal operators have always been under pressure to improve shipside performance and this pressure will only increase when the 18,000teu-capacity Triple E class of vessels being built by Maersk are introduced. To service these box ships, future facilities will include the largest cranes and equipment, many capable of lifting containers in tandem and stacking them higher and at greater densities.

The Port of Long Beach recently began to build a fully automated \$1.2Bn terminal at its new Middle Harbor facility. It will feature tandem dual-hoist cranes capable of lifting two 40ft containers simultaneously, AGVs and automated stacking cranes designed to work within the stacks and at the gate end.

High box density and the accuracy required when laying rails for the automated cranes have demanded





Image: Port of Rotterdam

unusual levels of precision in planning the terminal, explained Dan Allen, director of port engineering at engineering consultant Moffatt & Nichol. "Designing the pavement and crane rail systems so that they never change in elevation is a challenge, particularly as the container yard covers six different land areas that are being backfilled over different timeframes and the region is prone to seismic activity," he said. "Cracks in pavement areas can be easily repaired in a manual terminal, but with hundreds of millions of dollars-worth of equipment running on rails, repairs are near impossible in an automated terminal and a failure of foundations due to an earthquake would be catastrophic."

While some operators remain reluctant to commit to full automation and balk at the idea of implementing fledgling automated horizontal transfer equipment, such as AGVs or automated shuttle carriers, APM Terminals is confidently forging ahead with the technology at its soon-to-be-built Maasvlakte 2 terminal in Rotterdam. Constructed in phases, the first of which will be operational by 2014, the facility will break several automation records.

The project will feature the world's largest double-trolley ship-to-shore gantry cranes, capable of servicing Triple E class vessels. Taller and wider than the largest cranes currently available, the cranes will also be the world's first remotely operated gantries, run by operators stationed 1.5km away at APM Terminals' main building.

The joystick-operated system will feature cameras mounted on the crane spreader and hoist mechanisms and will also make use of intelligent systems such as ship profile scanning.

APM Terminals will also be the first client to implement Gottwald's 'lift' AGVs, designed to interact with automated stacking cranes at the container yard, said Frank Tazelaar, MD of APM Terminals' Maasvlakte 2 facility: "An integrated container lifting mechanism allows the AGV to place containers directly on to the stacking crane rack, which increases productivity by decoupling the operation between the AGVs and cranes. The lift AGVs will also serve an on-dock rail terminal, something that has previously only ever been done manually in terminals," he said.

APM Terminals has set ambitious targets for overall productivity, aiming for a 25–50% increase by 2015 on the average 25–30 boxes an hour handled by current conventional and automated terminals.

The terminal operator has also worked hard to address issues related to exception handling in its automated equipment. A critical feature at the core of any successful automated terminal software solution is in its ability to handle the exceptions that are certain to appear during operation. Complex algorithms are required to solve logistical problems such as planning, routing and locating equipment and containers.

"We have a team dedicated to process-mapping the terminal and associated software to take these

exceptions into account," said Tazelaar. "It's vital to plan for them in advance and build that capability into the terminal operating system and equipment control system software."

As a result, equipment will adapt automatically to handle different sizes and weights of containers and perform unique movements – for example, when IMO hazardous cargo has to be moved to a different terminal location.

Farther east, the Middle East's first automated terminal is being built by operator Abu Dhabi Ports Company (ADPC) at the Khalifa Port, just outside Abu Dhabi. Scheduled for completion later this year, the terminal's container yard will be fully automated, featuring 30 automated stacking cranes in the initial phase, increasing to 52 cranes in phase two. The gate will also utilise a fully automated entry and exit process.

All container terminal processes, including operation of the stacking cranes will be carried out using SPARCS N4 software from terminal operating system supplier Navis. The automated inspection gate is being delivered by Dis Gate and also integrates with the TOS.

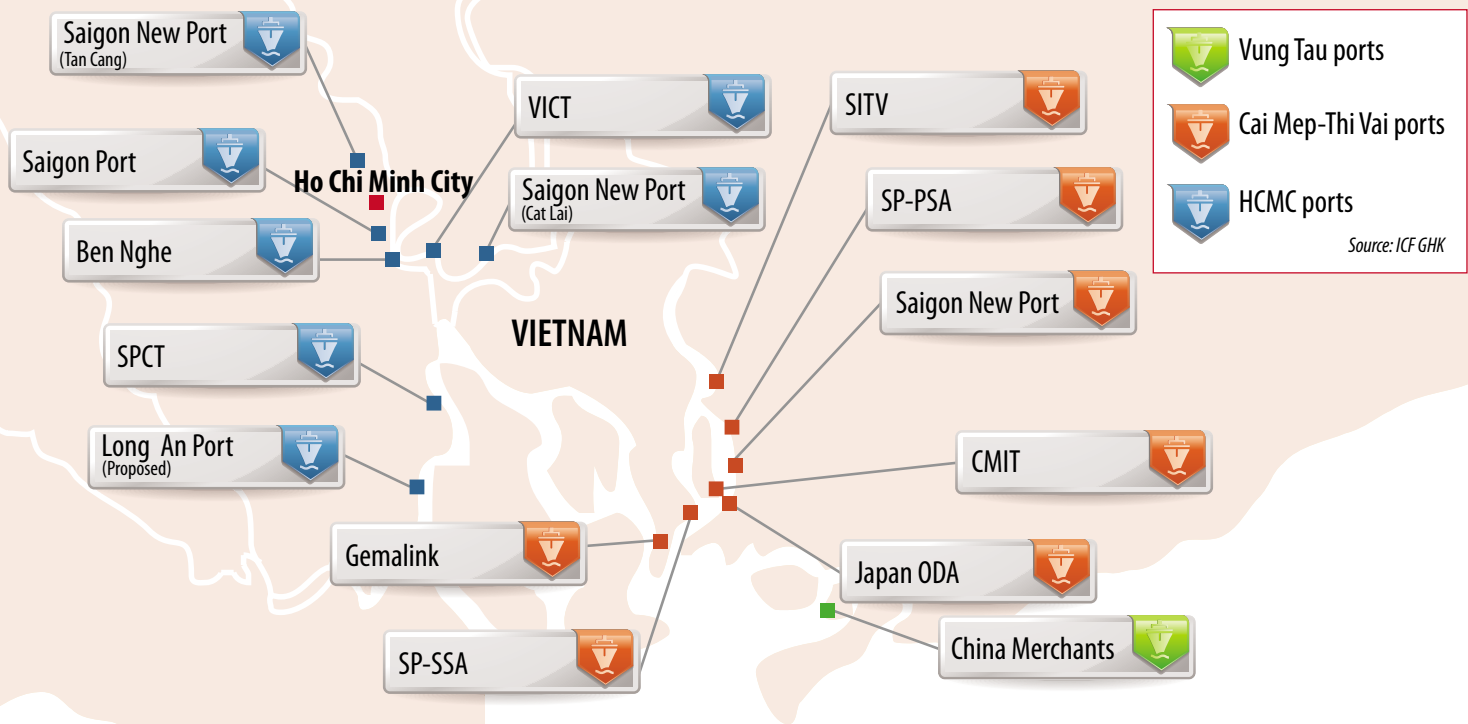
As well as doubling the number of containers handled compared with a manually operated port, the automated system is expected to offer benefits over human operation through reductions in CO<sub>2</sub> emissions, maintenance costs and damage exposure. "We expect these benefits to improve in future in line with increasing energy prices, labour costs and shipping lines' higher productivity demands," said an ADPC spokesman.

What advice can ADPC offer other operators planning to go down the robotic route? "It's vital to get everything right at the design stage and describe the terminal business processes in detail as there's little room for alterations after the terminal's built," said the spokesman. "This will prove a huge benefit during the tender, development, testing and implementation phases. It's also important to ensure early involvement of the operational and technical terminal staff and concentrate on the interfaces between systems. Also, build flexibility into contracts so that any interface issues can be resolved easily," he concluded. **PH**



Photo: Demag

**One of Gottwald's battery-driven AGVs at Hamburg's Altenwerder container terminal**



## A decade of patchy progress

Foreign involvement in Vietnamese container trades is completing its first decade. Asia analyst **Jonathan Beard** still sees insufficient planning and fragmentation and identifies the need for coherent public-sector leadership to deliver successful PPPs

**T**wo major port clusters service south Vietnam: the older, heavily congested terminals in the centre of Ho Chi Minh City (HCMC) with draught limits of 8.5m and generally operated by local, state-backed interests. But since 2006, newer terminals have sprung up closer to the open sea at Cai Mep and Hiep Phuoc, offering deeper water and supposedly superior handling services, developed by a number of international operators through public-private partnerships (PPPs).

When the government opened new port projects in southern Vietnam to foreign participation in 2006, an array of carriers and international port operators sought to gain footholds in a market offering considerable potential from a rapidly expanding import/export cargo base. A total of 10 foreign operators secured terminal stakes amid optimism that rising cargo volumes would overcome the challenges presented by poor infrastructure and potential overcapacity. There was also an assumption that the older terminals in the centre of HCMC would be phased out, removing some capacity from the market.

In general terms, the development of facilities has been fragmented and poorly planned. While it is clearly desirable to have competition, this might have been better achieved with just three or four operators. Instead, the master plan implemented by the Vietnamese authorities has created a balkanised collection of terminals, few of which have opportunities for phased expansion and scale economies.

Although the private sector has a major role in the development of the new terminals, the government is still the dominant player. Unfortunately, this has not helped secure proper co-ordination of development. In particular, supporting infrastructure is highly fragmented and has not been delivered in a timely fashion. Some terminals still do not have proper road access two years after opening and the vast majority of inland cargo moves are on barges.

Vietnam's port development model has secured the involvement of most of the world's major operators and the injection of considerable amounts of private capital. However, scarce public-sector funds have also been injected into each of the PPPs, so the risks



have not been fully transferred to the private sector.

With six out of nine terminals in operation and the continued success of the city centre terminals, there has been much blood on the carpet as rates have been slashed in a desperate bid to secure cargo. Several terminals are operating well below capacity – the HPH-operated SITV terminal lost its sole line-haul service towards the end of 2011 and has to all intents and purposes exited the container handling market altogether. DP World's SPCT terminal at Hiep Phuoc has also struggled to attract any services.

Given this over-capacity, those terminals with liner connections – in particular APM Terminals' (APMT) international facility at Cai Mep (CMIT) – are dominating the share of weekly liner calls, while common-user terminals are struggling. Average capacity utilisation at Cai Mep and Hiep Phuoc terminals is well below 50% and there is little likelihood of this improving in the near term, even with delays in the introduction of new capacity, notably CMA's Gemalink terminal and a new terminal funded by Japanese overseas aid.

The Cai Mep terminals' poor performance has led to large losses for the operators. Vinalines, parent company of Saigon Port and the Vietnamese joint-venture partner of PSA and APMT, reported a loss of VND460Bn (\$22M) at the two Cai Mep terminals for the first half of 2011. The two Vinalines terminals compete directly against each other and when CMIT opened in March 2011 it snatched away services that previously called at the SP-PSA terminal, effectively cannibalising the market. Vinalines is also SSA's joint-venture partner at its terminal, which opened at the end of 2011, after a delay of several months because of the slow progress of road infrastructure development at the terminal.

ICF GHK's analysis indicates that the Cai Mep terminals will face several years of severe competition as surplus capacity continues to be introduced up

to 2015, allied to the continued operation of the older city-centre terminals. The demand and supply situation of the south Vietnam container market is shown in the figure, below left – assuming that the terminals in central Ho Chi Minh City are still operational in 2015.

The major casualties to date have been the 'pure' global terminal operators (HPH, PSA and DPW) running common-user facilities. The problems that they face at Cai Mep reflect the challenging conditions when competing with shipping line-invested terminals in a market that favours the demand side.

Moreover, the global terminal operators tend to be more commercially disciplined in their operations compared with shipping lines and/or quasi public-sector operators, such as Saigon New Port. For carriers, terminals are primarily cost centres rather than profit centres, while operators such as Saigon New Port seem more willing to engage in a 'chase to the bottom' strategy on tariffs to secure volume, offering rates as low as \$30 per teu, against about \$50/teu in 2006.

These rates are low relative to neighbouring countries that offer similar services – \$55/teu in Thailand, \$76/teu in China and \$117 in Singapore (for double move/transshipment, ie \$58–59 per lift). Five to six years ago, however, potential operators were concerned about the regulations on tariffs in Vietnam and whether these would be eased to allow prices to be increased. The tariff controls have largely been removed, but instead of rising, the rates have fallen as the substantial surplus of capacity has prompted operators to slash handling rates to secure volume.

Unlike China, for example, Vietnam desperately needs private-sector investment to develop the infrastructure required to support its continued economic growth – public-sector finances cannot fill the gap.

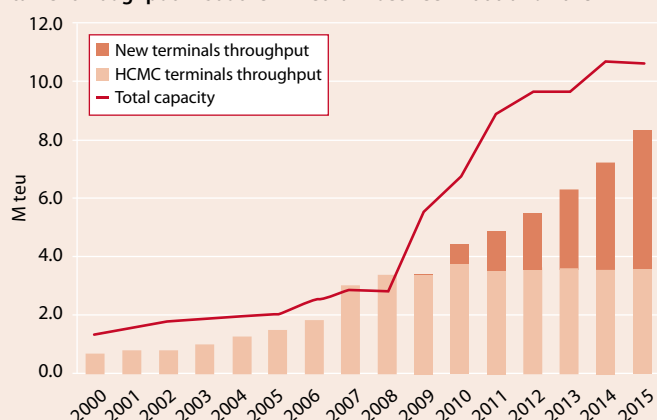
Malcolm Gregory, head of commercial for CMIT, emphasised the need for more private-sector investment in the country. "Port investments are capital-intensive, long-term and strategic in nature. However, fundamentals such as adequate maritime and land-based infrastructure as well as anticipated market demand should be closely aligned with the timelines for completion of new port capacity," he told *Ports & Harbors*. He described CMIT as a world-class container terminal with deep water, high productivity and the ability to handle the largest container vessels, which will provide more reliable and cost-effective access for Vietnamese shippers to global markets.

"From CMIT's perspective, we are working closely with Vietnamese government leaders to strengthen the national economy through providing competitive port infrastructure," Gregory added.

Vietnam's port public-private partnerships need to be better structured to attract more private investment. The headline story of a youthful economy with a thriving manufacturing sector and a globalised outlook can no longer be relied upon to pull in overseas infrastructure investors and operators. A fresh approach is urgently needed if PPPs are going to deliver the goods effectively. **PH**

## South Vietnam container market

Figure shows supply and demand situation (historical and projected) of container throughput in southern Vietnam between 2000 and 2015



Source: ICF GHK



# LNG full speed ahead

In less than three years, ships in northern Europe and both the east and west coasts of North America will be subject to stringent emissions regulations. **Ports & Harbors** looks at a promising alternative fuel to marine diesel oil – liquefied natural gas

**'LNG is likely to be the fuel making the most progress through the remainder of the decade'**

**C**onsider: 2015 is approaching and you are a US or north European port authority inside an emissions control area (ECA). Or you are an EU port elsewhere and anticipating that the European Commission will 'move the goalposts' and include your port within the same ship emissions regulations.

You have read the Baltic ports study warning that no more than 8% of local shipping will be able to comply with emissions restrictions by fitting scrubbers. You assume that your shipping clients have seen the same study and are now seriously considering LNG-powered vessels. Like them, you have read that not only is LNG cheaper than MDO, but also some European countries are offering tax incentives to encourage switching from conventional fuels.

More than 75% of the owners and operators attending the Green Ship Technology conference in Oslo in February 2011 said they expected LNG to be the fuel making the most progress through the remainder of the decade.

So, if your port decides to invest in LNG bunkering facilities, what do you need to know? What are your practical options?

Martin Crawford-Brunt, manager classification

at DNV, confirmed that there are clear business opportunities for ports considering LNG bunkering facilities and that in some cases emissions scrubber technology may not be an adequate solution.

"LNG bunker availability is still a concern for owners contemplating LNG as fuel in some parts of the European ECA, but an extended focus to prepare for small-scale LNG delivery is ongoing," he said at a recent conference on LNG bunkering in London. "Dealing with the waste stream from scrubbers and ensuring they are operating correctly 100% of the time with variable engine load may introduce compliance risk for operators who select the scrubber option.

"In effect, without a widescale LNG and scrubber solution in place, this forces a shift to low-sulphur distillate for shortsea shipping in Europe, which could have the unintended consequence of a modal shift from shortsea shipping back to road and rail," he pointed out.

Speakers at the same London conference reported that there was an alarming ignorance generally about LNG technology and what it would demand of those wishing to embrace it as one of the most promising alternatives to conventional marine fuel.





"There is a lack of LNG experience and knowledge among governments and local authorities. Currently, they don't know what they're talking about," said Erik Buethker, business development manager at Ballast Nedam, which is setting up a LNG refuelling network in the Netherlands. European port authorities, too, have little or no experience of handling LNG inland vessels, port operations and LNG ship movements.

"For LNG bunkering stations a quantitative risk assessment is needed. At the moment there are no guidelines or harmonised risk analysis; a harmonised risk analysis is critical," Buethker maintained. In his view, everyone, however remotely connected with LNG operations at a port, should have to undergo training, including employees of port authorities and cargo terminals.

For Crawford-Brunt, a common standard for bunkering connections and safety procedures is important. "If we don't have this worldwide it could be a mess. DNV is currently chairing an ISO working group tasked with the development of internationally agreed guidelines for hardware as well as the safety and operational procedures for LNG bunkering."

He added that while the most likely bunkering solution in ports would be ship-to-ship, another key task was to prepare local stakeholders in advance, including the port community and the population of the surrounding area.

"Public perception is always an issue; bring in the stakeholders as early as possible when deciding to offer LNG bunkering in a port, and listen to the feedback. You make much better progress in the long term by having the stakeholder discussion early on and mapping out the process. You need to provide the reassurance to local people through a structured process which dispels some of the myths around LNG. However, we draw on more than 10 years' experience with local authorities, communities and ports in Norway," he advised.

"Our experience of public consultation has been very varied, depending on the country. For example in the Netherlands and Belgium there has been a big discussion with stakeholders involving the local community – it's the way those countries operate – but in many parts of the world ports are separated from the community," he concluded. **PH**

## What are the options?

Liquefied natural gas takes up about 1/600th the volume of the gas itself and is odourless, colourless, non-toxic and non-corrosive. The liquefaction process involves removal of certain components, such as dust, acid gases, helium, water and heavy hydrocarbons, making it a cleaner fuel. The gas is condensed into a liquid at close to atmospheric pressure by cooling it to approximately -162°C. This makes it cost-efficient to transport LNG over long distances where gas pipelines do not exist. Specially designed cryogenic sea carriers or road tankers are used for transport.



### Bunker ship to ship

#### Pluses

Flexibility in location and capacity  
Low interference with parallel activities  
Common practice

#### Minuses

High initial investment  
Lack of trained crew/cost of trained crew  
Limited alternative use

**Typical use:** all oceangoing vessels



### Truck to ship

#### Pluses

Low initial investment  
Flexible locations  
Proven in operation

#### Minuses

Limited capacity  
Limited transfer speed

**Typical use:** smaller vessels such as inland barges, passenger ferries, start-up solution



### Fixed tank to ship

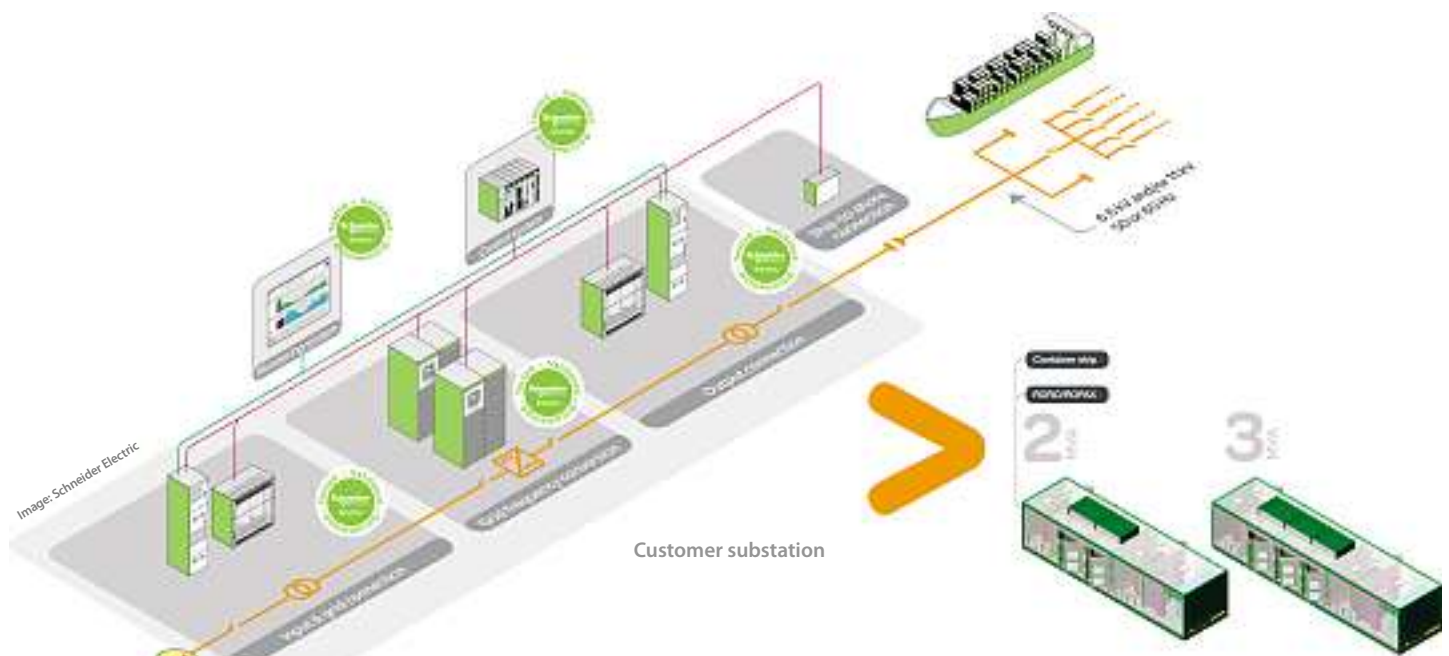
#### Pluses

Tailor-made  
Low operational cost  
Proven in operation

#### Minuses

High initial investment in fixed asset  
Inflexible and takes up quayside space  
Interferes with parallel activities (cargo loading, passengers boarding)

**Typical use:** Fixed-route ferries, ro-ro



# Efficient onshore power

Retrofitting berths for onshore power is very expensive. Equipment supplier Schneider Electric has devised a way of making shore connection investments more cost-effective

## Diagrammatic setup of a Compact ShoreBoX system at the quayside

**P**ublic concern about air pollution from shipping has steadily increased over the past decade. Every year the shipping industry emits several million tonnes of particulate matter (PM), sulphur oxides (SOx), nitrogen oxides (NOx) and carbon dioxide (CO<sub>2</sub>). Environmental studies estimate that maritime activity is responsible for 3–5% of total CO<sub>2</sub> emissions, 15% of NOx emissions and 5–8% of SOx emissions.

Since nearly 70% of those emissions occur within 400km of land, ships make a significant contribution to air pollution in coastal and ports areas. European studies assume that international shipping kills about 50,000 people a year in Europe and costs society about €60Bn (\$77Bn).

International and local regulations are exerting increasing pressure on the maritime industry to reduce its air pollution. The Marpol Convention's Annex VI is the IMO's main enforcement tool, defining the regulatory framework to bring about a progressive reduction in NOx and SOx emissions from ships. Now it has been reinforced with two new tools to reduce ship CO<sub>2</sub> emissions: the Energy Efficiency Design Index (EEDI) and ship energy efficiency management plans (SEEMPs). They will be mandatory by 2013.

In Europe, emissions regulations are even stricter and debate has restarted on implementation of market-based measures to address maritime transport emissions in the EU and the industry's commitment to greenhouse gas reduction. Californian ports, among others in the USA, continue to increase investment in onshore power generation in compliance with California Air Resource Board regulations that require ships to be equipped with this technology by 2014.

In Asia, regulations are also being drafted, and Hong Kong's Environmental Protection Department has asked for consultation studies on North American and European proposals for further emissions control areas (ECAs). China has already included shore connection in its 12th five-year plan, which ends in 2015.

Ship operators and ports will have to adapt their businesses to these new realities by investing in new technologies to reduce harmful emissions. Electrical onshore power is probably the most attractive option from both environmental and financial points of view. It allows ships to turn off their engines while at berth and use electricity from the grid.

By doing so, operators can cut emissions by up to 90% and reduce their energy bills at the same time – a



# SMARTER WHERE IT MATTERS

Eco-efficiency  
is in our DNA

At Konecranes, we keep the heart of our container cranes in-house. We design and manufacture our own drive systems and associated key components to make sure they work as a perfect unit. This is how we ensure that the energy requirements of our container cranes are in true balance with the work they do. And that is why we offer the world's most eco-efficient container handling equipment.

Smarter where? On your bottom line and in your community.

Call us for SMARTER WHERE IT MATTERS container handling.  
Tel. +358 204 2711, ask for Port Sales  
Email: [ports-info@konecranes.com](mailto:ports-info@konecranes.com) [www.konecranes.com/container](http://www.konecranes.com/container)

**KONECRANES®**  
Lifting Businesses™



Quite simply the best portfolio  
of magazines in the global  
maritime industry

Find out more  
[ihs.com/fairplaymagazines](http://ihs.com/fairplaymagazines)



5727\_0412AA



Photo: P2S Engineering

**A basic power connection from a vessel to a quayside electrical unit**

valuable benefit as marine fuel oil hits record highs.

Once the ECAs for North America, the Baltic, North Sea and the English Channel become mandatory, ships in those areas will be allowed to burn fuel with a maximum 1% sulphur content. By 2015 they will have to switch to a 0.1% sulphur-content fuel. That change will increase the demand for – and therefore prices of – marine diesel oil.

In most countries, electricity is not only a greener power source than heavy fuel but also cheaper. This cost differential is going to increase in countries such as Sweden that have decided to cut their electricity tax for ships using a shore connection at berth. Confident in the onshore power supply (OPS) technology, the European Union is investigating ways to extend this promising initiative to all member states.

For ports, OPS technology is an opportunity to create new business, by selling electricity to ships. Depending on several parameters – including berth occupation rates and electricity prices – ports could reduce the payback time of these installations while improving their air quality. To promote onshore power and encourage ports to invest in such green technologies, several countries have implemented subsidies. In Europe, for example, the Marco Polo programme can offer marine operators up to 20% of the finance for onshore power projects.

As a global leader in energy management and with more than 90 years of experience in the maritime industry, the company supports onshore power technology. To make it financially sustainable, it has developed an innovative solution called the Compact ShoreBoX, designed to reduce investment, lead time and operational costs of both ports and ships. The Compact ShoreBoX solution consists of a range of standard components and all shore connection modules include tested, validated and documented architectures while guaranteeing system reliability.

Fully packaged in a single metallic enclosure, Compact ShoreBoX has been designed to be as space- and cost-efficient as possible. To help ports deal with such complex investments, the company provides a complete turnkey solution on shore and on board and undertakes to handle the entire project, including design, execution and post-sales services.

The Compact ShoreBoX is installed in a shelter substation, with all components being integrated, tested and validated in the company's factories. This solution can be adapted to the different power needs and electrical frequency of a wide variety of ships and port infrastructures.

Ports are a dynamic environment, with traffic likely to change constantly. Since changes may well occur to berth profiles or to the electrical power needed by the ship, the company has designed a flexible solution to accommodate both tomorrow's ships and tomorrow's ports. This solution can be implemented and operated without disturbing the port activities.

The Compact ShoreBoX includes an energy management and control system, which allows ports to optimise their electricity consumption and lower their operational costs. The system tracks and reports all data in real time, giving ports visibility of energy-source selection, forecasts, simulation, metering and billing. The system also supplies data on the port environmental indicators to make a shore connection investment as green and efficient as possible.

With increasing pressure from communities and health issues linked to ship emissions at berths, air pollution should be on the agenda of all ports wanting to become so-called 'green ports'. By cutting NOx, SOx, PM and CO<sub>2</sub> emissions from ships in ports, onshore power is by far the most environment-friendly technology available. This solution also leads to fuel, energy and money savings that will be of major benefit to the maritime industry. **PH**

More info: [www.schneider-electric.com](http://www.schneider-electric.com)

## International standard

To make this Compact ShoreBoX solution sustainable, an international technical standard (IEC/ISO/IEEE 80005-1 Ed.1: Utility connections in port – Part 1: High Voltage Shore Connection (HVSC) Systems) has been validated to ensure

global compatibility for ports and ships. Schneider Electric is an active member of this standard and is ready to help any customers wanting to opt for a green solution and make the most of their energy.



# PORT OF KINGSTON

The Western Hemisphere's  
Beacon of Maritime Excellence



## YOUR TRANSSHIPMENT HUB TO THE WORLD

The Port of Kingston has become a key player on the international shipping scene. With its excellent facilities and strategic location, Kingston is widely recognised as the Caribbean's number one hub for container transshipment.

Focus of operations is Kingston Container Terminal (KCT), owned by The Port Authority of Jamaica and operated by Kingston Container Services Ltd, a major subsidiary. KCT has three terminals with a combined capacity of 2.8 million teu. Maximum efficiency has been achieved through a combination of leading-edge technology, stable industrial relations and a highly trained, well motivated workforce.

The Port of Kingston is perfectly placed for ships trading on north-south and east-west routes across the Caribbean and for vessels using the Panama Canal.



15-17 Duke Street, Kingston, Jamaica W1  
Tel: +876 922 0290/9 • Fax: +876 924 9437  
Email: [paj@portjam.com](mailto:paj@portjam.com) • [www.portjam.com](http://www.portjam.com)



KCT Services Limited  
Tel: +876 937 7916

# The great Arctic thaw

Is the Arctic Sea Route a great shipping opportunity or a false hope? **Jacqui Street** investigates its prospects in a warmer world

**T**he world is edging closer to an ice-free Arctic summer with conditions in recent years allowing a major increase in commercial shipping movements in the region. Platts reported that the 2011 season lasted a record five months with 41 vessels traversing the Northern Sea Route (NSR) from the Russian port of Murmansk on the Barents Sea to the Pacific Ocean. This summer even more ships are expected on the route, including an LNG carrier. The rapid changes have prompted IAPH's Port Planning and Development Committee to investigate the implications of the NSR for ports.

Scientists continue to argue about the causes and timing of the sea ice retreat. A recent study by Jennifer Kay and colleagues at the National Center for Atmospheric Research in Boulder, Colorado, found that about half of the changes to the Arctic ice sheet between 1979 and 2005 were caused by warming effects of greenhouse gases in the atmosphere, and about half were attributable to seasonal variability. A 2010 Japanese study, however, ascribed the accelerated loss of ice in recent years to the region's swirling winds.

Some are predicting that the Northern Sea Route will achieve a four-month open season between 2030 and 2040, although Colin Manson, a former UK Ministry of Defence meteorology expert, revealed to *P&H* last year that the MoD expects the route to open up around 2015–2020.

Regardless of the scientific debate, it is clear the shipping industry's attention is now focused on the Arctic region, where new opportunities and challenges are emerging for ports. At an Arctic Forum in 2011, then Russian Prime Minister Vladimir Putin extolled the advantages of the NSR: "The shortest route between Europe's largest markets and the Asia-Pacific region lies across the Arctic. This route is almost one-third shorter than the traditional southern one," he announced, adding: "States and private companies that choose the Arctic trade routes will undoubtedly reap economic advantages."

The Russian government has promised Rb400Bn (\$13.7Bn) to shipbuilders for the construction of new ice-breakers and a further Rb1Bn for 10 Arctic search-and-rescue centres, planned for completion by 2015.

"The Northern Sea Route could put Russia in control

of a major strategic waterway, as well as helping to open up Siberia," Charles Emmerson, senior research fellow at the UK's Chatham House and author of *The Future History of the Arctic*, told *P&H*. He said point-to-point shipping is likely to increase to supply Arctic oil and gas developments: "Huge investments are needed in upgrading port infrastructure in the Arctic – in Canada, Greenland, Russia and the US," he noted.

Ports in northern Europe, such as Hamburg and Gothenburg, or in the northern Pacific rim, such as Busan in South Korea and Tomakomai in Japan, are expressing great interest in the potential of the new Arctic route. The vice-chair of IAPH's Port Planning and Development committee, Dr Masahiko Furuichi, presented a feasibility study at May's committee meeting in Jerusalem.

"The focal point of the feasibility study is whether the Northern Sea Route will eventually be open throughout the year; currently, that is four to five months only," Dr Furuichi told *P&H*. "It is also feasible to carry goods to and from the Asian market through the northern route, not to mention the potential development of natural resources in the Northern Sea – crude oil, natural gas etc."

Canada, like Russia, is looking to take advantage of the Arctic's transformation. The agent-general for the Quebec Government, Pierre Boulanger, told *Ports & Harbors* at a London forum that projects such as roads, railways and ports in northern Canada could become strategically important for the export of minerals to Asia. "The likely opening of the Northwest Passage must be seriously envisaged as something to take advantage of," he affirmed.

Churchill, Canada's main Arctic seaport, is positioning itself as an access point for European markets. Brenda Deamel, from the Churchill Gateway Development Corporation told *P&H* the distance between Churchill and Rotterdam is just under 14 sailing days, whereas rival Canadian port Thunder Bay is a further four days away from Rotterdam. "We at the CGDC are looking at all types of products and commodities, such as grain crops, coal, potash, wood pellets, construction materials for resupply, as well as many other opportunities," Deamel said.

Although Putin has promoted the Arctic as an alternative to the Panama Canal, the idea has many detractors. Frederic Lasserre from Laval University, Canada, surveyed 142 shipping companies and found that few of them view the Arctic as competition for the current main shipping routes. "It is far from the cliché of the coming shipping highway," Lasserre concluded. On the Canadian side he noted there had been 19 complete transits in 2010, in contrast to the 14,700 transits of the Panama Canal in 2008 or 21,000 transits of the Suez Canal the same year.

Many cost barriers to Arctic transit exist, noted Lasserre, including higher equipment and insurance costs. He noted container shipping companies were deterred by the region's lack of unloading opportunities, not to mention "the scarcity of port facilities and navigation aids, the inaccuracy of nautical charts, isolation and the drifting growlers and



small icebergs, which are very difficult to detect.”

One man who has experienced the challenges of Arctic voyages first hand is Ulf Hagen, MD of Norwegian Tschudi Arctic Transit. He told *P&H* that NSR development is slow. “In 2010 there were four ships, in 2011, 34. We expect something like 50–60 next year. It will get more attention from the market; they are getting slightly used to it now. In the beginning people were scared. They thought it would be like the *Titanic* – that they would hit an iceberg and sink.”

Hagen is adamant the main obstacle to large-scale transit in the Arctic is the need for ice-class vessels.

He said that although parts of the NSR may be completely ice-free during summer, Russian authorities may still require transiting vessels to possess a high ice-class. “The ice-class question may diminish in

importance. But that’s not going to happen this year and I don’t think it’s going to happen next year, either,” Hagen commented.

Ice-class vessels are 30% more expensive than regular vessels, making them less cost-effective as container ships. Hagen believes the future ice-class vessels on the NSR are more likely to carry dry and wet cargoes or supplies for oil and gas fields. “I don’t think there are any container vessels in ice class – you’d have to build them first. If you’re looking at USA to China, for example, because the rates are so low I don’t think it’s feasible.”

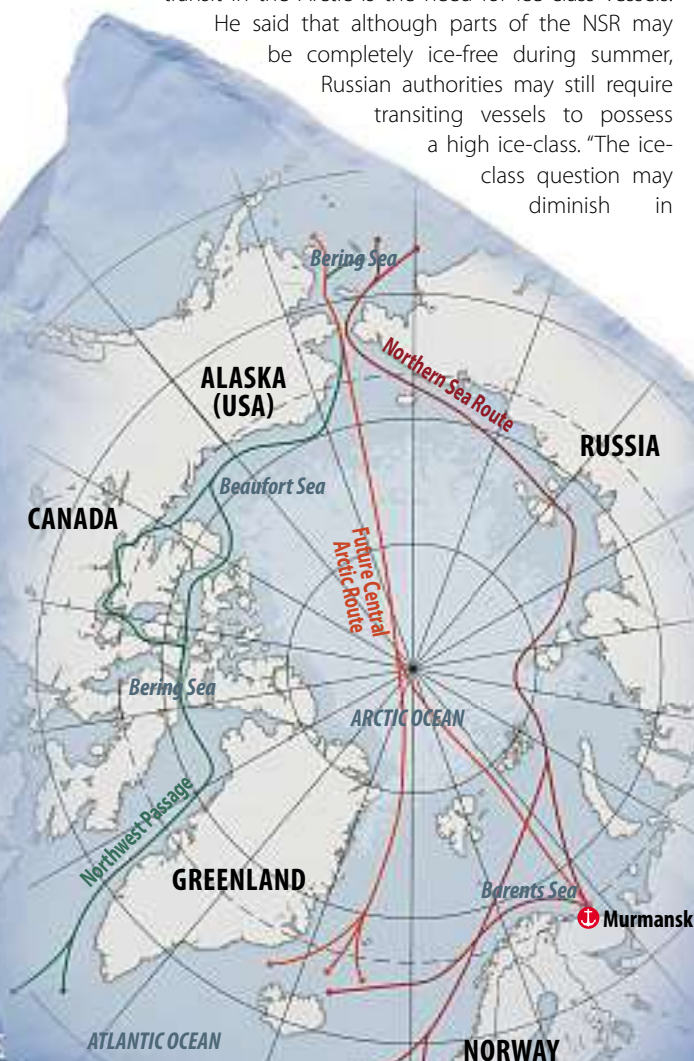
Another barrier to Arctic shipping is the confusion over the navigation regimes and territorial status of Arctic waters. Emerson told *P&H* that all Arctic states want the Law of the Sea to be the rulebook. “But,” he noted, “there remain questions about how overlapping claims will be dealt with, what regimes will apply along the Arctic Sea Route, and disagreements over the status of the Northwest Passage.”

Some ports are already calling for more government investment to clarify regulations and improve safety provisions. Brenda Deamel from CGDC explained: “The extension of the shipping season is inevitable and the commercial and regulatory environment needs to adapt to a changing climate...”

Up-to-date ice conditions need to be provided to the marine and insurance industries. Increased commercial shipping will require new rescue and salvage capabilities.” **PH**

Photos: Shutterstock map: IHS

**‘Will the Northern Sea Route eventually be open throughout the year?’**





# Challenges facing Florida's ports

Maritime lawyer **Doug Manson** of Manson Law Group looks at the implications of the Panama Canal expansion for the US state's ports

**T**he expanded Panama Canal should be open for business in 2014. When that occurs, it is expected to bring about an increase in cargo at ports on Florida's east and Gulf coasts. This will include cargo from the new breed of Panamax vessels that will carry two to three times the volume of containers on ships traversing the canal today. The largest vessels will be able to carry up to 12,600teu, compared with the current maximum of 5,100teu, although it is anticipated that most ships serving this trade will be no more than 8,000teu. There will also be more transshipment into smaller vessels, which will increase ship traffic at Florida ports.

The challenge facing the state's ports is to expand their facilities, capacity and road and railway connections so that they can take advantage of the greater cargo volumes and compete successfully with ports from outside the state.

Florida's ports have already starting building infrastructure to capitalise on this potential increase in business. Tampa Port Authority is co-ordinating with other Gulf ports to market the region collectively to global container shipping lines. "Tampa, Mobile and Houston offer three large, distinct, complementary markets that are currently under-served by the container lines," declared Wade Elliott, senior director of marketing, Tampa Port Authority. "Until now, the carriers have focused primarily on the US east and west coasts; however, the Gulf's proximity to the Panama Canal and our location at the intersection of the north-south and east-west trade lanes is generating great interest in the 'Gulf Coast Advantage'."

Tampa Port Authority (TPA), Port of Everglades, Port of Miami and Jacksonville Port Authority (Jaxport) are all expanding their transport systems to meet the increased demand. TPA has a new dedicated truck ramp from the port to the interstate highway, and an on-dock railway terminal is under construction.

The Port of Miami is completing the construction of a tunnel to bypass metropolitan areas and feed its truck traffic directly into the major interstate highway. The first phase of its on-dock railway terminal is expected

**Tampa Port Authority has built a dedicated truck ramp from the port to the nearby interstate highway and an on-dock railway terminal is under construction**

Photo: Port of Tampa



to be operational later this year. Port Everglades is increasing its capacity through intermodal railway upgrades and infrastructure.

The state's ports are planning to spend billions of dollars in preparation for the new opportunities, and Governor Rick Scott is prioritising funding and regulatory permits to ensure the projects can progress smoothly. Last year, Florida eased regulation on port improvements, providing \$117M in funding and making it easier to finance transport projects in ports.

However, congressional approval is needed for all major water-related projects, and ports also have to gain permits from the US Army Corps of Engineers (USACE) and other federal agencies. These authorisations extend the average time from project start to completion to 12 years. USACE dredging and filling permits can also take years to process and are subject to legal challenge by environmentalists.

Port of Miami is the only Florida port with USACE authorisation and funding identified to expand and deepen channels to receive the largest of the new Panamax ships. Dredge and fill work is needed so that the existing channels can be deepened and port facilities expanded, both to give sufficient depth for the larger ships to enter the port and to allow more vessels to navigate efficiently and safely within it.

Commenting on the delays caused by the permit process, Jaxport CEO Paul Anderson stated in his response to the US Department of Transportation's Maritime Administration (Marad): "As a nation in a

globally competitive market, we cannot afford either the additional cost this process creates or the time to continue taking an average of 12 years to complete projects in our waterways." He urged a major speed-up in the authorisation appropriation process so that port projects can be completed in a competitive timeframe.

Jaxport's Mile Point project recently received approval from a USACE committee to move to the review and authorisation stage. The \$40M construction project to remove a navigational hazard and restriction in the St Johns River will now go to various state and federal agencies for review and comment. A final report from the USACE will follow before the project can be submitted to Congress for authorisation and funding approval. The project is essential to provide space for ships to navigate into the port.

At Port Everglades, the project to deepen a portion of the channel from 42ft (12m) to 50ft (15.2m) has been moving forward, but progress slowed recently as USACE found that it would need to enlarge its deepsea disposal site for dredged material. The first step towards this expansion started with the issuing of a notice for a public hearing to address on-site location and options and potential environmental impacts.

The target date for completion was originally 2017, but this new process makes it unlikely Port Everglades will be able to achieve complete construction by then.

The Port of Savannah and Port of Charleston channel projects have both stirred up environmental concerns recently and now environmental activists are challenging the Port of Miami's channel-deepening project. The port received full approval from Congress to deepen its channel to 50ft, but environmentalists are challenging the state permits for dredging on the grounds that it will adversely affect Biscayne Bay. Unless this dispute can be resolved quickly, these challenges look likely to delay the project, or even halt it completely if the legal challenge is upheld.

Florida has an unprecedented opportunity to become a global hub for trade if it can overcome the many challenges in constructing the port infrastructure it urgently needs. To meet these challenges, Florida ports will have to work together with regional partners. For its part, the federal government needs to change its slow and inefficient approvals process for port improvements. **PH**

**The proposed extension of the Tampa container terminal is outlined in red (left and centre)**

**Approved dredging at Miami has been held up by challenges from environmentalists**







Photo: Plymouth Marine Laboratory

# Ports ready to take on ballast?

In the near future, owners of certain categories of ballast-carrying newbuildings will be advised to fit treatment systems. Master Mariner and former port manager **David Smith** considers the implications for port operations

## Invasive types of phytoplankton found in ballast water

**T**he IMO's 2004 Convention for the Control and Management of Ships Ballast Water and Sediments represents a global maritime response to the growing evidence of damage caused by invasive aquatic species (IAS).

At the time of going to press, 33 states had formally ratified the convention, which requires ships to install a ballast water treatment (BWT) system to a schedule determined by gross tonnage and build date. Ships built after 2009 with a ballast tank capacity below 5,000m<sup>3</sup> and ships newly built on and after 1 January 2012 with ballast tank capacity of 5,000m<sup>3</sup> and over will have to have installed ballast water treatment systems by the time the convention is enacted.

"There is going to be a serious bottleneck when some 50,000 ships scramble to meet global regulations in a few years' time. Now with the US Coast Guard pushing ballast water ratification, global shipowners must ramp up their BWT decision-making choices. We are one of them," said Lars Traaseth, MD of Norwegian owner Saga Shipholding. If all owners plan a BWT retrofit during a vessel's five-year survey, about 11,000 retrofits must be completed between 2013 and 2016. Market observers believe the peak will occur in 2017 when it is estimated that 16,500 vessels will have to be retrofitted – an average of 45 systems a day.

IAS are contained within the plankton, eggs and larvae taken on board ships during ballast water operations. At the end of a voyage and before cargo loading, these may be discharged into waters

in distant locations. There are well-documented examples of such ship-mediated transfers in which marine species incursions have caused severe damage to local ecologies.

The IMO convention seeks to prevent further species invasions through a comprehensive suite of guidelines and control measures. However, owners and operators are increasingly concerned that gaps in areas such as technical sampling and testing protocols increase the potential for disputes, ship detentions, cancelled freight contracts and locally imposed fines for unwitting contraventions.

Within the operational scope of the convention, certain responsibilities lie firmly in the domain of the port state. On the enactment of the convention, those who operate and control harbour jurisdictions will need to ensure that suitable port ballast water management plans are in place to address these demands.

Ballast water exchange (BWE) is identified within Regulation B-4 of the convention as a means of controlling IAS by ensuring ships flush their ballast tanks at sea. This is on the premise that coastal organisms taken on board are considered less likely to survive under oceanic conditions. Similarly, uplifted oceanic organisms when discharged are considered less likely to colonise coastal and inland waters as a result of habitat and environmental mismatching. When the convention is first brought into law, BWE will be used by the vast majority of ships arriving at ports.

The use of BWE as a control medium appears to be a



## Ports need to ensure their plans are in place

**David Smith**  
Master Mariner



Photo: Plymouth Marine Laboratory

reasonable precaution to protect local environments, but examination of convention regulation B-4 introduces a set of options for vessels that may require port authorities not only to provide advance information for inward ships but could also present harbor masters with situations producing conflict or requiring compromise with inward ships and their ballast discharge expectations.

Regulation B-4.4 makes it clear that masters do not have to carry out any BWE if the operation would endanger the safety or stability of the ship. Masters experiencing inclement weather on a voyage may therefore postpone or cancel the BWE process and ask that the harbor authority accepts the unchanged ballast under *force majeure*.

The port state may designate areas where BWE can take place closer inshore and in shallower waters than is recommended by the convention. This facility may be provided principally to allow coastal traffic to carry out BWE between regional ports.

IMO considers effective BWE flushing techniques to be an interim measure only until 2016, when all ships larger than 400gt should be fitted with BWT systems. These devices are capable of onboard separation and physical eradication of the plankton and bacteria carried within ballast water, bringing it within allowable limits.

For port authorities, the efficiency of a BWT system and consequently the quality of the processed water will be of importance when the ship presents treated water for discharge into the port environment.

Convention guidelines G-2 indicate which ballast

water testing methods may be considered for use by a port state or other inspectorate. There is not yet a defined common protocol that can be used at port level to determine if a particular vessel's treated ballast water meets the convention standard.

Without a recognised testing methodology, port authorities and port state control officers may find themselves in a difficult situation if they suspect a vessel is carrying sub-standard ballast water but cannot employ a globally accepted testing procedure to categorically identify any shortfall in convention criteria.

The introduction of a possible tiered approach for port state inspection, starting at initial inspection through to detailed analysis and full-scale sampling to detect compliance or non-compliance, is being considered by the IMO but a globally accepted testing method may not be available for some time after the convention comes into force.

Comprehensive port management plans, dealing with all aspects of ballast water handling in both normal and emergency circumstances will be a necessity to underpin local port requirements (see box below).

For ports that have regular trades such as fixed-route ferry and coastal services, the convention offers an exemption option under guideline G-7 whereby operators may apply for an immunity to carry out BWE or use BWT for specific vessels operating exclusively between detailed ports or locations.

Port authorities will be party to the granting of such permissions but need to be aware that such exclusions will require scientifically robust risk assessments and not simply grandfather rights arising from long-established trading patterns.

In conclusion, the enactment of the IMO Ballast Water Convention will radically alter the methodology of ships moving ballast between donor and recipient ports. Ports will have to be ready to deal with the ramifications of the legislation and operational challenges the convention will bring.

Pivotal to this will be the compilation of detailed physical and biological port assessments carried out by marine environmental specialists. This will allow a port authority to create relevant operating procedures and carry out balanced judgements in its management of IAS risks from ballast water. **PH**

More info: [www.pml.ac.uk](http://www.pml.ac.uk)

**Cougar Ace listing after a ballast water transfer in heavy weather in July 2006**

## Port management plans

Ballast water management plans will be particularly relevant when dealing with issues surrounding exchange and treatment operations. These plans will need to include:

- Baseline survey – a thorough ecological assessment of the port and immediate area highlighting incumbent species at risk along with known invaders already established. This survey will be an integral part of any decision support system allowing port authorities to determine the risk of allowing untreated or suspect ballast water discharges.
- Ballast water and sediment disposal facilities – ports may make arrangements to accept ballast water ashore but will have to consider the factors outlined in convention guidelines highlighting the required standards of treated water being returned to the environment.



Photo: US Coast Guard



Illustration: Shutterstock

# Rotterdam goes for network effect

The Port of Rotterdam Authority is looking to forge business links with developers of key industrial ports in emerging countries as a means of securing its own future growth and prosperity

**T**he idea that port authorities are essentially landlord-type entities, administering a single port complex in a clearly defined geographical location, may soon need to be reviewed. Leading European port authorities are starting to follow the example of their principal industrial customers by turning themselves into multinational entities that are ready to invest in port construction and development projects far from their traditional areas of operation.

In so doing, they are looking not just for a return on investment but also to create international networks that will secure their own future growth and prosperity.

The Port of Rotterdam Authority, which runs Europe's leading cargo port, has embarked on just such a strategy. In April, it announced plans to participate in a joint venture to be set up for construction of Porto Central on a greenfield site in the Brazilian state of Espírito Santo, north of São Paulo and Rio de Janeiro.

For the moment, Rotterdam has simply signed a co-operation agreement with project developer Terminal Presidente Kennedy (TPK). It has stated clearly, however, that it intends to convert the co-operation

agreement into a fully fledged joint venture once the relevant permits have been obtained and the first contracts with customers signed.

The new port is scheduled to open in the final quarter of 2015. This year and next will be devoted to sounding out the market and obtaining permits and then, in the third quarter of 2013, work should start on the 1,000ha first phase of what will be a general-purpose, deepwater industrial port, handling liquid and dry bulk and general cargo.

In announcing the venture, Rotterdam explained that it fitted into a "foreign policy" that it said was directed at strategic joint ventures and new international participations.

Indeed, Porto Central is not the first example of the Dutch port's plans to develop its international presence. It is already a 50% partner with the government of Oman in the Sohar Industrial Port Company, which runs the new port of Sohar.

Rotterdam signed an initial agreement on the project in 2002; two years later, industrial development and the first ship operations got under way. Today, the port is fully operational and handled more than 29M tonnes of freight last year.

Other ventures can be expected, according to Roger Clasquin, director of Port of Rotterdam International (PORint), the port authority subsidiary that spearheads Rotterdam's efforts in this sphere.

He told *P&H* that the port of Rotterdam was particularly interested in ventures in emerging countries. It is looking at possibilities in China, Russia, Malaysia, Vietnam, India and Mozambique and has not yet drawn a line under its ambitions in Brazil, where he said more ventures were likely to follow the Porto Central project.

In China, another prime hunting ground, PORint signed an agreement in March this year with Nangang Industrial Port Complex, a subsidiary of state-sponsored Tianjin Economic-Technological Development Area



in northern China, which enables it to participate in the management of the greenfield port construction project for the next five years.

New ventures could come in Europe, too. In April, a preliminary agreement was signed with the port of Taranto to study the possibility of Rotterdam involving itself in the management of the southern Italian port, which it believes has strong development potential. The port of Constanta, Romania, is also receiving attention, with talks regarding a co-operation agreement at an advanced stage, according to Clasquin.

He said that the two last-mentioned ports are potential participants in the port's European network, as opposed to the global network it is looking to establish at inter-continental level.

The factor linking all the ports in which Rotterdam wants to establish a presence is that they are, or are destined to become, “industrial” ports, serving as operating bases for industrial complexes generating large-scale traffic flows and attendant economic activity.

Container ports are not on Rotterdam's shopping list, because it considers they are unlikely to bring either it or its partners the kind of real commercial benefits that come from the presence of major industrial groups.

“We believe strongly in the concept of industrial ports,” said Clasquin. “In emerging markets, it is generally what people are looking for.” He listed three criteria for seeking to bring a port into the Rotterdam network: it should offer development potential for Rotterdam's existing industrial customers; it should be able to bring new investors to the port of Rotterdam and the other ports in its international network; and it should contribute to increasing traffic flows at the port of Rotterdam and at ports in the network.

Subsequently, the relationship would become a two-way one, based on a “push and pull effect”, he said. The port was looking for real commercial benefits in return for bringing to its chosen partners the benefits of its investment capacity, its technical and managerial know-how and its international reputation.

Clasquin noted that this strategy, which was initiated three or four years ago, had largely replaced the port's earlier approach to international relations, which had taken the form of simple consultancy contracts carried out for other ports, generally in developing countries.

Did this mean that the concept of port authorities

as single landlord port entities was moving towards something more complex?

“It's moving in the sense that [port authorities] are becoming much more a commercial partner than just a landlord port,” he said.

The strategy goes further than that, as Rotterdam is looking to further its interests and those of its clients by building around itself a network of ports with shared standards and shared commercial objectives, so as to strengthen the port's relationships with its clients.

“We are looking at making combinations and creating a cluster of activities,” Clasquin said.

The port was not looking to involve itself in cargo-handling or other commercial activities at partner ports, he said, but was looking to accompany and even facilitate the development of its industrial customers.

Clasquin mentioned groups like Brazilian steel producer Vale, Brazilian and Malaysian oil companies Petrobras and Petronas, and the large Indian industrial conglomerates as the kind of groups with which it was seeking to strengthen ties.

One of the ways the port could achieve this goal was by establishing a presence at ports and in countries and regions offering them development opportunities.

“A lot of companies would like to get access to certain markets or certain ports,” he observed, “provided that they can have the same service as they have in Rotterdam.” **PH**

## Benelux networker: 2

Rotterdam is not alone in seeking to build up an international port network. Its Belgian counterpart and nearest European rival Antwerp is pursuing a comparable policy through its subsidiary, Port of Antwerp International.

It already has a 50% stake in the port of Al Duqm in Oman, due to open next year, and is working on other alliances with developers at the Indian port of Hazira and the Brazilian port of Vitória, which like Porto Central is in the state of Espírito Santo.

It also has a long-standing relationship with the port of Matadi in the Democratic Republic of Congo. Last November, Antwerp signed a memorandum of understanding to establish a strategic partnership with the port of San Pedro in Côte d'Ivoire, the world's leading cocoa port. Under the MoU, Antwerp will provide technical assistance and training, but the agreement also sets up a commercial partnership between the two ports and prepares the way for the Belgian port to invest in future developments at San Pedro.

Most recently, Antwerp has announced that it is taking a capital stake of around 4% in Essar Ports, a subsidiary of India's Essar group, which is engaged in a major expansion of its port activities in the state of Gujarat in northwest India and at the east coast port of Paradip.





# Israel's Ashdod joins ship index



The Israeli port of Ashdod announced during a visit of IAPH delegates on 24 May that it was joining the Environmental Ship Index (ESI) programme from 1 July.

"I know it will cost us thousands of shekels, but we're sure it's another step to help our port environment. We propose to offer an incentive to shipping companies that submit a valid ESI certificate for a ship with a total ESI score of 31 points or higher," Ashdod CEO Shuki Sagis told *P&H*. He said Ashdod was the biggest port in Israel, moving 1.16M teu through its box terminal in 2011.

The port said the amount of the

incentive would depend on the ship's length overall (see table).

The Port of Los Angeles is planning to introduce ESI at the same time and other European ports have announced they

intend to join the ESI programme but have yet to announce a definite starting date. They include Wilhelmshaven in Germany, Civitavecchia in Italy, the inland port of Ghent in Belgium and

Zeeland Ports in the Netherlands.

ESI incentives are based on the vessel's engine specifications and emissions certification, the use of low-sulphur fuel and plug-in-ready capacity to use shoreside electrical power at berth. A total of 741 ships are registered on the ESI database, with 209 ships having scored 30 index points or more. One exceptional vessel – Sirius Shipping's chemical tanker *Olympus* – has scored a record-breaking 75 points.

## ESI incentives

Ship length (m)	Incentive in NIS
100–150	1,000 (\$257)
151–200	2,000 (\$514)
201–250	3,000 (\$771)
251–300	4,000 (\$1,028)
300+	5,000 (\$1,285)

Source: Israel Ports



Sagis: 'helps our port environment'

## LA has world's cleanest truck fleet

Since 1 January, every local short-haul or haulage truck calling at the Port of Los Angeles has had to meet the strictest clean air and safety standards of any major port in the world. This year marks the final stage of the port's Clean Truck Program (CTP), which in the past seven years has slashed emissions from trucks serving the San Pedro Bay ports of Los Angeles and Long Beach. Studies comparing overall emissions for 2010 with those of 2005 show a 92% reduction in sulphur oxides, an 89% drop in diesel particulate matter and a 77% reduction of nitrogen oxides – the primary pollutants associated with smog and unhealthy air.

"The Port of Los Angeles, along with our industry partners, has made the business of moving cargo cleaner and less impactful on regional air quality. The results speak for themselves," said executive director and IAPH president Geraldine Knatz.

As a result of the progressive ban adopted in 2006 and enacted from 2008, 1,473 of the current drayage fleet of 11,772 trucks serving the Port of Los Angeles had been retired from port service by the start of this year as they no longer met the port's clean air standards.

The new year also marked the end of the \$35/teu fee collected for every gate move made by trucks that did not

meet the 2007 clean engine standards during the transition. The fees generated around \$60M, which the port has used to help the haulage industry convert its fleet.

The CTP has been a crucial component of the San Pedro Bay 2006 Clear Air Action Plan (CAAP), an ambitious, ground-breaking environmental undertaking that sought to cut by 45% pollution from all port-related sources – ships, trains, trucks, harbor craft and off-road equipment – by the end of 2011. Other accomplishments include agreements with each licensed motor carrier serving the port to ensure that environmental, safety and security standards are met, which include proper truck maintenance.

Before the CTP, there was no accountability for the 16,800 trucks that called at the terminals every year.

Los Angeles has provided \$44M in incentives to bring 2,200 clean trucks (more than 20% of today's fleet) to the port, \$12.5M in incentives for natural gas-fuelled trucks and more than \$3.6M in incentives to reward companies for putting clean trucks into regular service at the port.

The programme not only put cleaner-burning diesel trucks on the road faster, it also prompted the introduction of about 900 trucks with engines that run on either liquefied natural gas (LNG) or compressed natural gas (CNG).

Los Angeles is still pushing the technological boundaries by investing in zero-emission technologies, funding the development of diesel hybrids trucks that operate on batteries while in the port area, plug-in all-electric trucks, and hydrogen fuel cell trucks. To date, the port has invested about \$6M for these projects, with a commitment to continue evaluating and perhaps funding other zero-emission technologies.

**More than 20% of the haulage fleet using the Port of Los Angeles are trucks with reduced emissions**



Photo: Port of Los Angeles

## Notable numbers

# 5%

estimated increase in fuel costs for shortsea operators in US Emissions Control Area

# 4

port expansion projects still unfinished at the time of an EU audit in 2010

# Singapore offers \$1M reward

The port of Singapore is offering a top prize of \$1M for ideas that will help it make a leap forward in performance, productivity and sustainability. Jointly organised by the Maritime and Port Authority of Singapore (MPA) and the Singapore Maritime Institute, the Next Generation Container Port Challenge is aimed at propelling Singapore 10 years into the future, creating a next-generation container port.

Registration for the international competition is open until 31 July 2012 and participants will have to submit their proposals by 31 December 2012. Submissions will be evaluated by an international panel, comprising representatives from the Singapore government and the maritime industry.

"The current landscape is such that high demands are placed on



**Singapore: brilliant ideas wanted**

port infrastructure in the world. It is especially important for Singapore as a land-scarce nation to look for innovative proposals that will allow it to achieve an exponential leap in performance, productivity and sustainability.

We believe that this competition will allow us to identify ideas that will not only benefit the port of Singapore, but also revolutionise the entire container port industry," said Captain Muhammad Segar, MPA assistant chief executive (operations).

Participants will be required to consider several operating parameters, such as a handling capacity of at least 20M teu, round-the-clock operations and 90% berth availability for ships on arrival. The designs should also be operational within the given land profile of Singapore and be environmentally sustainable. These specifications are challenges that many established container ports around the world are also facing.

The winning proposal will be announced at the next Singapore Maritime Week in April 2013.

## Baltimore installs solar 'trackers'

At the port of Baltimore, local engineering company Advanced Technology & Research (ATR) has installed three tracking solar units at ro-ro specialist Wallenius Wilhelmsen Logistics Mid-Atlantic Terminal (MAT) facility to power two all-electric vehicles. WWL calls at the Port of Baltimore several times a week, making it the company's largest port operation in North America. Last year, WWL increased the frequency of its North America to Oceania trade to four sailings per month.

The Mid-Atlantic Terminal uses the GEM electric cars to transport employees and materials around its facility. Once fully charged, the vehicles can run for between three and five days without recharging, said Michael Derby, WWL's general manager for North Atlantic operations – ocean, terminal and environmental affairs. "We hope the energy produced by the solar trackers can offset completely the power needed to operate the vehicles," he said.

The dual-panel solar units that provide the power make use of a GPS-enabled mechanism to follow the sun and produce 25–45% more electricity a day than fixed solar panels, said Robert Lundahl, ATR's vice-president for energy and automation. Because they're being used specifically for electrical vehicles, these particular solar units incorporate car-charging points on each post, he added.

If the pilot scheme is a success, WWL will consider adding more trackers. "Our goal would be to adopt the concept at other facilities," Derby said. "As an environmental forerunner in the maritime industry, we are pleased to undertake this initiative as part of our energy-efficient and emissions-reduction programmes," he added.

# Ship emissions – more work needed

European shipowners' body ECSA has urged EU institutions to put in more work to make new marine fuel sulphur limits acceptable to its members. ECSA indicated that it remained particularly concerned about the 0.1% limit due to be introduced in north European sulphur emissions control areas (SECAs) in 2015.

It said that it "appreciated" the compromise agreement reached between EU institutions in May on the introduction of a general 0.5% limit within the European Union in 2020, but emphasised that solutions still need to be found to the problems raised by the 0.1% limit. ECSA has been pressing for the EU not to introduce stricter limits than those contained in the

Marpol Convention's Annex VI. It said that outstanding points to resolve include the application of the 0.1% limit in the Baltic Sea, North Sea and English Channel SECAs in 2015.

ECSA, which has in the past indicated that it wants the measure to be introduced flexibly with owners granted exemptions and transition periods for compliance where necessary, said that "realities" still needed to be taken more into account.

The association's secretary-general, Alfons Guinier, said he feels there is scope to allow member states to apply exemptions when the IMO and EU rules are brought into member states' national legislation. He cited

the USA as an example. The waters surrounding most of North America are also set to become an ECA to which the same emissions controls will apply, but the USA has offered exemptions to certain vessels in its coastal and Great Lakes waters that would otherwise have to be taken out of service.

Guinier believes member states should be able to make similar exemptions for some of Europe's shortsea shipping industry.

ECSA maintained that exhaust gas scrubbers and alternative fuels would not be available in sufficient quantities in time to meet the 2015 deadline and that measures to prevent modal backshift – freight returning to the roads – were far from adequate.

# 689M

dollars to be spent on East African port upgrades by 2015

# 20%

estimated area of the port of Le Havre under environmental protection

# IMO gets tough on piracy

The International Maritime Organization (IMO) took a strong stand against piracy at the 90th session of its Maritime Safety Committee (MSC). The IMO's first ministerial-level meeting on piracy gave unprecedented visibility to the crisis.

IMO secretary-general Koji Sekimizu openly backed the land attack by EU naval forces on pirate bases on 15 May, emphasising that tough action of this kind was the way forward. "Tougher action will clearly indicate a strong willingness on the part of the international community to deal with this menace and, in that respect, I welcome it," he told the assembled IMO delegates.

It was the first raid by EU naval forces on pirate bases on the Somali mainland and an EU spokesman said several pirate boats had been destroyed. The EU recently agreed to expand Operation Atalanta to allow forces to attack land targets as well as those at sea.

This is the first time that EU forces have used the new rules to attack a base on the mainland. Hitherto, anti-piracy forces have been reluctant to attack mainland



Photo: DfT

“The UK is funding counter-piracy projects”

**Justine Greening**  
UK transport minister

bases, fearing for the crew of captured ships.

The IMO meeting was also addressed by UK transport minister, Justine Greening. She said the UK had announced funding for a range of counter-piracy projects, including support for regional justice systems and prison capacity building in Mauritius, the Seychelles, Tanzania and Somalia to ensure that pirates can be prosecuted and punished. "Our officials are also working to help Kenya seize pirates' assets. And together with the Netherlands we are supporting a regional centre in the Seychelles for co-ordinating intelligence and pursuing the

leaders and funders of piracy," she told IMO delegates.

Delegates also heard that capacity-building in Somalia was being addressed through five new partnerships with the UN Food and Agriculture Organization, UN Office on Drugs and Crime, UN Political Office for Somalia, World Food Programme and European External Action Service. These are expected to synchronise government-level programmes in Somalia.

The meeting endorsed the first-ever international guidelines for private maritime security companies and their personnel. Its core focus was company certification, business

requirements and management and personnel deployment.

After further debate in a working group, the MSC agreed interim guidance to private maritime security companies (PMSCs) that provide contracted armed security personnel on board ships in the High Risk Area.

The MSC agreed that the International Organization for Standardization (ISO) would be best placed to develop international standards for PMSCs based on the IMO-developed guidance and with relevant IMO participation in the ISO process for standards development.

The MSC also agreed to revisions of the interim guidance for shipowners, ship operators, shipmasters, flag states, port states and coastal states on the use of private armed security personnel on board ships to counter Somali-based piracy, to reflect the new guidance to PMSCs.

Globally, the number of acts of piracy and armed robbery against ships reported to IMO in 2011 was 544, an increase of 55 (11.3%), compared with the 489 reported for 2010. Seven crew members were killed in 2011, against two in 2010, while 569 crew members were reportedly taken hostage/kidnapped in 2011, down from 1,027 in 2010.

## Sète joins Medlink

Four years after the creation of the Medlink Ports partnership between the port of Marseille-Fos and nine multimodal platforms situated on the Rhône-Saône axis, the consortium has been strengthened by the addition of the seaport of Sète, which joined the partnership in March.

For the Grand Port Maritime de Marseille, the addition of the port of Sète to the partnership is an opportunity to forge a powerful collaboration to promote and develop

wide-gauge inland waterway transport from their hinterland for containers, solid and liquid bulk and general cargo.

Southern France's inland waterway network differentiates its ports from others in the southern range. Better access should allow both Marseille and Sète to strengthen their strategic hold in the regions of southern France that the waterways cross, including Languedoc-Roussillon, Provence-Alpes-Côte d'Azur, Rhône-Alpes and Burgundy.

The port of Sète also sees co-operation as the way to boost the attractiveness of the French Mediterranean seaboard against competing European ports, while

continuing to support the development of the waterway in Languedoc-Roussillon and to capitalise on the modernisation of the Rhône canal.

The nine trimodal platforms – Pagny, Chalon, Mâcon, Villefranche-sur-Saône, Lyons, Vienne-Sud/Salaise-Sablons, Valence, Avignon-Le Pontet and Arles – form a network covering the 550km of the Rhône and Saône wide-gauge waterway that leads to the ports of Marseille-Fos and Sète. Between them, they offer more than 2,600m of quays, 50ha of storage capacity and 460ha of additional land reserves to serve their near-hinterland population of nearly 14M consumers.

## Notable numbers

1.5

distance in km between new Maasvlakte 2 automated terminal and operating staff

41

number of US Coast Guard captain of the port zones around US coasts



# Auditors criticise EU port financing

The European Union has provided funding for port construction projects that in some cases have run years behind schedule and in others risked never being used for their intended purpose, according to a special report by the European Court of Auditors (ECA).

The court examined 27 projects that received EU finance between 2000 and 2006. Of these, only 11 had been built on time, while 12 others were delayed by an average of 26 months. The four remaining projects had still not been completed at the time the court carried out its audit in mid-2010.

Among the completed projects, moreover, the ECA found that five would need considerable further investment before they could be brought into effective use. An example was the plan to build a container terminal at Campamento in southern Spain. This had to be abandoned when it was discovered that the planned new facility was too small to accommodate many modern container vessels. It was then



Some projects, such as Le Havre's Port 2000 expansion, were judged to be an effective use of EU financing

Photo: DP World

decided to turn the facility into a special purpose dry dock but, according to the auditors, the dock was used only once for construction of a floating LNG terminal and had no prospect of being used again.

Similarly, at the port of Augusta on the Italian island of Sicily, the EU contributed to construction of the second phase of a new

commercial port. The project was completed in 2006 but, reported ECA, the facility was still idle four years later. A new quay built at the port of Arinaga in Spain's Canary Islands was also unused, the auditors discovered, while multimodal structures at the port of Bari, southern Italy, were only being partially used.

These four projects received EU

funding totalling €25.7M (\$31.8M), representing 36.6% of their total cost, according to the ECA. The projects audited by the court represented a total investment of €1.7Bn, of which €726M had been provided from EU funds.

This compares with a total €2.8Bn allocated to seaport infrastructure from EU structural and cohesion funds between 2000 and 2006. Spain alone accounted for 52% of the total, while Spain, Greece, Italy and France together accounted for 85%.

The court called on the Commission to remind member states to exercise sound financial management in their use of EU funding and to make funding conditional on the attainment of promised results in future.

It also recommended that the commission improve its project assessment procedures to enable project weaknesses to be detected and urged that aid be made conditional on the regions concerned having long-term development strategies.

## Safer tankers, but at what cost to ports?

In response to work by its Fire Protection Sub-committee, the IMO's Maritime Safety Committee intends to amend the SOLAS regulations and include additional safety measures for oil and chemical tankers. These measures will apply from 1 January 2015 at the earliest for newly built tankers under 20,000dwt with cargoes that have a flashpoint under 60°C.

The measures are intended to prevent explosions on tankers transporting low-flashpoint cargoes. They apply after loading (but before discharge) and during cleaning, and concern the mandatory use of inert gas on board tankers and the installation of inert gas

systems (IGS) on terminals and ships.

As the measures also have to be applied in ports they may affect port and terminal operations. Some European ports are worried that the additional safety measures will increase costs and turnaround times.

Maritime consultant Royal Haskoning published a report earlier this year commissioned by the Port of Rotterdam that spelled out the implications of the new measures for liquid and chemical bulk terminals and in particular their economic impact. The study showed that the time needed to inert the vessels may add 3.5 hours to a vessel's berthing time in cases where an

IGS is installed on board and loading and discharging are optimal. But failing this, dwell time may increase by up to 16 hours.

Moreover, the study said, the use of IGS will demand additional fuel consumption for power generation and other operational costs.

Commentators point out that the accidents to which these measures are a response all occurred at sea, but they will affect port operations disproportionately. The aim is to submit the report to the next IMO Fire Protection Sub-committee meeting in January 2013. The Royal Haskoning report can be found at: [www.portofrotterdam.com/en/Shipping/contact-support/Pages/publications.aspx](http://www.portofrotterdam.com/en/Shipping/contact-support/Pages/publications.aspx)

# 2,500

estimated vessels calling yearly at India's Haldia Dock Complex

# 70%

of ship emissions are estimated to occur within 400km of land

# Jerusalem gives IAPH fresh impetus

A successful Mid-term Conference with several new initiatives was rounded off with a visit to Israel's high-tech port of Ashdod

Delegates were welcomed at the start of the Mid-term Conference in Jerusalem by IAPH president Dr Geraldine Knatz of the Port of Los Angeles and Israeli Ports Company chief executive officer Shlomo Breiman.

A special guest speaker was the Israeli transport minister, Yisrael Katz, who also welcomed IAPH delegates to Israel and spoke of the government's intention to extend the railway network to the southern port of Eilat. He said the government and the Israeli Ports Company were discussing a proposal for an integrated logistics platform, including the construction of a container terminal at Eilat.

Secretary-General Susumu Naruse spoke of the resolutions IAPH has adopted, including the creation of a new committee on port finance and economics, a women's forum and the signing of an MoU with the European Sea Ports Organisation (ESPO) about a new role for ports and port authorities. The executive was also able to finalise new IAPH vision and mission statements (see p38).

ESPO chairman Victor Schoenmakers said the MoU it had signed with IAPH marked an era of greater co-operation between the two organisations that would create more scope for synergy and exchanges of know-how.

Chairman-elect of the American Association of Port Authorities, Armando Duarte of the port of Santa Marta in Colombia, emphasised the importance of providing training for port workers and said how much he valued visits to other ports to learn different approaches to port operations.

The Port Forum proper was kicked off by Theo Notteboom, president of Belgium's Institute of Transport and Maritime Management, who also addressed the increasingly strategic role that ports are playing in the supply chain and drew attention to their growing importance as information centres for the chain. Notteboom said that increasing pressure on costs left ports with a dilemma: whether their pricing policy should be based purely on business costs or on more strategic considerations.

## IAPH signs an MoU with ESPO

IAPH signed a memorandum of understanding with the European Sea Ports Organisation at the board meeting on 22 May in Jerusalem, Israel. The MoU aims to create greater co-operation between the two organisations and enhance their effectiveness in representing the interests of seaports in international maritime forums (see page 38).

For more info about ESPO, visit [www.espo.be](http://www.espo.be)



Left to right: Secretary-General Naruse and President Knatz with ESPO chairman Victor Schoenmakers and its S-G Patrick Verhoeven

Shipping analyst Ben Hackett looked at the implications of across-the-board increases in container ship sizes, saying it would lead to market volatility and consolidation in intra-regional feeder services. The rise of worldwide terminal operators could mean a move to global accounts by shipping companies instead of individual accounts with local ports, he said. Major port investments were still needed in the USA, South America and Africa.

ESPO secretary-general Patrick Verhoeven provided delegates with more detail on his organisation's MoU with IAPH, focusing on the part played by European port authorities. He called for authorities to have a more active role as facilitators and creators of a fertile business climate in ports. They should pursue a more dynamic concession policy, above all monitoring concessions after they have been awarded to private operators. Port authorities in Europe should also be independent of government and enjoy financial autonomy, he suggested.

Arley Baker, senior director of the Port of Los Angeles, described the often fractious relations between the ports of Los Angeles and Long Beach and their local environmental groups. The ports have adopted a strategy that ensures their expansion projects can go ahead while still responding to Angelenos' concerns about their environment and jobs.

The session after lunch was opened by the chairman of Israel Ports Company, Yechiel Leiter, who briefly described expansion plans at the existing container ports of Haifa and Ashdod before outlining more ambitious plans by the Israeli government to extend the country's railway network to the small southern port of Eilat. At present, the port imports cars and exports bulk chemicals, but there are plans to create a container terminal that would provide an alternative route for containerised Asian imports into Israel that currently pass through the Suez Canal to Haifa and Ashdod.

Kris de Craene, manager spatial management and environment at the Port of Antwerp, spoke of his port's pioneering attempts to bring sustainability into all areas of its operations and the implications he sees for other ports.

The first day's conference presentations were rounded off by Kieran Ring, CEO of the Global Institute of Logistics, who looked at the consequences of the changing role of port authorities from landlord to dynamic agents of business development in their ports, improving the commercial climate for private terminal operators and other port users.

The governor of the Bank of Israel, Professor Stanley Fisher, gave the keynote speech at the start of Wednesday's session, discussing prospects for both the Israeli and world economies in the rest of this decade. Wout Korving, managing director of the Dutch investment consultant Rebel Group, followed with the first of two presentations looking at current concession models and urging port authorities to rethink their concession strategies.

Professor Thanos Pallis, general secretary of ports for the Greek government, considered the benefits of intra-port competition and talked of the difficulty of identifying a minimum efficient scale for stimulating local competition.

Eric Smit, the maritime

Keynote speaker and governor of the Bank of Israel Professor Stanley Fischer (centre)



practice director for consultancy Royal Haskoning, proposed an unconventional kind of sustainable terminal for ports in low-lying areas, based on the polder terminal concept developed by Dutch engineers. Just before the coffee break, Wout Korving returned to present an analysis of port infrastructure financing, warning that traditional models of project financing may disappear because of stricter banking controls. He suggested some alternative financing instruments that port authorities and operators should consider.

After the break, IAPH-Europe MD Fer van der Laar gave a general overview of the World Ports Climate Initiative, focusing on progress in developing the Environmental Ship Index.

Martin Byrne, CEO of the New Zealand port of Nelson, followed with a gripping account of the grounding of the container vessel *Rena* and the lessons learned from the country's worst maritime incident. Rene Kolman, secretary general of the International Association of Dredging Companies, tried to recast the generally held perception of the dredging industry, arguing that it was already one of the greenest industries in the maritime sector. The last speaker before lunch, Professor Nicole von Lieberman of Hamburg Port Authority, looked at the implications of climate change for ports – above all, the impact of rising water levels and changing sedimentation patterns – and spoke in detail of the long-term planning implications for the port of Hamburg and the River Elbe.

After lunch, the conference hall was divided into four, where workshops took place in parallel on preparing strategic port masterplans, economic contributions of ports to local economies, women in the port industry, and port security technology.

The conference ended on Thursday with an all-day visit to the modern multipurpose port of Ashdod and the ancient port of Jaffa. **RH**



Group poses at Israel Museum's model of Jerusalem

Conference delegates

Asian delegates plant trees outside Jerusalem



Jerusalem mayor Nir Barkat (third right) with IAPH, ESPO and AAPA leaders

Delegates outside old Jerusalem's Jaffa Gate



Israeli transport minister Yisrael Katz (second left) at opening ceremony

IAPH board meeting



Music at opening ceremony

Delegates view the old city from the Mount of Olives





## Finance committee launched

A new technical committee on port finance and economics was launched at the Mid-term Conference in Jerusalem and Dov Frohlinger, chief operating officer of Israel Ports Development and Assets Co Ltd, was appointed chairman by President Knatz, after being approved by the board.

The committee's mission is to: "Monitor, collect, analyse and disseminate information relative to port accounting principles, budgeting, project financing, financial instruments/lending, economic feasibility studies, port economic contributions studies, tariffs and other issues related to the port finances and economics."

The new technical committee on port finance and economics should be of particular interest to port authorities wanting to play a greater role in the business development of their port.

IAPH members interested in joining the committee will be welcomed. Please contact [info@iaphworldports.org](mailto:info@iaphworldports.org).



New chairman: Dov Frohlinger

## Members resolve

The IAPH Board of Directors adopted the following four resolutions on 22 May at the IAPH Mid-term Conference/Board Meeting

### Environmental protection

The IMO adopted the Ballast Water Management (BWM) Convention in 2004 but it has not yet come into effect. Once in force, a ballast water treatment system will have to be installed on specific ship types.

Regulation D2 requires BWM systems to be fitted to ships built in 2009 and later that have a ballast tank capacity of less than 5,000m<sup>3</sup> and ships newly built on and after 1 January 2012 with ballast tank capacity of 5,000m<sup>3</sup> and over.

At its meeting in Jerusalem on 22 May, the board resolved that IAPH is concerned that invasive species transported by ballast water can cause serious biological damage to the marine environment. It urged states to ratify the BWM Convention, which is expected to come into effect as an international unified code.

IAPH also asked its members to urge their states to ratify the Ship Recycling Convention and the 2010 HNS Convention.

### Friendly organisations

IAPH has already signed memoranda of understanding for co-operation with friendly organisations that share common interests as follows:

- The World Association for Waterborne Transport Infrastructure (PIANC) in 2001
- American Association of Port Authorities (AAPA) in 2004
- Organization of American States, Inter-American Committee on Ports (OAS-CIP) in 2005.

IAPH has now entered into an MoU with the European Sea Ports Organisation to strengthen co-operation between the two organisations and explore further areas of mutually beneficial joint programmes. IAPH resolved that it supports the MoUs it has entered into with other maritime organisations and endorses them as the collective voice of the global port industry to be heard at international forums in furtherance of promoting, enhancing and protecting the interests of the industry as a whole.

### Vision and mission

IAPH seeks to represent more ports around the world at international organisations and forums. The IAPH Long-Range Planning & Review Committee has recommended that new vision and mission statements be adopted as IAPH strives to be the world's leading maritime body. The committee recommended that the board adopt the new Vision Statement, Mission Statement and objectives.

The board resolved that the new IAPH Vision Statement will be: "The Global Ports' Forum for Industry Collaboration and Excellence".

It agreed that the IAPH Mission Statement will be: "Promoting the interest of ports worldwide through strong member relationships, collaboration and information-sharing that help resolve common issues, advance sustainable practices and continually improve how ports

serve the maritime industries."

The objectives to be attained by IAPH to achieve the mission will be: to strengthen relationships among the member ports by facilitating interaction, dialogue, problem-solving and formulation of best practices; to leverage member expertise through strong technical committees and programmes that create platforms focused on resolving complex port and maritime industry concerns and building greater efficiency and sustainability for ports worldwide; to promote and demonstrate IAPH members' leadership and commitment to a cleaner, safer and more environmentally sustainable industry for the benefit of the global community; to co-ordinate with other international maritime and related organisations and advocate global solutions to issues that affect IAPH members.

### Women's Forum

The IAPH Long-Range Planning & Review Committee recommended that a Women's Forum be set up to advance and empower women in the maritime industry. The board resolved to establish a Women's Forum, authorising it to create a platform to discuss women's issues in the maritime industry, ways to encourage women to join the industry and promote training programmes enabling women to compete more effectively for positions at all levels. It authorised the forum to develop policies and recommendations on equality, advancement and empowerment of women in the industry.

The board reaffirmed that the forum will collaborate with ports around the world, and UN and other organisations to implement these policies. It also said that IAPH will establish a permanent annual scholarship for female IAPH members for training purposes.



## We value your opinions

Do you have strong views about any of the articles in *Ports & Harbors*?

Are there other industry issues you feel strongly about?

**Email your views to [ph@iaphworldports.org](mailto:ph@iaphworldports.org) and we'll be happy to include them**





Photo: IAPH

**Delegates at first session of the Women's Forum held in Jerusalem**

## Women's Forum launched

The first-ever women-only IAPH working group has been launched and its first session was held at the Mid-term Conference in Jerusalem on 23 May after being approved by the IAPH Board. This forum was created for the advancement and empowerment of women in the maritime industries, where women are still very much in the minority.

Any female IAPH members interested in joining the committee are welcomed. Please contact the forum's chair, Naomi Kogon-Steinberg, at [nkogon@aol.com](mailto:nkogon@aol.com). She has sent a message to IAPH members on page 40; see also the report of the board meeting's fourth resolution, page 38.

## Vice-chair appointed

Xavier Gesé Aperte, deputy president of Spain's Puertos del Estado, was appointed vice-chair of the IAPH Port Operations and Logistics Committee by President Knatz on 29 May. He succeeds Dov Frohlinger, who has been elected chair of the new IAPH Port Finance and Economics Committee.

Gesé chaired the Port Operations and Logistics Committee until 2011 and addressed issues such as shortsea shipping and container terminal productivity.

**New vice-chair: Xavier Gesé Aperte**

Photo: IAPH

## Visitors to Tokyo HQ

On 31 May, a delegation from Hamburg Port Authority ([www.hamburg-port-authority.de](http://www.hamburg-port-authority.de)) headed by CEO Jens Meier visited the IAPH office to exchange views on the recent Mid-term Ports Conference in Jerusalem, on WPCI and on other maritime topics with Secretary-General Naruse.



Photo: IAPH

**Secretary-General Naruse with the Hamburg Port Authority delegation**

## Dates for your diary

A selection of forthcoming maritime courses and conferences



### August

- 7–8 Breakbulk Africa Congress – Cape Town, South Africa  
[www.joc.com/events](http://www.joc.com/events)
- 23–24 Subic Bay Maritime Conference and Exhibit – Subic Bay, The Philippines  
<http://www.subicmaritimeconference.com>
- 28–29 The Future of Dredging in Latin America – Rio de Janeiro, Brazil  
[www.quaynote.com/ankiti/www?code=dred12&f=home](http://www.quaynote.com/ankiti/www?code=dred12&f=home)

### September

- From 4 Diploma in Terminal Management\* – Distance Learning  
\*15% discount for IAPH members  
[www.ibt-academy.com/tm](http://www.ibt-academy.com/tm)
- 5–6 Inland Port Logistics Conference – Oak Brook, IL, USA  
[www.joc.com/events](http://www.joc.com/events)
- From 19 Diploma in Port Management\* – Distance Learning  
\*15% discount for IAPH members  
[www.ibt-academy.com/pm](http://www.ibt-academy.com/pm)
- From 19 Diploma for Harbour Masters\* – Distance Learning  
\*15% discount for IAPH members  
[www.ibt-academy.com/hm](http://www.ibt-academy.com/hm)
- 20 Port Finance & Investments 2012 – Amsterdam, The Netherlands  
[www.millenniumconferences.com](http://www.millenniumconferences.com)
- 24–26 Coollogistics Global – Antwerp, Belgium  
[www.coollogisticsconference.com](http://www.coollogisticsconference.com)

### October

- 1–3 TOC Container Supply Chain: Middle East\* – Dubai, UAE  
\*20% discount for IAPH members  
[www.tocevents-me.com/](http://www.tocevents-me.com/)
- 1–3 14th IAIN Congress 2012 – Cairo, Egypt  
[www.pianc.org](http://www.pianc.org)
- 1–12 Seminar on Dredging Technologies – Antwerp, Belgium  
[www.haven.antwerpen.be/apec](http://www.haven.antwerpen.be/apec)
- 21–25 AAPA Annual Convention (one day for IAPH Americas Regional Meeting) – Mobile, Alabama, USA  
<http://www.aapa-ports.org>

### 2013

#### March

- 18–20 Asia/Oceania Regional Meeting – Abu Dhabi, UAE  
[www.iaphworldports.org](http://www.iaphworldports.org)

#### May

- 6–10 28th IAPH World Ports Conference – Los Angeles, USA  
[www.iaph2013.org](http://www.iaph2013.org)



# Women doing it for themselves

Vice-chair of IAPH's Long-Range Planning and Review Committee Naomi Kogon-Steinberg of Steinberg & Associates explains the objectives of the newly formed IAPH Women's Forum, of which she is the first chair

The maritime industry is still very much male-dominated, as reflected in the scarcity of women in senior positions. The number of female port directors worldwide can be counted on fewer than two hands and the number of females holding other senior positions is also very low. With this in mind, the time has come to support and encourage the advancement and empowerment of women in the maritime industry.

Women have the capability to make substantive contributions to the maritime industry in all capacities including the operation and management of ports around the world. Thus, the first steps need to be to encourage qualified and interested women to join the industry, obtain the appropriate training that will put them in line for promotions and jobs that were previously not open to them, and ensure that they are given equal pay and equal treatment. Women have proved, and will continue to prove, that the ports will greatly benefit from their services and contributions.

At the IAPH Board of Directors meeting held on 22 May during the 2012 Mid-Term Conference in Jerusalem, the board adopted a resolution to establish an IAPH Women's Forum that will aspire to advance and empower women in the maritime industry.

This forum is authorised to create a platform to discuss women's issues in the maritime industry, pursue ways to

encourage women to join the industry, promote training programmes and develop policies and recommendations on equality, advancement and empowerment of women in the industry. To implement these policies and recommendations, the forum, with the support of IAPH, will reach out to, and collaborate with, ports around the world, UN organisations, other maritime entities, other women's professional organisations and other organisations that engage in the advancement and empowerment of women.

The new IAPH Women's Forum met for the first time the day after the board meeting and was attended by about 35 women, including the current IAPH president and delegates from 14 countries, as well as the IAPH secretary general and third vice-president.

Three women, each representing a continent and holding a senior position in a port ranging from port director to director of shipping and commerce, described the challenges they faced in reaching their current positions and what lessons could be drawn from their experiences. The meeting was then opened to a general discussion and suggestions based on what the women present expected from the forum and what the next steps should be.

Judging by the energy and enthusiasm displayed at this first meeting, we can expect significant and positive results as we take this forum into the future. **REH**

“ Women have proved, and will continue to prove, that the ports will greatly benefit from their services and contributions ”

*Naomi Kogon-Steinberg*



Under the Patronage of  
His Excellency Rashid Ahmed Bin Fahad,  
Minister of Environment and Water



Minister of Environment  
and Water

**TOC**  
CONTAINER  
SUPPLY CHAIN

**MIDDLE EAST**  
[www.toc-events.com](http://www.toc-events.com)



**1 – 3 October 2012**

Sheikh Rashid Hall, DWTC, Dubai

**Offering you unrivalled access to ports &  
terminals across the Middle East, GCC,  
India and Africa**

- ☆ Executive Level Conference
- ☆ Free Trade Exhibition
- ☆ Free Seminars
- ☆ Networking

**Registration  
is now open**

**Exclusive  
Government  
Seminars**

Host  
Sponsor  
  
موانئ دبي العالمية  
**DP WORLD**

Sponsors

holman  
ferwick  
willan  
**hfw**

**IPS**

**TT CLUB**  
established expertise

Official Sponsoring Publication

**WorldCargo**  
news

Key Media Partners

**CONTAINERISATION**  
INTERNATIONAL

**Lloyd's**  
Loading List.com

Cargo Newsprint Partner

**MENA Cargo**  
News

Premier Association Partner

**PAMA**

Arabic Maritime Media Partner

**السفينة**

Supporting Organisations



The Chartered Institute of  
Logistics & Transport  
International



**DUBAI EXPORTS**  
INTERNATIONAL



[www.tocevents-me.com/ad](http://www.tocevents-me.com/ad)



# USD 1 million NEXT GENERATION CONTAINER PORT CHALLENGE



AN INTERNATIONAL COMPETITION SEEKING REVOLUTIONARY PROPOSALS,  
FOR A CONTAINER PORT OF THE FUTURE THAT WILL ACHIEVE A QUANTUM LEAP  
IN PERFORMANCE, PRODUCTIVITY AND SUSTAINABILITY.



[www.maritimeinstitute.sg/portchallenge](http://www.maritimeinstitute.sg/portchallenge)  
Registration closes: 31 July 2012

Organised by:

