PORTS HARBORS

Official Journal of the International Association of Ports and Harbors



Bulk handling at sea Indonesia pioneers offshore terminals

Economies of scale US invests to stay competitive

Harnessing the wind New business opportunities for ports

Routes to success

Intermodal links attract new customers

World Peace through World Trade – World Trade through World Ports www.iaphworldports.org

"It was simple. We cut all ties with traditional thinking."

VACUU



MoorMaster™ is currently in use in Australia, Canada, Denmark, New Zealand and Oman. Compared to lines, the system offers dramatic reductions in ship motion – for faster loading and unloading.

Cavotec's automated mooring making ports safer

Cavotec's automated mooring technology, MoorMaster[™], uses large vacuum pads that adhere to the sides of ships to safely moor or release vessels in just seconds, regardless of tides, swell or weather conditions. Safer than existing mooring techniques, MoorMaster[™] dispenses with traditional mooring lines. Cavotec MSL is a leading global engineering group, supplying innovative and environmentally friendly systems to the maritime, airports, mining and tunnelling and general industry sectors. To find out more about Cavotec and our product range, please visit www.cavotec.com.

Come and see us at RORO 2010, May 18 - 20 in Bremen, Germany and at TOC Europe 2010, June 8 - 10 in Valencia, Spain



NO MORE DOCK LINES

REGULARS

Comment Secretary General Naruse on low-sulphur fuels 3 **News** Private deal to redevelop Port-au-Prince harbor, plus 4 other port updates, dredging projects, people and more **Open Forum** Gilles Fontaine of logistics provider Geodis believes giving customers what they want is the key 12 **Cover Story** The chair of the Port Operations and Logistics Committee mulls the advantages of expanding port hinterlands; 24 Antwerp barges ahead with rail; seaports extend inland Maritime Update Ports share carbon data; emissions 36 control progress; lifeboat safety; ships blowing bubbles IAPH Info Mid-term Board Meeting in Savannah and 42 remembering former board member André Pagès Last Word Hamburg's international affairs director Manfred 44 Reuter suggests how a port can stay one step ahead

FEATURES

Routes to	Bulk handling offshore New transhipment system	ns
	have helped Indonesia become a leading coal exporter	1
	Gas by direct input Pioneering methods of delivering as from ship to pipeline have proved their effectiveness	ng 1
	Canada links The Pacific Gateway has been galvanised	l by
On the right track?	a collaborative effort between all players	1
Rail is at the fore of seaport and dry port	US puts up cash for ports Despite the recession	
connectivity	there's no slowdown in planning for 2014	2
Photo: Steve Crise/Corbis	A favourable wind North European ports are gearing	ng
	up to ride the coming boom in offshore wind power	3
	The meaning of Function of the second s	

May 2010 ISSUE 03 VOL 55



14

16





Zeeland Seaports

Zeeland Seaports Port Authority Phone: +31 (0)115 647400 Fax: +31 (0)115 647500

port@zeeland-seaports.com

People and vessels. In a nutshell, that is the driving force behind Jan De Nul Group. Thanks to the approximately 5,000 employees and its ultramodern fleet, today the group ranks at the top of the international dredging and marine related industry. Also with regard to civil engineering and environmental works, the group is one of the largest contractors.

Thanks to the supporting services of the dredging, civil and environmental division, Jan De Nul Group is able to perform large-scale projects to its clients' satisfaction, whether this concerns a Palm Island in Dubai, a new port facility in Australia or the largest wastewater treatment plant in Europe.







OFFICE JAN DE NUL N.V. Tragel 60 | 9308 Hofstade-Aalst | Belgium T +32 53 731 711 | F +32 53 781 760 info@jandenul.com | www.jandenul.com

www.jandenul.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 Allen penny.allen@ihs.com

SUB-EDITOR

Stephen Spark

ADVERT SALES MANAGER

Daniel Gonçalves daniel.goncalves@ihs.com

DESIGN & PRODUCTION

Hannah Kidd Matt Ramsdale Luke Spalding Sarah Treacy Rebecca Bailey

PICTURE EDITOR

Kelly Bundy

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

Lombard House, 3 Princess Way Redhill, Surrey RH1 1UP, UK Tel: +44-(0)1-737-379-000 Fax: +44-(0)1-737-379-001 Web: www.ihsfairplay.com SUBSCRIPTIONS

International Association of Ports and Harbors Price Japanese ¥12,000 (US\$115 / UK£60 / €87) 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 Tokvo 105-0022, Japan Tel: +81-3-5403-2770 Fax: +81-3-5403-7651 Email: ph@iaphworldports.org Web: www.iaphworldports.org

COPYRIGHT

All rights reserved. No part of this publication may be transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or any other information storage retrieval system without permission in writing from IAPH and IHS Fairplay © Copyright IAPH and IHS Inc, its subsidiary and affiliated companies, all rights reserved, 2005–10

DISCLAIMER

IHS Fairplay, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'IHS Group'. The IHS Group assumes no responsibility and shall not be liable for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant IHS Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract. Any dispute concerning the provision of IHS services is subject to the exclusive jurisdiction of the English courts and governed by English law. The opinions expressed are not necessarily those of IAPH or the IHS Group and the inclusion of an advertisement implies no endorsement of any kind by IAPH or the IHS Group of the product or service advertised. IAPH is unable to accept any liability for the consequences of any inaccuracies, errors or omissions in this publication

Printed by Buxton Press Limited, Palace Road, Buxton, Derbyshire, England



Emissions control

Low-sulphur fuels are good news for the environment provided shippers don't look elsewhere for cheaper alternatives



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

> S tatistics show that throughputs of most IAPH member ports have been bouncing back since the end of last year. This is one of many signs that the world economy is slowly recovering. Environmental matters and the economic downturn have been focal issues over the past year and the wider shipping community is considering further measures to reduce global warming.

IMO's Marine Environment Protection Committee (MEPC) failed to reach an agreement on greenhouse gas (GHG) reduction at its March meeting. However, it did adopt amendments to the MARPOL Convention to establish a North American emission control area (ECA), in which emissions of sulphur oxides (SOx), nitrogen oxides (NOx) and others will be subject to more stringent controls than the limits that apply globally.

North America joining the Baltic Sea and the North Sea as a sulphur emission control area (SECA) is likely to have far more of an impact on ports than any measures for GHG reduction that

Shortsea shipping is considered one of the prominent solutions to reduce GHGs

may be imposed by IMO or its member states. A report prepared by Antwerp University suggested that the high price of low-sulphur fuel – almost twice that of standard marine fuel – will undermine the advantages of shortsea shipping (SSS) in these regions. We must think globally and act locally to promote SSS.

IAPH is making progress. As I mentioned in the last issue, a section on onshore power supply (OPS) is now available on the

WPCI website. Members are invited to carry out a feasibility study on the introduction of OPS at their port. A database for port redevelopment is also available on the IAPH website – members can add a redevelopment project that has taken place at their ports as an example of good practice.

IAPH's technical committees and the WPCI project teams form the backbone of our association, and we wholeheartedly recommend that you get involved in one of these groups to make the most of your membership. Our mid-term meeting in Savannah in June (see page 42) will present an ideal opportunity for any interested members to participate in committee meetings.

I look forward to meeting you in Savannah. PH

Port updates

BARCELONA TENDER

Barcelona has called for tenders to construct and manage a new ro-pax terminal for shortsea shipping. **Barcelona Port Authority said bidders** will be expected to invest €20M (\$27M) to build a passenger terminal at Costa wharf.

The contract is for 15 years with an option to extend a further seven. The winning operator will be expected to build a multi-storey storage facility for ro-ro cargo if it meets a minimum target on annual traffic. Ferry services to Greece, Turkey and North Africa are on Barcelona's wish-list.

NEW LERWICK FACILITY

Lerwick, in the Shetland Islands, is to get a deepwater guay facility for decommissioning oil and gas rigs. The facility will be built by a subsidiary of Norway's AF Gruppen and Lerwick Port Authority. It will be located at Dales Voe, where there is already 12.5m of water depth alongside a 52m quay strengthened to handle heavy lifts. The project is entering the engineering and design phase.

EARTHQUAKE RECOVERY

Several Chilean ports are recovering from the huge earthquake that struck in late February. By early March San Antonio was working again although a small Paceco crane was badly damaged and three cranes were experiencing minor problems.

The TPSV container terminal used by Hamburg Süd in Valparaiso was 90% operational, although the older berths were affected by damage.

APM SAFETY IMPROVES

APM Terminals has reported that its workplace safety record improved significantly in 2009.

The time lost by 330 injuries fell 42% to 4.1 per million hours worked, which the port operator claims is "the lowest of any major terminal operating company". Five years ago APM's injury rate stood at 32.5. However, "near miss" safety incidents rose from 2,600 in 2008 to 10,151 last year - an increase that APM attributes to its workers' greater willingness to identify and report risks.



Investment is being channelled into battered Port-au-Prince in Haiti

Private money in Haitian port

Reconstruction may leave Haiti with a far better port than it had before January's devastating earthquake. Rebuilding of Portau-Prince's facilities got off to an encouraging start in March when Miami-based Santé Holding and Haiti group WIN announced they would redevelop Terminal Varreux, a private multi-purpose facility, at a cost of \$70M. A new container terminal will form part of the project.

The Rovirosa family, which operates terminals in Miami and Port Everglades, will partner Santé in developing, managing and operating the new container facility. WIN, which owns Varreux, will keep control of the dry bulk and liquid bulk/petroleum operations at the terminal.

The first stage of the three- to five-year project will involve building two deepwater jetties for container vessels for around \$25M. Construction was expected to begin in mid-May and container operations should start mid-year.

Before the earthquake, 70% of Haiti's fuel was imported through Terminal Varreux. Dockside fuel pipelines and dry bulk handling infrastructure were damaged, but were rapidly repaired to permit fuel imports.

At Port-au-Prince's publicly owned port the earthquake caused several quay cranes to topple into the sea and caused extensive damage to berths.

The Santé/WIN redevelopment represents the largest private investment earmarked for Haiti since the disaster struck. One report has suggested that Haiti needs \$11.5Bn to recover from earthquake damage.

The private terminal is located about 3km north of Port-au-Prince's main public port. In effect, the capital will receive a new multi-berth port with a 60ha common-user terminal able to accommodate container and break-bulk shipping - and existing berths will be repaired and expanded.

"Once completed, this project will not only support Haiti's ongoing relief efforts, but lay the foundation for the overall modernisation of the country's shipping industry," explained Youri Mevs, WIN's managing partner.

"People really needed to see a project like this to know that there is a better future for Haiti," Mevs said. "We import almost everything we use and a healthy port system has an impact on every segment of society. If Haiti wants to enter this century, we must have structures that work and that can deliver results." WIN is building the \$45M West Indies Free Zone industrial park near Port-au-Prince's impoverished Cité Soleil district. Santé Holding subsidiary Santé Shipping Lines offers direct container service from the Miami River to ports in northern Haiti.

The new port facilities will "greatly increase" the capacity of Port-au-Prince to accommodate continued demand for relief and recovery cargo, a spokesman said.

LNG boom predicted

World LNG volumes are expected to rise at a faster pace this year, JP Morgan Chase has reported. The rise is forecast to follow a boost in global gas demand and the start-up of additional LNG projects. "Large new LNG liquefaction plants are ramping up and several more are scheduled to start up through 2010 and into 2011," the report said.

The rebound in global LNG shipments was

already under way at the end of last year, with the last two months of 2009 seeing the strongest world LNG exports on record, chiefly attributable to surging Chinese demand.

Record gas purchases by China and increased European demand more than compensated for a decline in imports by traditional buyers such as Japan, South Korea and Spain.

ClassNK supports green initiative

Japan's maritime front runners are getting serious about the environment, with news that \$95M has been earmarked for three years' research into reducing greenhouse gas (GHG) emissions.

Japanese classification society ClassNK is contributing \$25M of the overall amount. Other project participants include shipbuilders IHI, Kawasaki and Mitsubishi Heavy Industries; shipping companies "K" Line, NYK and MOL; research bodies; and several local manufacturers and suppliers.

When the initiative was announced by ClassNK's chairman and president Noburu Ueda, he emphasised that while class societies should "take a leading role in the reduction of greenhouse gas emissions... our commitment as an industry must go beyond merely helping to establish goals for reducing maritime emissions.

"We must actively contribute to developing, funding and promoting concrete, practical technologies to make the achievement of these goals a reality," he said. Ueda is due to become chairman of IACS in July.

Since last year Japan's national R&D effort to reduce emissions has been co-ordinated by the country's Ministry of Land, Infrastructure, Transportation and Tourism (MLIT). The ministry is already assisting more than 20 environmental projects that are currently being conducted by the maritime sector in Japan. Several other classification societies are developing projects aimed at cutting shipping's emissions. In the UK, for example, Lloyd's Register's strategic research division is exploring the potential for nuclear propulsion, although it concedes that this technology is "not likely to be a realistic option for most operators in the near future".

Useful steps, and clear cost savings, can be made by improving engine efficiency and hull design to minimise fuel consumption.

Slow steaming has already been adopted by a number of shipping companies including the AP Møller-Mærsk Group.

Adopting an engine load of 10% can reduce fuel use and CO_2 emissions by 10–30%, according to Mærsk. For a post-Panamax container ship this represents an annual saving of 3,500 tonnes of fuel (\$1M) and 10,000 tonnes of CO₃.

"The savings potential of slow steaming is a lot bigger than previously thought," said Maersk Line's head of sustainability last July.

Germanischer Lloyd in Germany also offers a service called FutureShip designed to improve ships' fuel efficiency.

"FutureShip takes a holistic view of a ship, be it in the conceptual phase or currently in service. Not only hydrodynamic aspects, but also onboard systems and operations are considered," explained GL.

Yangtze river port boom

Renovation and expansion projects along the River Yangtze are worth Rmb27Bn (\$4Bn) in investments, according to the first phase of a Yangtze River Administration survey. The projects, covering 2,838km of navigable river, are either under construction or planned and likely to be approved.

Of the 73 ports that responded to the survey, 46 submitted details of their projects.

Shopping list items include handling equipment for bulk, break-bulk, containers, ro-ro and oversize cargo, as well as operations management software, vessel-to-shore communications systems and other technology.

All ports on the river have been encouraged to upgrade their handling equipment and technology as part of a central government-driven programme to modernise the waterway by 2020. Tax rebates are being made



On the Yangtze... massive investment is planned

available to Yangtze ports, among other incentives. The ports are also one of the major beneficiaries of the government's Rmb4Trn stimulus package announced in November 2008.

The river administration is working with Yangtze Business

Services to organise a summit in Wuhan on 25 May that will bring together Western suppliers and Yangtze ports. Many of the participating ports have also expressed interest in joining an overseas fact-finding and procurement trip later this year.

Port updates

FRENCH STORM

La Rochelle was badly hit by the severe storm that battered France's Atlantic coast in late February, causing flooding and some damage to quays. However, the port took protective measures including the use of a tug to reinforce mooring lines, which minimised the impact on shipping, and it reported no major damage, although outside the harbor high winds parted ships from their anchors.

RTGs FOR PERNAMBUCO

Pernambuco, Brazil, has received eight new rubber-tyred gantry cranes (RTGs). The Noell-manufactured machines will work at ICTSI's Tecon Suape container terminal and are part of a \$45M investment. Each RTG offers a lifting capacity of 41 tonnes.

PORTLAND FREEZES DUES

The Port of Portland, southwest England, has frozen its harbor dues, berthing dues and pilotage fees until the end of this year. Portland Harbour Authority's commercial manager lan McQuade commented "It is clear the next 12 months will squeeze shipping and the supply chain, putting yet more pressure on margins. We are freezing prices, as we are always keen to support our customers."

TYNESIDE BOOST

Online and television shopping business JML is switching its retail operation from Dartford, southeast England, to the Port of Tyne in the northeast. The move means that stock supplied to major retail groups such as Asda and Boots will be dispatched from Tyneside. JML's operations director Shaun Tebble said he expected container volumes to "rise by almost 500%, from 350 to 1,500 containers a year, as a result".

YARMOUTH HARBOR

Great Yarmouth's new outer harbor at EastPort UK opened in January. PSA International, UK grain company Gleadell Agricultural and Stema Shipping, one of northern Europe's largest supplies of crushed rock, have all agreed to a long-term commitment to the multi-purpose outer harbor.

Port updates

UPLOADER FACELIFT

Cement importer Sin Heng Chan has hired Cargotec for a major refurbishment of its Siwertell ST-490F ship unloader at its Singapore terminal. "The unloader will be updated with the latest versions of both hardware and software to simplify operations," said Cargotec's sales manager Daniel Frostberg. "It will also reduce wear and tear costs and improve performance and reliability," he said.

ITAJAÍ GETS DEEPER

The Brazilian government has approved further capital dredging of Itajai's approach channel and turning basin – from the current 12m to 14m – in a bid to keep the port competitive. Authorised in early March, the project's estimated to cost \$36M and tenders were due to be announced as *P&H* went to press.

The objective is to allow 8,000teu container ships with a draught of 13m to use Itajaí, the main port of the state of Santa Catarina.

FIRST LNG DEAL

Rotterdam's Gate terminal consortium has signed the first LNG supply deal to feed its import facility being built at the Dutch port. One of the terminal's co-owners, Denmark's Dong Energy, has committed to buying 1Bn m³ of LNG a year for 10 years from Iberdrola of Spain, starting from the end of 2011. "The agreement with DONG Energy underlines the importance of long-term contracts in achieving security of supply," said Angel Chiarri, Iberdrola's energy chief.

HANCOCK IN HEDLAND

Hancock Prospecting's Roy Hill iron ore project in Western Australia expects to start its first shipments from Port Hedland by the end of 2013. Nonbinding deals with customers already account for 80% of the Pilbara project's proposed start-up capacity of 55M tonnes a year. Roy Hill is located near Fortescue Metals' Christmas Creek mine and is about 260km south of Port Hedland. It has a 2.4Bn-tonne resource, of which about 1Bn tonnes offer grades of 55% iron or higher. Concept ore-carrier Ishin III recovers heat energy

MOL's next Ishin is ore-inspired

Mitsui OSK Lines (MOL) in April unveiled the concept for the third in its series of next-generation vessels: an environment-friendly, large-scale iron ore carrier called the Ishin-III.

MOL operates the very large iron ore carrier *Brasil Maru*, delivered in December 2007, which offers a high level of environmental performance. Ishin-III makes use of the characteristics offered by that vessel class and also utilises advanced engine technologies.

According to the company it is a "highly viable concept, aiming to further reduce MOL's environmental burden by maximising the use of technologies the company has developed and adopted."

The design consists of two main features. The first is a system of waste heat energy recovery to assist propulsion – heat from the main engine is converted to electricity.

The second feature is a turbocharger said to be highly efficient when operating at low revs per minute. The combination of this turbocharger and an electronically controlled main engine reduces CO, emissions even during low-speed transits.

The company claims that by introducing a combination of new technologies in the Ishin-III, CO, emissions will be reduced by 30%.

Antwerp goes international

The Port of Antwerp aims to strengthen the port's competitive position worldwide by developing its activities beyond Europe, especially in regions with the growth potential to generate cargo for Antwerp. The port has launched a new subsidiary, Port of Antwerp International (PAI), the successor to Antwerp Port Consultancy (APC).

"We see a great demand for effective support from a large number of countries. This can be an important leverage point for us to expand Antwerp's presence abroad," said the company's director Yannick Dufraimont.

PAI will put the port authority's 'maritime foreland policy' into practice by acquiring stakes in foreign port projects with a reliable rate of return. It is looking at strategically important regions such as the Middle East, India, sub-Saharan Africa and Brazil.

The foreland policy is intended to create stronger commercial links between Antwerp and other maritime regions, as well as raising Antwerp's name recognition and boosting its image, leveraging its know-how and supporting Antwerp port companies abroad.

PAI's Nico Vertongen added: "We believe it is logical to progress from training and consultancy to greater involvement in management support, for developing, operating or even investing in foreign ports or networks of ports. The most important foreland projects are actually an extension of our current activities, taking them to the level of implementation."

Short on boxes, tight on capacity

European shippers have been warned that delays, equipment shortages and cargo backlogs in the container trades to and from southeast Asia and the US will continue over the coming months because carriers refuse to introduce more capacity. The slowdown in teu liftings in southeast Asian ports over Chinese New Year in February was shortlived. Currently, "many carriers are booked out well over 100% again; there is no letup in the capacity shortage," said German forwarding group DB Schenker.

Backlogs and rollovers of containers in Asian transit ports may increase further as container traffic returns to yearon-year growth. Bottlenecks are also emerging in the eastbound export trade to southeast Asia, with ships increasingly reaching their deadweight limits because of the high proportion of heavy cargo containers when they sail out of northern Europe.

Carriers are applying overweight surcharges as well as prolonged peak season surcharges in a bid to raise their operating margins once more, DB Schenker pointed out, which warned: "There are similar scenarios looming as in the westbound trade."

Space is also extremely tight on the transatlantic route between northern Europe and the USA after carriers rapidly pruned back service capacity last year.

In contrast to the southeast Asia–Europe route where spot freight rates have recovered to 2008 levels, rate restoration attempts on the trans-Atlantic routes are lagging behind.

Rates on the benchmark route from Bremerhaven to New York are only at 60% of the peak level of early 2008, DB Schenker noted.

Intelligent Drivesystems, Worldwide Services



NORD GLOBAL ALWAYS CLOSE TO YOU

Thanks to our worldwide network* of assembly and service facilities, NORD is always close to you because we rely on local roots for globalisation. At the same time we control our processes throughout the world, quickly and effectively, with GLOBAL NORDNEt. You can find out more about NORD DRIVESYSTEMS at www.nord.com. *2.300 employees in 35 NORD assembly and service facilities in over 60 countries throughout the world enable us to take a global view but still remain close to our customers.

Getriebebau NORD, 22941 Bargteheide, Rudolf-Diesel-Str. 1, Fon +49 (0) 45 32 / 4 01-0, Fax +49 (0) 45 32 / 4 01-2 53, info@nord-de.com









Port Talbot Tel: 01639 895815 Gloucester Tel: 01452 726999 Bodmin Tel: 01208 78440 Winsford Tel: 01606 863343 Wexford (IRL) Tel: 00353 87 2310577 **Pump Supplies** owns and operates the largest hire fleet of electric submersible pumps and accessories in the UK.

As a leading provider of **Flygt** pumps we offer a robust and reliable solution to any pumping problem whether it be temporary or permanent, hire or purchase. For flow diversion, sewer overpumping, failed unit replacement or storm / nuisance water transfer, we have it covered. Equipment to handle sludges and slurries is also a speciality.

And our service extends beyond hire, sales and installation. Whether an emergency or planned maintenance, we can quickly provide technical support and resources to any location in the UK or Ireland.

The solution is clear.



Cash & Cargo

GROWTH SIGNS

Recent container throughput at the Port of Los Angeles has shown early signs that trade might recover this year from 2009's depressed total of 6.7Mteu. At 525,458teu in February, box figures were up almost 27% on the same month the year before – although the latter marked a recession low point. The port forecast "moderate growth" for the remainder of 2010.

ST PETERSBURG BOXES UP

Russia's largest box facility, St Petersburg's First Container Terminal, has reported a 25% increase in transhipment in the first two months of this year. The figure rose to 156,200 teu compared with the first two months of 2009. Russian consumer demand growth continues to be weak and is keeping imports down.

NOVOROSSIYSK UP ON TEU

The Russian commercial seaport of Novorossiysk saw container throughput climb 29% in January and February, compared with the same months in 2009. Although box numbers were up to 46,300teu, the port's overall cargo volume rose only 2.3% to 14.1M tonnes. National Container Company's Nutep terminal saw throughput rise 35% to 28,200teu over the same period.

FORTH PROFIT FALL

Forth Ports has revealed that its underlying profit for 2009 fell 8.5% to £33.2M (\$49.9M), compared with 2008, which it said was "in line with expectations" given the recession and a £12.3M write-down on the value of its Nordic recycling arm. In March, Forth Ports said a \$920M takeover bid offer from Northstream's consortium was still too low, although CEO Charles Hammond agreed to meet the bidders, which already own 27.5% of Forth.

ROTTERDAM BOOST

Port of Rotterdam Authority plans to up investment from €341M in 2009 to around €500M in 2010 and about €700M in 2011. Those increases are being driven by the Maasvlakte 2 project and also development of the existing port area.



Singapore is offering a 10% discount

Dues diligence and discounts

Three Italian ports have slashed their port fees and dues by 90% in a bid to attract transhipment business. In addition, Singapore and Long Beach are offering 10% discounts, while others have frozen their fees or are offering discounts for 'green' vessels. The move, said Graziano Milia, president of the Italian Port of Cagliari, "puts us back in fair competitiveness terms with some ports in the Mediterranean".

Although by no means a universal process, the downward pressure on dues has been in evidence for almost two years – as long as the global economic downturn. There are signs that the reductions will continue for at least this year as shipping operators continue to feel the pinch.

Antwerp, for example, is freezing most of this year's dues at 2008 levels and has reduced dues for transhipment of break-bulk and conventional cargoes.

The primary rationale for lowering fees is to stem losses in port freight volumes and to support hard-pressed shipping customers. But with the lower income that results, it may be necessary for ports to renegotiate labour arrangements.

"Nobody can deny that the Port of Antwerp has lost some trade in

the past years due to the overly rigid work organisation in freight handling," Alderman Marc Van Peel said in a statement reported in November.

Reasons for cutting fees vary. Maritime and Port Authority of Singapore (MPA) chief executive Lam Yi Young said Singapore's aim was to help the shipping industry lower business costs and boost the port's attractiveness as a hub for maritime businesses.

In parts of the world where trade has been less severely affected, such as Australia, price reductions are not so common. Melbourne increased its wharfage charges by 2.5% last July, partly to recoup heavy investment in channel deepening.

Ports also face a choice

between carrot and stick when it comes to encouraging more environment-friendly operations. Long Beach, for instance, has introduced a 50% discount for vessels that sail at no more than 12kt within 40nm of the coast. Already, about 70% of ships are keeping to that speed limit, but the port hopes to raise that figure to 90%.

In the third quarter of this year Rotterdam is expected to make a final decision on cutting its fees for cleaner-running ships from 2011. This follows a "one-off recession discount" of 5% in 2010.

In mid-2008 Port Metro Vancouver said ships certified as 'green' by the Green Award Foundation would receive a saving in port dues of 26%.

Recent examples

- Singapore 10% cheaper dues for all oceangoing ships extended for six months to 30 September
- Long Beach, US 10% discount extended to the end of this year for containers originating from, or heading to, locations outside the local area
- Cagliari, Gioia Tauro and Taranto, Italy cut port fees and anchor dues by 90% in a bid to attract transhipment business
- Odessa, Ukraine offering a 20% cut in port dues for cruise ships in the 2010 season
- Antwerp, Belgium lower dues for transhipping break-bulk and conventional freight
- Portland, UK harbor dues frozen until the end of 2010.

European Cruise Council's 'Green Attitude'

The Port of Helsinki has presented the European Cruise Council (ECC) with its Green Attitude Recognition award for active partnership in developing an environment-friendly port.

Last year, the cities of Helsinki and Turku made an appeal for an improvement in the state of the Baltic Sea. The commitment, presented in the Baltic Sea Challenge, aims to reduce the environmental burden on coastal waters and the Baltic Sea caused by the functions of the cities Helsinki and Turku themselves.

An important aspiration is to promote the practice

of discharging wastewater from passenger ships to city sewer systems. The ECC has risen to the challenge and all of its 23 members have made the commitment to discharge their wastewater to the Helsinki city sewer.

Another example of ECC's environmental responsibility was the Green Cruise Day organised recently when the cruise companies presented their solutions to reduce the environmental impact of cruise ships to decision-makers, environmental authorities and people living near the port.

Machado calls for shift to sea

The Brazilian transport matrix should be restructured immediately, according to Sergio Machado, the president of Transpetro, the tanker and logistics arm of Brazilian oil giant Petrobras.

Machado, attending the launch of an offshore supply vessel at the STX Shipyard in Niterói, across the bay from Rio de Janeiro, said: "In a country with continental dimensions such as Brazil, we cannot continue to move 70% of our cargo on the back of trucks."

Transpetro is undergoing a \$4.9Bn fleet renewal programme (Promef), and Machado wants to see more goods (including soya, petroleum and gas) moving by sea rather than by road.

He also wants to see ethanol one of Brazil's fastest-expanding industry sectors - moved around by barge rather than truck. And with this in mind, Transpetro announced a tender in mid-March for the construction of 20 barge convoys (20 pusher tugs and 80 barges) to operate along the Tietê and Paraná rivers. Ethanol will be moved from refineries to a pipeline near Campinas, from where it will be piped down to vessels berthed at the ports of São Sebastião and Rio de Janeiro ready for export. It is estimated that the project - to be called the Promef Waterway - will cost around \$200M.

The new waterway convoy operation is part of Petrobras's programme for integrated ethanol transportation logistics, which includes building new pipelines, collection centres and terminals.



Sergio Machado of Petrobas wants a choice of logistics

With the construction of the barges and pusher tugs, around 2,000 new jobs are expected to be generated, 400 of which will be direct and a further 1,600 indirect. Some 25 shipyards in Brazil are ready to bid for the contracts.

Machado launched his "green and intermodal" message at the launch of an anchor handling tug supply vessel for Norskan at the STX shipyard. He was accompanied by President Lula's chief of staff. Dilma Rousseff.

It seems that part of the next presidential election strategy for Lula's PT party – he is backing Rousseff as his successor – is to push for more investment in infrastructure and transport, including shipyards and ships.

Brazil, as Machado pointed out, has 8,000km of coastline and another 42,000km of navigable waterways, and in his view a change in emphasis can only come about via a change of mindset and by building more ships.

Earlier he told *P&H* that "the majority of cities in Brazil of more than one million inhabitants are located close to the sea" and this means many cargoes "should be moved off the roads, especially for distances greater than 500km".

Machado added: "Logistics used to be very important during our past. And now, in the era of the pre-salt [deep undersea] oil finds, its return is fundamental. Good logistics and transport choices guarantee competitivity."

Pedro Brito, special minister for ports, joined in, saying: "We have been dominated for too long by road transport, which is the most expensive and most polluting of all forms of transport. We are now working with a new national logistics plan that will allow us to double the percentage of fluvial transport from today's 13% up to 29% by the year 2025."

He added that the Reais1.5Bn (\$800M) that the federal government was already spending at Brazil's 20 leading ports as part of its PAC1 (Programa de Aceleração do Crescimento) economic package was already paving the way for an expansion of the sea and waterway transport systems. Brito said that another package, PAC2, is being prepared to earmark more funding for port and transport infrastructure. PAC1 totalled \$140Bn, of which around \$20Bn was directed towards transport and ports.

Dredging

COCHIN DREDGED

Dredging India's Cochin Shipyard will start on 1 September and should be finished by 31 December. Work will be carried out from the north end of Quay 1 to the south end of Quay 3 up to 120m from the quay line. The area is divided into three zones with final depths of 8.5m, 7.5m and 9m.

CROWDY LOSES SAND

Work is just about to get under way on a \$400,000 programme to repair and upgrade Australia's Crowdy Head Harbour, including dredging 10,000m³ of marine sand, which is restricting vessel access. The sand removal should improve safety for professional fishermen and the public.

DEVONPORT DREDGED

Port of Devonport, Tasmania, will undertake major dredging work in conjunction with a A\$30M (\$27.3M) upgrade by one of its largest customers, Cement Australia. The company is planning to expand its bulk storage and loading facilities at the port. The three-year project will see two small silos demolished and replaced with a larger one, while pumps, compressors and railway facilities are all to be upgraded.

ELBE AVAILABILITY

Future River Elbe maintenance dredging will aim to ensure a minimum fairway depth of 1.6m on 345 days a year, Enak Ferlemann, Germany's federal transport ministry secretary of state, announced in March. The move is designed to encourage use of the river for inland waterway transport after forecasts indicated that cargo volumes would increase significantly, while predictable fairway depths will also boost competitiveness.

CO-OPERATION IN INDIA

India has begun dredging the River Ichamati to restore navigability and prevent flooding caused by the emergence of a 20km shoal. West Bengal's irrigation and waterways minister, Shubhas Naskar, inaugurated the programme at the Pipli–Goga border with Bangladesh in March.

People

NEW CHAIR AT ECC

Manfredi Lefebvre d'Ovidio was appointed chairman of the European Cruise Council (ECC) on 1 April. He is currently chair of Silversea Cruises. Lefebvre takes over the position from David Dingle, CEO of Carnival UK. Pierfrancesco Vago, chief executive officer of MSC Crociere, assumes the role of ECC vice-chairman.

SPC APPOINTS EXECS

Master Mariner Bryan Smith has been appointed chairman of the Sydney Ports Corporation (SPC), it was announced in March by Australia's Ports and Waterways minister Paul McLeay. Smith's previous positions include general manager of Patrick Stevedoring Company and regional director East Asia for P&O Ports, and subsequently VP and MD South East Asia for DP World.

McLeay also announced the appointment of two new directors to the board of Sydney Ports Corporation, John Brogden and Talal Yassine.

AMSTERDAM APPOINTS

Janine van Oosten became the new harbor master of Amsterdam on 1 April. Since December 2008 van Oosten has been head of the port's traffic control and posts since 1995 cover (interim) manager, adviser and trainer in the field of human resources and change management, spending the last five years as a consultant.

She succeeds Astrid Kee as head of the Nautical Sector at the Port of Amsterdam, harbor master and director of Central Nautical Management.

CARIBBEAN DIRECTOR

Christopher Alexander has been appointed director of maritime affairs at Saint Lucia Air and Sea Ports Authority. He will be responsible for planning, organisation and direction of the division's activities, including administration of maritime legislation. A former maritime lecturer, Alexander declared: "One of my longer-term goals is to develop a centre to provide basic safety training for crew operating within Saint Lucian waters, targeting mainly commercial vessels."



Sustainable design

Hamburg Port Authority jury has awarded Royal Haskoning first place in a competition to create a concept for the development of the Central Terminal Steinwerder.

The engineering and environmental consultancy's design called 'Port Evolution' is based on a sustainable urban maritime development.

Slow steaming not on time

As more shipping lines adopt slow steaming to reduce fuel consumption, there have been fewer on-time arrivals at ports.

Drewry Shipping Consultants said the "unexpected deterioration" in schedule reliability affected all major east–west trade lanes in the last quarter of 2009.

Of nearly 1,600 vessels tracked during the period, only 53% arrived on the scheduled day or the day before. This compares with scores of 60% or above in the previous nine months.

"Such a low percentage of ontime arrivals clearly has a negative impact for ports and terminals, who have to schedule berthing windows and labour. There are also issues regarding mother ships missing connections with feeder ships, which can lead to cargo being rolled over and left at port," the editor of Drewry's Freight Shipper Insight report, Simon Heaney, told *P&H*.

"To some extent, congestion pressures at container terminals have eased with the falloff in demand for goods, but as demand is now picking up again and more ships are reactivated from lay-up, congestion issues will likely resurface."

Service reliability needs to improve rapidly to nip congestion in the bud, the consultant felt.

Each of the main east–west trade lanes experienced a fall in on-time performance in the last three months of 2009, with transatlantic services dropping to 55% (from 70% the previous quarter) and trans-Pacific services slipping 10% to 54%.

Consequently, Drewry's advice to shippers using these core trades is to add another day to carriers' schedules to take account of the average one day's delay.

In theory, slow steaming should improve reliability, as it creates a buffer in the schedule. "It seems that carriers are not prepared to put their foot down if they fall behind schedule," Heaney said.

"The benefits of slow steaming seem to be entirely skewed towards the carrier in terms of fuel cost savings and capacity restriction," he said.

Royal Haskoning's terminal concept is truck-free

Royal Haskoning's concept proposes a CO₂-neutral, automated, truck-free container terminal that maximises land use and minimises the size of the container terminal area. In the plan, the terminal takes up about four-fifths of the site. This leaves space for public access to a wetland park – which incorporates landscaping and a water wall – and to other areas accessible by public transport including water taxi.

The concept includes areas for education, recreation and tourism situated alongside the wetland park, a landmark building and a port administration building that incorporates public spaces for training, exhibitions, a restaurant and a viewing area.

The design also includes alternative ways to generate power, including tidal current turbines and wind turbines.

APM Rotterdam is AEO certified

APM Terminals Rotterdam has become the latest terminal to have become AEO-certified.

Certification as an authorised economic operator (AEO) was proposed by the EU in 2005 as a means of assuring security in international trade and in response to the creation of the Customs-Trade Partnership Against Terrorism (C-TPAT) in the US. It is the first port operator in Rotterdam to be so designated and the certification will enable shippers to cut four to five days off their supply chain schedule.

"As part of the logistical chain, APM Terminals Rotterdam can be placed in the 'Green Lane' of AEO-certified logistical links, allowing a smoother and faster service to our customers," explained Leo de Werker, customs specialist at APM Terminals Rotterdam.



Power Under Control.

The pioneering Reachstacker from Linde delivers the ultimate in refined power for greater reliability and handling performance.

First-rate agility, superb precision and smooth control – everything a Reachstacker should be!

Unleash the power.

Linde Heavy Trucks: Engineered for Perfection

For further information on your nearest Linde dealer, contact us at:

Linde Heavy Truck Division Ltd Linde Industrial Park, Merthyr Tydfil CF48 4LA, GB Phone +44 (0) 1443 624200, Fax +44 (0) 1443 624302 E-mail info.forklifts@linde-htd.com, www.linde-htd.com





Don't 'dwell' during the recession

Gilles Fontaine, from logistics provider Geodis Global Solutions, tells P&H that giving customers want they want is the secret to surviving the recession

'e live in a 'customer first' society. It is no longer a case of simply getting the goods from A to B. But today, as the global supply chain brings together the collection of goods, delivery to export port, organisation of sea freight, warehousing and customs clearance at the arrival port and delivery to destination, it is possible to base logistics solutions on the needs of customers.

From the perspective of a global logistics services operator on the climb out of economic recession, ports are integral to the company's aim of offering customers lower costs and greater efficiency.

The high cost of fuel and the effects of the economic downturn led ocean carriers to reduce speeds. This slow steaming has increased lead times, which hit our customers' cash flows because goods remained in the supply chain for longer. To offset this, I believe

it is reasonable to seek some improvement in the average five to seven days' dwell time that a container spends in port.

Many parties have a role to play in minimising the time lag between a box being offloaded from the ship and being ready for collection by the hinterland transport operator. The solution does not necessarily lie in larger terminals and faster handling equipment but may instead involve better management by all players involved in port servicing, including the port authority, terminal operator, ocean carrier, customs officials, freight forwarders and onward transport providers.

It is essential, therefore, that a port, or a port community, operates with efficient data exchange and under government programmes that promote customs clearance by electronic data interchange (EDI). Ports also need to foster the relationship between the terminal operator

and the ocean carrier and forwarder.

The international supply chain demands speedier movement of trucks through ports, together with closer working relationships with trucking companies, especially those engaged in inter-terminal operations.

Today's challenging road conditions and increased pressure on operators to be environmentally responsible mean we need to consider our transport options carefully. Geodis Global Solutions appreciates that customers – who are themselves under pressure - are looking for greener logistics solutions and need to be assured of a port's green credentials to maintain this momentum across the supply chain, both in terms of cargo handling and sustainable development.

Inland waterways are known as an environment-friendly mode of transport. However, if a barge operator does not deliver to the terminal for loading on to the vessel in time, or if there is no available slot at the terminal, containers will be short-shipped, resulting in a four- or five-day wait until the next vessel arrives. This scenario will not achieve the reduced box dwell times we are all



keen to secure. Ports need to facilitate the seamless fit of all three hinterland modes into the global supply chain.

Economic recovery is fragile. Gradual volume growth and efficiencies are intrinsically linked. The industry was hit by the economic downturn as customers shipped lower volumes of cargo, resulting in revenue falls of around 20%. Geodis Wilson's freight rates plummeted, although they are now moving towards sustainable levels.

The Geodis group has benefited from being owned by French rail and freight operator SNCF for over a year. During the downturn, this provided stability and gave us the advantage of being able to plan future strategy when other companies were struggling simply to survive.

Our strategies place considerable emphasis on end-to-end solutions, particularly for major customers. The crisis forced us to look at all our costs in detail; the exercise included reviewing old spending habits and adopting new systems in areas such as IT. We also looked at our 'core carrier' programme and, in recognition of the pivotal role played by ports, we set up the Port Logistics Project. This has enabled us to identify gateways where we can reinforce our presence and offer customers the most comprehensive solutions.

Much had already been achieved. Geodis

Global Solutions has entered a joint venture in Antwerp with Nova Natie to meet the specific needs of one customer. We have also established a gateway to the Maghreb area through our Geodis Wilson facilities at Tangier. We can maximise the benefits available to us through SNCF, by making use of its wide range of railway solutions.

We have identified our current activities in each port, the services we provide and the initiatives we could set up. We are also investigating areas where we do not currently have a presence. Inbound and outbound flows, warehousing, full container load (FCL), less than container load (LCL), specialist handling and customs performance have all been taken into consideration. Our aim is to optimise every element within our control to reduce that crucial dwell time.

This factor is fundamental when considering our preferred ports, their efficiency levels and their proximity to our customers' operations. Preferred ports will be those that best fit into our keenly costed model, initially in Europe and then worldwide.

As we emerge from the downturn, Geodis Global Solutions will pick up on the changes that the recession forced our customers to address. Customers increasingly expect their global service provider not just to move goods along their chosen route, but also to assist in

Customers need to be assured of a port's green credentials

Gilles Fontaine *Corporate sales and marketing manager*

and advise on network design. We advise whether moving their goods through a particular port will increase their inland or secondary transport costs.

Support of this kind becomes essential as container ships move beyond the 10,000teu league. I therefore call upon both ports and carriers to start a dialogue with the industry before the calling patterns of these massive vessels are rationalised.

Transporting goods through a combination of sea and air transport options (sea-air), is gaining interest from high-technology and retail customers for whom timeliness is crucial. This could be an area of opportunity for ports, but it is reliant on slick port transfers at the modal switch.

Ports close to production or consumer regions will benefit in the post-downturn economy, partly because of associated environmental benefits such as reduced emissions. In this case, the port interchange will be vital to workable end-to-end solutions in this competitive new market.

A combination of railway, waterway and road links will provide customers with a good choice of intermodal connections within the port. But the post-downturn client will also look for a comprehensive supply chain solution that draws upon the expertise of all the players – shipping line, port operator, customs, forwarders, truckers and multimodal operators. A company that can draw this together into a cohesive offering for the global supply chain will succeed over its peers. Geodis is ready. **PH**

Gilles Fontaine is corporate sales and marketing manager at French-based Geodis Global Solutions, a division of SNCF Geodis. Other divisions include freight management company Geodis Wilson, Geodis Logistics and Geodis Global Supply Chain Optimisation More info: www.geodis.com



Bulk handling goes to sea

Pioneering offshore transhipment systems have enabled Indonesia to become a leading thermal coal exporter, reports *Michael King*

A Gottwald bargemounted floating crane handles coal off Indonesia Whith its shallow-draught harbors, rugged terrain and limited industrial infrastructure, Indonesia would not appear to be an obvious candidate for the mass export of commodities. Yet last year the country's miners managed to extract 254M tonnes of thermal coal from sites on the islands of Kalimantan, Sulawesi and Sumatra, representing an increase of almost 6% on 2008. Of this figure, 207M tonnes of coal were exported, chiefly to buyers in Japan, China and India.

Indonesia does possess a few suitable shore-based terminals, but central to its success in supplying thermal coal is the willingness of supply chain stakeholders to invest their faith and capital in highly sophisticated and innovative marine logistics systems.

Much of the coal destined for export from the country is handled at a series of offshore transhipment stations and floating cranes that are fed by fleets of barges. Many of the designs include storage capacity, are able to be operated in adverse weather conditions and are suitable for loading Capesize vessels.

In the long term, land facilities are generally acknowledged as being cheaper per tonne of coal exported, but the significant upfront expenditure required to build a terminal is a powerful disincentive. One analyst estimated that \$10–15M of capital was required per million tonnes of loading capacity in Indonesia for a terminal of a minimum of 5M tonnes/ year capacity.

The risk profile of investing in Indonesia can also favour an offshore system because of the lack of legal clarity on land ownership and permitting, which can throw up unexpected costs on major infrastructure works."Offshore transhipment can offer similar loading rates to shore-based facilities, but the capital cost is lower and implementation time can be less than one year," said Andrew Minh Hooper-Nguyen, chief financial officer of Singapore's Scorpio Logistics, which provides marine logistics supply chain solutions to clients in Indonesia.

"Offshore facilities are also scalable, so loading capacity and speed can be increased as mine

production ramps-up over time," he said. "Except for major producers and strategically located multi-user facilities, it's hard to justify the time, cost and regulatory complexity associated with shore-based facilities."

Methods of offshore handling can take many forms. Systems developed by Liebherr, Gottwald and Logmarin Advisors are based on mounting a mobile crane on a barge that can then, depending on the design, either use its own propulsion or be towed into position. Other suppliers, notably CoeClericic Logistics, have taken a more radical approach, converting ships up to Panamax size into something akin to the floating storage offshore (FSO) vessels used in oil operations. These vessels are self-propelled and incorporate extensive onboard storage. From here, the cargo can then be transferred to lighters or transhipment vessels.

"Offshore terminals should be taken into more serious consideration by supply chain planners and port managers as highly viable alternatives to shorebased facilities," suggested Mario Terenzion, the head of Logmarin. "They provide the same advantages, but at a lower cost, a shorter gestation period and negligible environmental impact as compared to a shore-based facility."

When buying or designing an offshore transhipment system, price should not be the sole guide, *P&H* was warned, as the cost of equipment breakdowns and poor performance can be considerably more expensive to both operations and reputation than for a land-based counterpart. "The old expression 'you get what you pay for' certainly applies to offshore transhipment facilities," said Terenzio.

Another challenge is that current standard crane design codes do not address operation in offshore conditions, while maritime codes issued by classification societies do not usually cover the high service life demands placed on the equipment. Classification societies RINA and Lloyd's Register (LR) are addressing these issues.

Gottwald, for example, has worked with Lloyd's Register on its offshore crane designs to win approvals covering design, components and structure. During manufacturing and commissioning, the class society conducted surveys, including special non-destructive material tests, before issuing its special feature class notation, certifying Gottwald's compliance with LR's Code for Lifting Appliances in a Marine Environment.

Indonesia's coal production is set to expand further



Liebherr has been to the fore in developing suitable floating cranes for coal handling in Indonesia

Offshore terminals should be taken into consideration as alternatives to shore facilities

in the future. With the purchase price of a secondhand barge and the cost of shipyard construction and conversions falling, more transhipment systems are in the pipeline to join the 35 already installed off the coastline of Indonesia's main coal-producing islands.

It is not, however, an undertaking to be taken lightly, warned Hooper-Nguyen. "We've seen operators try unsuccessfully to use shore cranes on board transhipment vessels, but their bearings are not suitable," he said. "Controlling equipment weight and size is also important."

Finding a shipyard with the right experience to develop a purpose-built transhipment vessel can also be a challenge, he said. "It's not like building a Panamax, where most good shipyards have extensive experience. Offshore systems must be designed for, and employ equipment which is capable of handling, the constant movement of the sea." **PH**

'All go' for Indonesian coal transhipper

Canada Steamship Lines (CSL) has drawn on self-unloading technology and has been operating its semi-submersible Sea Spider Transhipper in East Kalimantan, Indonesia, since 1999. The vessel loads 4M tonnes/year for Berau Coal.

Last July, CSL commissioned a new 6M tonnes/year transhipment system for use in the same region. The handling system was built in China and incorporates two 35-tonne cranes mounted on a flat-top barge.

The cranes unload barges and feed a central receiving hopper. From the

hopper, coal is transported via a bucket-lift elevator to a ship loading boom with a 35m outreach capable of loading Capesize bulk carriers.

"This is all go now at guaranteed rates of 1,500 tonnes per hour," said Jim Murphy, CSL vice-president of projects and planning. "Platform stability is an integral part of the design and we employ a number of design methodologies to ensure a stable platform, including specially designed ballast pumping systems and specialised computer loading programs."



Pioneering methods of delivering gas from the ship to the pipeline have shown themselves to be effective, *Andrew Lansdale* reports

he traditional method of discharging natural gas from ship to shore is as liquid natural gas (LNG) at a berth alongside. This method has proved successful and safe since the first cargo delivery in 1964. Once ashore, the LNG is regasified at facilities usually situated near or in the port.

Two innovative ways of getting LNG to shore as natural gas, as opposed to its liquid form, have emerged in the past six years. Both are based on putting gas into the pipeline straight from the vessel without passing through a shoreside regasification plant.

There are several advantages:

Cost-efficiency

■ Offloading possible where it may be difficult to provide onshore facilities because of high cost, lack of available land or opposition from residents

Offers direct entry to areas with a high gas demand such as industrial zones

No draught restrictions for large tankers

■ No land-side storage or regasification facilities are required. LNG expands around 600 times when turned into gas.

The first option is a floating storage and regasification unit (FRSU) deployed out at sea. An example is being commissioned off the Italian west coast port of Livorno. It comprises a converted LNG tanker – the 138,000m³ *Golar Frost* – which will receive feeder vessels alongside to transport the gas ashore (see box below right).

A similar process is being considered to supply gas to the Vasilikos power station on the south coast of Cyprus, near Larnaca. A regasification plant out at sea is considered preferable in this tourist-focused region to a shore-based facility. Commissioning is expected to take place in 2014.

The second innovation is to use an LNG regasification vessel (LNGRV). Texas-based Excelerate Energy has developed a fleet of nine such vessels (see box above right). These ships can be used as traditional LNG tankers but also have the ability to regasify cargoes on board and to tie up to a turret mooring system. Vince Braniff, contracts manager for pipelines at engineering company Murphy Group, told *Ports & Harbors* that in theory any port with deep enough draught, offloading arm and shoreside access to a pipeline with a 'flanged end' can receive natural gas from these vessels.



Excelsior converts its liquid cargo to gas at Teesside GasPort, UK He also added that Excelerate Energy's vessels could, in the future, accommodate a loading arm requiring even less infrastructure from the port.

Excelerate has been operating at Northeast Gateway, an offshore offloading facility 18nm off the US port of Boston, Massachesetts, since 2008. After an LNGRV picks up a mooring it draws a conical fitting up from the seabed that docks in a bay under the bow of the ship.

The LNG on board is regasified on board and pumped ashore into the Massachusetts gas network. An Excelerate spokesperson told *P&H* that the total operation takes from five to seven days.

Gulf Gateway, 116nm off the Louisiana coast, offers a similar service. Excelerate said that ships have been specially designed to operate with both full and part cargoes without compromising the ship's stability, which is especially important during bad weather. The company told *P&H* that its LNG offloading was the only cargo operation that continued in the Gulf of Mexico region during hurricane Katrina.

Plans to develop a similar terminal 21nm off Santa Monica, California, with a pipeline coming ashore at Los Angeles airport, have been put on hold. The proponents of the plan, Woodside Petroleum, initially applied for consent for two facilities, but local opposition forced it to halve its ambitions on environmental grounds. In the end, the high-profile residents in the area forced the entire plan to be shelved until January 2011.

Excelerate also utilises three shoreside reception facilities that take advantage of LNGRV flexibility. One is in Bahía Blanca in Argentina, where ships go alongside and spend several days degasifying their cargoes and pumping them ashore; another in Teesside, in northeast England; and the third at Mina al Ahmadi, Kuwait. The last facility receives cargoes from Sakhalin Island in the Russian Far East.

The Teesside location was chosen because this major industrial area lacked its own gas supply, said Braniff who was involved in the project along with PD Ports. Gas manufacturer BOC's plant, just 3km away, was another incentive, as the natural gas must be blended with nitrogen to meet UK standards and enter the national grid, he explained.

"The total cost of the Teesside GasPort was less than £40M (\$62M), whereas a conventional land-based facility of comparable size would likely cost more

Excelerate's LNGRV fleet

Vessel	Capacity (m ³)	Built
Excelsior	138,000	Jan 2005
Excellence	138,000	Apr 2005
Excelerate	138,000	0ct 2006
Explorer	150,900	Apr 2008
Express	150,900	Apr 2009
Exquisite	150,900	Sep 2009
Expedient (idle, Pusan)	150,900	Nov 2009
Exemplar (building)	150,900	Jun 2010
Source: Excelerate Energy		

than £400M (\$617M)," PD Ports said in a statement.

The terminal is designed to be able to handle up to four LNG cargoes a month, each of which contains approximately 3Bn ft³ of natural gas.

Two further regasification vessels are now competing with Excelerate's fleet. Höegh LNG and MOL ordered two 145,000m³ vessels: *GDF SUEZ Neptune*, delivered on 20 November last year, and *GDF SUEZ Cape Ann*, scheduled for delivery this month (May). These two vessels form part of the Neptune Project, being developed by GDF Suez and Höegh LNG.

The two LNGRVs have been designed to service Neptune LNG Terminal, an offshore discharging facility situated in Massachusetts Bay. When complete the facility will link into an existing pipeline and be capable of handling enough gas to supply 2.8M homes.

"The vessels can operate in 11m seas and a wind force of 68kt," Julie Vitek head of corporate communication for GDF Suez LNG told *P&H*. She noted that a force 12 hurricane represents 64kt and above. "We have a support vessel in attendance to assist with the buoy pick-up line, but are not employing tugs. The ships' masters are trained to berth the ships and no berthing masters are required," she concluded. Together with the support vessel, this operates from Gloucester, Massachusetts.

Excelerate has strategically positioned itself in locations where it can hook up with a pipeline either at sea or in port. Braniff is confident more LNG will be regasified on board vessels in the future. **PH**

All at sea

Golar Frost will be deployed at a permanent mooring 12nm off the coast in a water depth of about 120m, a role for which it is being converted at Dubai Drydocks World. The cost of conversion is about \$90M, and involves providing the ship with the ability to take feeder LNG tankers alongside.

Cargo from these feeder ships will be taken on board the *Golar Frost*, stored in liquid form and then regasified before being piped ashore and added into the country's gas grid. The mooring, gas pipeline and shore facilities add a further \$160M to the overall cost. Conversion of the ship should be completed in June. Its planned capacity is 3Bn m³ a year, but if required the *Golar Frost* is said to be capable of processing 6Bn m³.

Should the Livorno project prove a success, a further installation will be planned for the northern Adriatic.

Sergio Bassi, of Livorno shipagent Gastaldi Tramp, told *Ports & Harbors:* "Of course, when the weather is bad they will require harbor tugs for berthing and perhaps a pilot or berthing master, and the port will have a small servicing role for the ship."



Corridor through Canada

Bringing all the players together is key to the success of the Gateway and Corridor, discovers *P&H*'s editor-in-chief, *Tony Slinn*

www.estern Canada is enhancing its ports so that they work within an integrated global supply chain. Port Metro Vancouver and Port of Prince Rupert, both in British Columbia, are the west coast elements of the Asia Pacific Gateway and Corridor (APGC), which was initiated in 2006 by minister David Emerson (see *P&H*, January 2008).

The strategy signalled a sea change in government policy: from mode-specific transportation changes – commercialisation, privatisation and deregulatory moves – to investment in integrated transportation in order to facilitate global supply chains. The federal government saw its role as fostering the APGC's efficiency, safety, security and sustainability via market-driven policies and regulations, plus national infrastructure investments that started with C\$591M.

Stockwell Day, Emerson's successor, is clear about the benefits: "Canada's Pacific Gateway presents many advantages – our ports are up to three days closer to Asian hubs than other major ports in the Americas and transportation of goods is via a modern, reliable, completely integrated network." He told *P&H* that since its launch in 2006 more than C\$2.8Bn has been committed to the project's infrastructure from federal, provincial and municipal governments across western Canada, and almost \$1Bn of this is federal contribution. APGC includes airports within the Gateway concept, but concentrates on Prince Rupert (PR) and Port Metro Vancouver (PMV) – the latter has just opened a third box berth at its Deltaport facility that will increase capacity 600,000teu from 1.2M teu to 1.8M teu and add 20ha of container storage yard.

The Corridor runs not only across Canada, but also into the USA. It has three main aims:

Boost Canada's commerce with Asia-Pacific

Increase the share of North America-bound imports

■ Improve the efficiency and reliability of Canadian and North American exports.

To achieve these goals it was necessary to get provincial governments across Canada involved, to streamline the country's border control and customs services – persuading the USA to integrate into this system – and to encourage ports, terminal operators and the two main railway operators, Canadian



Hanjin Praha alongside. Much of the cargo being unloaded at Prince **Rupert's Fairview** box terminal will make its onward journey by rail through the **Rocky Mountains**

National (CN) and Canadian Pacific (CP), to back the strategy with investment.

Day believes that the 'smart' and efficient Canada-US border operations via programmes like Rail Export Verification Unit (REVU) that pre-clears containers at the port so that they are free to cross the US/Canada internal borders, are among the most significant achievements of the strategy.

Another initiative is the Free and Secure Trade (FAST) programme, which is available for low-risk goods. The government has also set up a system that requires advance notification requirements for goods being shipped into Canada and the USA by all modes.

Minister Day noted: "APGC's next phase will include greater attention on how to capture the value-added opportunities associated with gateway investments such as logistics parks and professional services."

Free trade zones (FTZs), such as Winnipeg's 8,100ha inland CentrePort area, which attracted C\$3.5M in federal funding in October 2009, might be seen as a logical extension of the strategy. The government, however, has created a plan that is designed to give the entire country virtual free trade zone status through three incentive programmes: duty deferral, an export distribution centre and aid for exporters of processing services.

Canada's recently announced Budget 2010 will eliminate tariffs to lower manufacturers' production costs and allow them to invest, P&H has learned. "By reducing the cost of importing key factors of production, tariff relief encourages innovation and allows businesses to enhance their stock of capital equipment," the government announced in a statement, stressing aid to small and medium-sized manufacturers that link to global supply chains and need to diversify their export markets.

The budget will also bring about a second phase of tariff relief by eliminating all remaining tariffs on manufacturing inputs and machinery and equipment, with the remainder being gradually eliminated by 1 January 2015.

Fairview box terminal at Prince Rupert, operated by Maher Terminals, was built specifically to take advantage of the shorter sailing times and to utilise the existing Canadian National railway line through the Rocky Mountains. According to CN's international sales and marketing VP, Peter Ladouceur, the railway companies' investments have amounted to billions of Canadian dollars over the past few years and last year alone totalled C\$1.4Bn. These investments have paid for a C\$20M inland box stuffing/unstuffing terminal at Prince George, opened in 2007, and entire railway operations around Chicago as well as new railway wagons and locomotives.

Fairview has a seven-track on-dock railway yard; containers are loaded direct from ships to doublestack rail wagons. "We get trains out of the terminal before ships have finished unloading," vice-president of business development at Prince Rupert, Shaun Stevenson, told Ports & Harbors. "And because there's no congestion, they can run at 100km per hour."

Fairview today... when the second phase is complete capacity will be quadrupled

"At the time, the concept of building a box terminal

G Our ports are closer to Asian hubs and transportation is via a completely integrated network

somewhere with no major local population flew in the face of conventional wisdom, but we always saw it as a pure gateway."

Fairview's first customer was the CKYH Alliance weekly service, in which China's COSCO partnered with "K" Line, Yang Ming and Hanjin Shipping. In mid-2009, COSCO doubled its weekly calls, adding Prince Rupert to its existing CEN service linking northern China to the US southwest coast.

Stevenson believes that imports and exports will continue to climb. Prince Rupert has commissioned studies to consider future developments from both a supplier and supply chain perspective, and the port is working with Maher Terminals to create a 'best practice' design for off-dock facilities for empty boxes so "as not to impede terminal velocity", he said.

Maher instituted a joint training committee with the union, covering general terminal duties, bomb cart and reachstacker driving and a 21-day programme on ship-to-shore cranes.

"Of course, no one knew how to handle gantries [cranes] because it had all been break-bulk," said Maher Terminal's vice-president and general manager, Mark Schepp. "We wanted about 22 trained gantry guys and this year we're going to bump up that number. Our crane moves are up around 35 per hour now."

Before work began at Prince Rupert, there was detailed discussion between Maher Terminals, the port, Canadian National and Customs, both in Canada and Washington DC, USA. "We continue to have quarterly customs meetings in Rupert involving all the stakeholders to talk about issues and keeping the gateway fluid," said Schepp. "We wanted customs to be a part of what we're doing and we also wanted to make sure we understood what their needs and expectations were. Sure, there were a few bumps in the road when we first got going, but I think you'll find the relationship we now have with customs – and the



Photo: Port of Prince Rupe



KEY:

Canadian National Railway **Canadian Pacific** Railway

port authority - is unique.

Schepp also praised the port authority for keeping tariffs competitive and so helping boost throughput: "Volumes will drive costs down, no question about it. That's what we've been selling and people have been buying".

At Canadian National, Peter Ladouceur is firm in his commitment to the Gateway project: "In the case of the Gateway, we looked at the market and at what rate we thought it would grow. We translated that into rail terms, for example: do we need larger trains or additional trains?" At first they studied how their existing assets performed and then made a decision.

"In Prince Rupert's case, we made our estimates given that we already had infrastructure in place - the lines to Ridley Island, which were upgraded some years ago because of the coal trade. But we still had to go out and get locomotives, crews and other stock for Fairview."

Scanning facilities at Fairview... US-Canada border operations are said to be efficient

The overall plan included the C\$20M Prince George Terminal, located inland in the north of British Columbia. "Our lines ran straight through it and it's surrounded by millions of tons of wood products. Our decision was



to latch on to it for exports and make the investment." Ladouceur said. He cited the Chinese government's recent decision to allow more timber exports to Shanghai: "It's virtually a brand-new business and a great opportunity for BC's lumber companies."

In the past couple of years, in terms of overall coordination of cargoes from origin, via shippers, liners, the port and on to CN's network, lessons have been learned. "Imports work pretty well," said Ladouceur. "We get good forecasts from the ocean carriers – the recent Chinese New Year surge was a case in point - and at the [Fairview] terminal, boxes are loaded efficiently on to double-stack trains. The process doesn't need to be tweaked very much, I'd suggest.

"Exports are more tricky," he noted. "You will have a freight forwarder who's only interested in the import flow, after which it's kind of a scramble to get the box back to the port. That box belongs to the carrier and they'll try to fill it up, or send it back empty. Empty boxes are always a problem." The export market in western Canada is strong, he said, "and we are working with shippers to point out opportunities to get empty boxes into the places where exports are to be had."

He acknowledged that if Canada has a fault it is the great distance from one side of the country to the other, but, he explained, "CN will help with that and the lines appreciate it - they like the round trip approach." Ladouceur believes it's in the railways' interests to invest and they are doing so:"We know how to handle freight, so we're building them facilities."

Maher Terminal's Schepp concluded: "The work ethic at Prince Rupert is really something; the buy-in from local labour has been fantastic, they are truly stakeholders. Along with our relationship with the port and CN, it has reallybeenkeyinoursuccess.Sinceinception,wehavehad very few issues with anything, which is very unusual." PH

More info: www.pacificgateway.gc.ca



VIGAN

Your Partner in bulk handling

From initial project design to complete turnkey installations with mechanical and/or pneumatic most reliable and profitable solutions



170 tons/hour

PORT of Dubai



400 tons/hour

CHONQUING - China



1200 tons/hour VUNG TAU - Vietnam

Rue de l'Industrie, 16 1400 Nivelles (Belgium)

VIGAN Engineering s.a.

Phone : +32 67 89 50 41 Fax : +32 67 89 50 60 www.vigan.com info@vigan.com

> *La Réunion Island* 500 tons/hour

BARGE & SHIP LOADERS OR UNLOADERS • PNEUMATIC & MECHANICAL



US finds money for improvement

The worldwide recession may have laid down speed bumps, but there's no slowdown in planning for 2014, reports *John Gallagher*

When completed in 2022 Craney Island will be one of the largest container terminals on the US east coast

Photo: Virginia Ports Authority

The Port of Los Angeles (PoLA) estimates it spends about \$1M a day on expansion projects. But as the USA's biggest container port – it handled 6.7M teu in 2009 – even Los Angeles has not been immune to the effects of the recession. "We've definitely had to prioritise because of the economy. We've had to make some tough choices and delay some things," Port of Los Angeles spokesman Phillip Sanfield told *Ports & Harbors.* "But for the most part our container business is at the top of the priority list; everything else takes a back seat."

For example, the port has already spent \$200M in a multiyear project to deepen channels to 16m to accommodate the world's largest container ships. It plans to invest another \$96M over the next three years. PoLA's China Shipping and Trapac container terminals are also in the midst of multi-million-dollar expansions planned for completion by 2015.

Sanfield believes the port has to move forward on those major projects if it is to remain competitive once the Panama Canal enlargement is completed in 2014. Ports that have the ability to remain on that steady course despite the choppy seas caused by the recession will be in prime position once the storm abates and goods are moving freely again.

"What we've seen is a tremendous increase in private-sector investment – much more than I would have imagined – and that's filling the gap" caused by tighter project financing, budget cuts and plunging cargo volumes, said port consultant John Martin of Martin Associates.

An example can be found at Port of Baltimore, where private terminal operator Ports America took over the Seagirt container operation there in January. The New Jersey-based company plans to build a berth with 15m alongside depth to accommodate post-Panamax size ships. It has allocated \$106M for the project – an investment that the port on its own would have had difficulty justifying in the current economic climate.

The Port of Baltimore considers deepening to be the key to competing successfully against nearby



New York and Philadelphia, both of which have dredging projects in hand. Roughly 147nm to the south, the Port of Virginia is banking on the \$3.7Bn that prospective investor Centerpoint Properties says it will spend to do the same thing. That plan is contingent on Centerpoint winning the contract – the port is still considering bids. Much of this money would go towards developing Craney Island, a container terminal to be built on 240ha of dredged land that is intended to attract the largest vessels calling on east coast ports. The project received its final environmental permit in early March.

"When the economy was roaring it was our thought this had to be operational by 2017", Virginia Port spokesman Joe Harris told *Ports & Harbors*. "But things have slowed considerably, and because of that the completion date has been pushed back to 2022."

In North Carolina, the Port of Wilmington is also seeking a private investor to help build a \$2Bn international container terminal of 3M teu capacity. "Of course, the economy did have some impact in finding private investors in the new terminal, which has impacted everything," admitted port spokesperson Karen Fox. She insisted that the port is still moving forward with the project, with Phase 1 to be completed by 2017.

The Napoleon Avenue Container Terminal at the Port of New Orleans opened in 2004 with the capacity to handle 366,000teu a year. The port had envisaged a dramatic \$500M expansion of the terminal, but the recession – and findings from the port's own economic studies – have brought those expectations down to earth.

Projects were not put on hold, "but we did run into some rough water with financing," Port of New Orleans president Gary LaGrange told *P&H*. But LaGrange said two new terminals costing \$13M each should be in place at Napoleon Avenue in July, bringing the total to six. And by 2014 he expects completion of the second phase of the upgrade, giving the terminal 650,000teu capacity at a cost of \$250M. Port of Los Angeles Port of Log Beach Port of New Orleans

things are slow, so when the Panama Canal opens we want to be ramped up and ready."

New Orleans hopes to take advantage of new markets for backhauls of containerised grain, which traditionally were head-haul moves exported out of the port in bulk ships. "A lot of non-traditional products are moving in containers on backhauls that normally would move empty," LaGrange said.

Despite delays caused by the recession and any subsequent damage caused to a port's competitive position, Martin said it is futile for port directors on either coast to worry now about the effects of a wider Panama Canal in 2014: the shifts in trade flows, he believes, have already occurred.

"The dominance people are putting on the [enlarged] Panama Canal opening is overblown", Martin claimed. "The 2002 west coast port congestion and high inland intermodal rail pricing caused distribution centres to move years ago, along with supply chain shifts. You have to remember, the Suez Canal is going to be very important for Southeast Asia trade to the US, and Brazil is going to increase in importance. So the Panama Canal, I think, will have more effect on the size of the ships than anything else," Martin concluded. **PH**

"They say the best time in the world to build is when

Keeping the gates open for the upturn

Port congestion is no longer a problem in southern California, and the programme that helped make that happen could disappear as well. The programme, called PierPass, charged shippers a \$100/teu fee to pick up and deliver cargo to the terminals during the day. That fee helped offset the added costs of running five new night and weekend shifts at 13 terminals at the ports of Los Angeles and Long Beach in 2005. The shifts were added to reduce port congestion and spread out pickups and deliveries at a time when traffic was booming.

But last year the terminals agreed to eliminate one of the shifts because of weak container volume that made the off-peak shifts more costly to run. And even though volumes have rebounded in recent months, shippers fear the upturn is not fast enough to stave off more shift closures. As a consequence, not only do they have to pay higher fees at the gates during the day, but they also face additional costs through having to realign their supply chains.

"Our members are concerned, because when [the off-peak gate programme] started five years ago, a lot of retailers changed their operations to shift pickups to the night gates," said Jonathan Gold, VP of supply chain for the National Retail Federation. Now as we're coming out of a recession and volumes are picking up, we're having to add on costs." Not all terminals agreed to scale back operations.

PierPass President and CEO Bruce Wargo says despite recent calls by terminal operators and their carrier parent companies to reassess the viability of PierPass, shipper concerns about having to shift more cargo back to day gates are unfounded. "I realise someone has to pay to keep these gates open, but imports are starting to pick back up again and exports have been strong. I just don't see us having to take out another shift."



Railways are a vital link to a port's wider hinterland

he battle for the sea will be won inland. Recent trends suggest there is much truth to this saying. Never before has there been so much focus on a port's ability to cope effectively with a high throughput of cargo. In this respect, intermodal connection plays a huge role in a port's success today.

We have seen a change in the way traffic is operating in ports. The size of ships has increased over the past few decades and is still growing. This correlates with a higher number of containers being carried, resulting in a greater concentration of traffic required to move the cargo to and from the port.



Ports need to discuss ways to improve access at a ministerial level

Xavier Gesé Chair, Port Operations and Logistics Committee Transport has improved and today ports can reach a bigger hinterland than ever before.

This growth in traffic is also congesting ports and affecting the old network of roads and motorways. But as well as the congestion caused by port activity itself, roads and areas near or within big cities are becoming clogged by vehicles on other, non-port-related journeys, and is an increasing problem in some areas.

Ever resourceful, ports are exploring and implementing new ways of operating, utilising other modes of transport and restyling themselves as intermodal hubs and logistics platforms to make themselves as attractive as possible to potential clients. To do this, they need to rely on factors beyond their boundaries. A port authority is usually responsible for development inside the port area, but it cannot make decisions about planning or expansion beyond that zone. It therefore needs to discuss ways to improve access at a ministerial or high public administration level.

How this is achieved depends on the government model. The aim of many regional governments is to have the largest and most effective port possible. But central government - usually responsible for railway and highway infrastructure and development - has only a limited budget to share between the regions.

In Spain we are co-ordinating with the railways and motorways department in the ministry to define criteria



to help the central government prioritise projects that will provide rail and road access to ports (see box right). The premise is to analyse to what degree traffic congestion will be improved per euro of investment. We also have to measure external costs against investment needs. If a port development is dependent on a new railway being built, for example, once completed external costs will be reduced in the future.

Ports are no longer seen as a straightforward interface between sea and land. A logistics park located either within or just outside the port vicinity can increase throughput, because it acts as a distribution centre for the local area. In this case, proximity to the port is its advantage and is especially significant in ports where a high percentage of the origin or destination of containers is no further than 100–150km from the port. Distripark in Rotterdam, Barcelona's ZAL (Logistics Activity Zone) and Free Commercial Zone at Port Klang, Malaysia, are good examples of how a port's logistical involvement can be improved in this way.

Dry ports, on the other hand, are the optimum solution to connect with consumers or production centres farther inland (see page 29). If we want to link seaports with specific inland regions 200–300km or more away, it is most effective to use a direct rail shuttle freight connection where possible. A dry port with a rail connection to the seaport can help reduce congestion near ports and big cities. It also helps to facilitate a seamless flow of traffic from port to customer.

The final leg of the journey – from dry port to customer – is usually by truck. Some projects have tried to reach production centres with a rail link, but it is unrealistic to have a rail link to every retail outlet, other than the largest ones, and the economy is pushed by small to medium companies. Rail still struggles to compete successfully against the greater flexibility of the truck. The dry port as a node of the logistics chain can bring seaports closer to their customers using rail transport.

Nevertheless, the dry port concept has much to offer. Seaport throughput is quicker, as goods are sent straight to the dry port, where they are cleared and dispatched. Faster passage of goods through port means reduced costs, which again gives the associated seaport a competitive advantage. Moreover,

Raising the profile of rail

Spain is developing a long-term Strategic Plan for Transport and Infrastructure (PEIT), with parameters for port, railway and road development being discussed at ministerial level. The general framework is already established and the focus is now on the needs of the different sectors – maritime and rail freight.

"In 10 years our hinterland links should be better than those we have now," said Xavier Gesé, deputy director of planning at government port agency Puertos del Estado. "The government has recognised the need to co-ordinate planning of logistics platforms, rail access and port developments and the most important projects will be undertaken first," he said.

Land access to ports is an important issue today, he pointed out. "Recently the focus has been placed on motorway or highway access. Rail use is underdeveloped and accounts for only a small amount of freight traffic."

In 2007, 250,000M tonne-km (unit of measure for the transport of 1 tonne over 1km) of Spain's freight was carried by road while only 11,000M tonne-km was transported by rail. "We need to promote rail access to ports as much as possible and to provide long-distance transport options to shippers," Gesé told *P&H*.

movement and storage of containers require a lot of space, so removing them from the seaport shortly after their arrival frees up space for other activities. The associated social benefits include reduced congestion and cleaner air around the seaport.

But the overall success of a dry port depends on its location. It should be near to a production or consumer area, necessitating just a short road journey to the goods' destination. To optimise the concept's benefits, it is important to consider the maximum distance from the dry port to the production or consumer centre.

Seaports linked to a dry port stand to gain a great deal, but it is not an enterprise that they can enter alone. Space close to production or consumer areas can be limited and expensive, requiring public-private partnership investment. Regional government and local municipal involvement is also essential for the selection of areas for development. Finally, private players such as freight forwarders, shippers and transport companies all need to back the venture. **PH**

Xavier Gesé is deputy director of planning at Puertos del Estado, the Spanish government's port agency

Santander's linked-in outlook

The port city of Santander, on the north coast of Spain, has part ownership of two dry ports – Ebro dry port in Luceni and Azuqueca de Henares dry port in Alcalá, both 400km from the port. The port places considerable emphasis on these dry ports, claiming it offers customers more and increases the port's throughput.

Benjamín García Pastor, the port's marketing director, told *P&H* that even after the transportation costs between the seaport and dry port have been taken into account the advantages are still apparent. He also emphasises the benefits of a port's proximity to an industrial zone from the perspective of all parties, such as reduced transportation and production costs. "The Port of Santander has two industries situated at less than a kilometre distance: steelworks and a petrochemical complex," he added.

Port of Santander utilises railway transport a great deal: "I would say that railway connections to the hinterland are very important for ports in general," he said, adding that "road transportation is also important. The decision to use one or the other depends on the specific needs of the owners of the freight. "We have enough rail connections with our dry ports and we use them for the transportation of vehicles, paper, containers and any other general goods."

The port is carrying out a study on increasing rail transport capacity between Santander and Madrid. Pastor said it would enable the port to offer a better service between its hinterland production centres and the dry port in Alcalá.

He added that recently the port received approval to use longer trains between it and the dry ports, which will result in lower transport costs.

Barging ahead with rail

Antwerp has an ambitious agenda to increase its railway and barge interconnectivity, reports journalist *Scott Berman*

he Port of Antwerp is looking to its railway infrastructure and its hinterland in an effort to provide new, sustainable options for customers. Rail operators, shippers and forwarders are all vital components of the port's ambitious plan.

On the agenda at Antwerp: €764M-worth of portfunded railway projects, a hinterland rail connectivity programme and additional investments by major port players. The broad vision – as described recently in a speech by Marc Van Peel, president of the Antwerp Port Authority – is to contribute "to modal shift and sustainable growth and development".

The recession led to a fall in overall tonnage last year;

nevertheless, port officials and port participants have been looking ahead, responding to the past decade's growth in rail and barge traffic. Antwerp's objective now, in terms of the container modal split, is to raise rail from its current 11% share to 15% by 2020 and barge traffic's share from about 33% to 43% within the same time period, while road haulage of containers is set to fall from the current 56% to 42%.

Based on data gathered from shippers and forwarders, the port sees the potential for rail to carry another 340,000 containers a year. This will be achieved both by shifting containers from roads and by attracting new business. Doing so is expected to

Key	
Port area	
Water	
Nature area	
Residential area	
Development area	
Projected canals	
Roads	
Motorways	
Railway	

bring about a major drop in carbon dioxide emissions. Rail is only one part of the hinterland multimodal equation. Antwerp is also keen to foster continued, significant increases in the container volumes that are transported by barge. In fact, between 1998 and 2008 barge's modal split at the port increased from 21.4% to 32.4%. This encouraged the port to join an Economic Interest Grouping (EIG) in 2006 to help develop the Liège Trilogiport multimodal platform – preliminary construction of which has already begun – along the Albert Canal. According to Liège Port Authority, the EIG enables "Port of Antwerp's customers who do not need a coastal wharf to become established in its natural hinterland and [improves] inward and outward mobility in Antwerp."

Antwerp's efforts are an ongoing story about penetrating certain markets – in this case by enhancing hinterland connections in Germany, Austria, the Czech Republic and Hungary – while building upon Antwerp's strengths in the French market. Koen Cuypers, a port adviser for strategy and development at Port of Antwerp, told *Ports & Harbors:* "Traditionally, ports focused on the dock side and talking to shipping lines." Today, he explained, this is balanced by greater awareness of the hinterland and the need for strong intermodal connections to speed flow and expand the presence of every stakeholder.

Port of Antwerp has responded by investing in infrastructure to create new options for customers. That €764M is being spent on the construction of the Liefkenshoek railway tunnel to relieve traffic congestion and to provide a better connection between the banks of the River Scheldt, a second rail access on the Scheldt's right bank, and increasing capacity on the port's main railway line by 30%.

Others, too, are finding space for rail in their budgets rail. For example, Antwerp-based Inter Ferry Boats (IFB) announced in January new connections and calls on its railway services between the Port of Antwerp and points in France, Spain and Italy. Company spokesperson Veerle Van Mierlo also advised that there would be a new rail connection between Antwerp and Sopron, Hungary. Having started a service connecting Portugal, Spain and Antwerp in April 2009, at the start of this year Hupac opened a €22M transhipment terminal at Antwerp able to handle a dozen 620mlong trains a day.

Hupac spokesperson Irmtraut Tonndorf said the terminal offers environment-friendly options for customers. As it is available to all rail freight operators, the new terminal contributes "to the opening up of the rail transport market", Tonndorf said. Furthermore, Hupac's new terminal will, in Van Peel's view, further strengthen the port's "competitive position through high-quality and fast intermodal rail connections with tight market coverage".

On 1 March, another open-access intermodal terminal, Combinant, opened for business at the Port of Antwerp. It is jointly owned by BASF, Hupac and IFB and is a €29M intermodal facility that incorporates three rail-mounted gantry cranes, five railway tracks and an annual capacity of 150,000 units.

Recognising the potential of rail, Antwerp in April 2009 rolled out its Masterplan Railfreight, which concentrates upon key connectivity issues. In addition, a plan by the port recently took on barge transport matters and another, to be issued later this year, will focus on roads.

The railway masterplan is made up of various elements, one of which is Antwerp Intermodal Solutions II (AIS II), a hinterland railway connectivity initiative. Antwerp's Intermodal Rail Team implemented AIS II in part by bringing together the European intermodal managers of five leading forwarders and three carriers to share data, assess business cases for establishing new rail services and engage in networking, according to Helen DeWachter, the port's senior consultant, strategy and development.

The concept, as described by DeWachter, is for the port to bring together the supply and demand sides to bundle volumes and forge new connections. It is also to provide "a neutral platform to allow bundling and structured feedback to the rail freight market," she said. Participants analysed data about potential volumes and connections and convened in two sessions, in November 2009 and March 2010, when they met with rail freight suppliers. The result: five new connections are being established – announcements revealing them are expected shortly.

The port organised and hosted its first rail freight conference in February 2010, during which forwarders, transport and intermodal managers shared best practices, heard presentations about the future of European rail, and learned how the new intermodal terminals at Antwerp and the port fit into that picture.

As Van Peel pointed out in his January speech, Antwerp is determined to build upon its rail assets both literally and strategically. There's much to build upon: Antwerp's railway network is second only to Hamburg's in size and has "no equivalent in Europe," in Van Peel's view. And still, he said, "we need to keep investing in this market... [and] in solving operational issues." **PH**

Antwerp rail freight in numbers

Intermodal operators and traction providers: Crossrail, Hupac, Inter Ferry Boats, MSC Medlog, Naviland Cargo, NMBS, Raillink, SNCF Fret Benelux, SNCF Fret, Trainsport. 22 shunting vards

- 66km of traffic jams on regional roadways are avoided by using rail
- 200 weekly container shuttles, to 40 destinations in 13 countries
- 250 trains serve the port each day
- 1,055km of track in the port area.
- 4,000 trucks daily are kept off the road thanks to the rail shuttles
- 200,000 tonnes of CO₂ emissions a year are avoided by using rail
- 1M teu of rail container freight handled in 2008 (half the total rail freight volume)
- 30M tonnes of total freight handled a year
- €764M will be spent on current port rail infrastructure projects
- Construction of twin-bore railway tunnel under the River Scheldt is scheduled for completion in 2014

Source: Antwerp Port Authority

Shaping your world.

AND STREET



Moffatt & Nichol is a leading U.S.-based global infrastructure advisor specializing in the planning and design of facilities that shape and power our coastlines, harbors, communities and rivers as well as an innovator in the transportation complexities associated with the movement of freight.

> Creative People, Practical Solutions. ** www.moffattnichol.com



Violeta Roso has spent seven years researching the global concept of a dry port. She talks to *P&H* about the mutual benefits they bring to the environment and a seaport's customers

Virginia Inland Port can offer customers full seaport facilities 330km away from the Port of Virginia t was the perceived environmental benefits associated with dry ports that aroused Violeta Roso's interest in the concept in 2002. At that time very little had been written about the subject. Her initial web search produced just nine hits, whereas today the same search generates thousands of results.

Not all of today's 'hits' claiming to be dry ports would match Roso's stringent definition: "a seaport directly connected by rail to inland intermodal terminals, where shippers can leave and/or collect their goods in intermodal loading units as if directly at the seaport", as she set out in her PhD thesis entitled 'The Dry Port Concept', completed in December 2009. Nonetheless, she noted, that many of the logistics hubs and parks describing themselves as dry ports do adopt some of the elements within her definition.

The core idea behind the concept is to move a seaport's interface inland and so extend its traditional hinterland to attract new customers. All the usual services found at a conventional seaport should be available, she explained, including customs clearance

Looking inland for benefits

- Increased seaport capacity
- Increased seaport productivity
- Reduced congestion at seaports and in the seaport cities
- Reduced risk of road accidents
- Lower environmental impact
- May serve as a depot
- Improved access to areas outside a seaport's traditional hinterland
- Supports regional development

and warehousing. Moving this dimension of a seaport's operations inland helps increase its efficiency and throughput, her research has revealed.

For Roso, the most important element of a dry port – and the one she considers that best realises many of the potential benefits – is its rail link to the seaport. She pointed out that a single train load of cargo can replace 40 trucks, greatly reducing harmful emissions. Her research revealed that by removing vehicles from the roads around the seaport fewer accidents occur, there is less congestion and air quality is improved. The dry port itself brings social benefits to the area around it (many are located in rural districts) by creating jobs for local people.

When planning a dry port, railway connectivity usually demands the biggest investment in terms of time and money. The "biggest obstacles identified by surveyed dry ports are regulations, existing infrastructure and land use," said Roso. She cited Sydney as example of a port that would greatly benefit from a dry port, yet has failed to convince city planners and politicians of these advantages. According to Roso, this demonstrates that it is not enough to have money; the project also needs approval.

The economic value to be gained from a dry port depends very much on the region that it serves or the seaport with which it is associated. "Some seaports are doing fine without a dry port – in particular, ports that do not handle high volumes of containers, whereas large seaports with no good rail access to inland destinations that want to expand and increase their capacity would benefit greatly," asserted Roso.



Large seaports with no good rail access would benefit greatly Violeta Roso

Chalmers University, Gothenburg

There is no set procedure for developing a dry port. For example, in the USA rail transport is deemed to be viable only for distances of 500km or more, while in Europe and Australia railways are considered costeffective for movements over much shorter distances.

Administrative hurdles also vary widely from country to country and even within the same country. Falköping dry port in Sweden was initiated by the local municipality and took seven years to realise from the initial proposal. So far as Roso is aware, Eskilstuna, also in Sweden, "was the quickest dry port from the idea to the establishment", taking just one year. Again, the municipality went ahead because it recognised that a dry port could stimulate regional development."

Falköping terminal's development is a part of a three-year European Union project: Dry port – a modal shift in practice. One of its goals is to create a 'blueprint' for setting up dry ports, which, Roso noted, would be the first of its kind for this concept.

The success of a dry port is also difficult to quantify, as an individual project may fulfil a variety of needs. Roso considers Virginia Inland Port (VIP) a success because of the benefits it has brought to transport operations. Located 330km from the seaport of Virginia, it provides an interface between road and railway for the transport of ocean-going containers to and from the seaport. It is a US customs-designated port of entry and offers customers a full range of functions. In 2006 VIP handled approximately 30,000teu, all of which were units from new customers.

A seaport's inland access: Option A without a dry port, Option B with a dry port



integrated into the supply chain, customers had to carry out administrative tasks such as customs and port clearance at the Port of Dar es Salaam, which often led to delays and congestion. These requirements can now be handled at Isaka, which acts as a traditional seaport for its hinterland as well as for neighbouring land-locked countries that formerly depended on distant Dar es Salaam. Customer service has improved as a consequence – previously it took a week to transport freight to Dar es Salaam whereas today it takes only 48 hours.

Roso considers Madrid's dry port in Coslada to be a good example of multi-agency collaboration. The project is a result of the joint efforts and interests of the Spanish Ministry of Development, the municipalities of Madrid and Coslada, the Spanish Port Authority and the national railway operator RENFE. The original concept dates back to 1995 and the terminal became operational in 2000, but it was not until 2003 that it gained dry port status. Since then, use of the railway has increased, leading to greater volumes carried, lower transport costs, reduced environmental impact and less congestion at the seaports served by Coslada, such as Barcelona and Bilbao. The transport and delivery of goods have been speeded up, giving these ports a competitive advantage. Business attracted to the dry port area has led to job creation locally.

Looking forward, Roso cited Sydney once again and its plans for a large rail freight terminal at Enfield, 18km from Port Botany. Overall growth in containerised trade through Sydney is expected, as is an increase in rail's share of the container market after modal shift from road. Roso believes that the Enfield dry port should enable containers to be cleared from the port more effectively, thereby boosting the productivity and capacity of existing port terminals. With movement of containers by train instead of truck, road congestion should ease significantly, which would have benefits for the environment.

Only recently has research been conducted into the ways that the different logistics concepts can help reduce emissions. Roso hopes that the dry port concept's mutual benefits for port, customer and the environment will be recognised more widely and adopted globally. **PH**

Dr Violeta Roso is based in the Department of Technology Management and Economics at Chalmers University, Gothenburg, Sweden







RUSSIA St. Petersburg October 5 - 7

2010

TRANSTEC

THE SECOND **INTERNATIONAL CONFERENCE "FUTURE OF RUSSIAN PORTS"**

AND EXHIBITION "PORTS, TRANSPORT AND INTERNATIONAL TRANSIT"

with the official support of

Association of Sea Commercial Ports Maritime Council of the City of St. Petersburg





Euro-Asian

Transport Union

Association of Inland Waterways, River-Sea Ports and Shipowners

Institute of Transport Issues of the Russian Academy of Science

Contact Dolphin Exhibitions: Tel: + 44 1449 741801 • Fax: + 44 1449 741628 Email: info@dolphin-exhibitions.co.uk

www.transtec-neva.com

34th IADC INTERNATIONAL SEMINAR ON DREDGING AND RECLAMATION

21- 25 June 2010 **Delft, The Netherlands**

PRE-REGISTER at: info@iadc-dredging.com

FOR WHOM?

For decision makers and their advisors in government, port and harbour authorities, off-shore companies and other organisations that have to execute dredging projects, the International Association of Dredging Companies organises the International Seminar on Dredging and Reclamation.

The 34th Seminar will take place in Delft, Monday 21 to Friday 25 June 2010. An important feature of the seminars is a trip to visit a dredging project being executed in the given geographical area. This gives the participants the opportunity to see dredging equipment in action and to gain a better feeling of the extent of a dredging activity.

Highlights of the programme are: Day 1 Why Dredging? The Need for Dredging/ **Project Phasing**

Day 2 What is Dredging? Dredging Equipment/ Survey Systems (includes a Site Visit) Day 3 Cost, Pricing and Contracts (includes a

visit to a Dredging yard)

Day 4 Preparation of a Dredging Contract Day 5 Dredging Projects

The cost of the seminar will be € 1.950,-; this fee includes all tuition, VAT, seminar proceedings and workshops and a special participants dinner during the week but is exclusive of travel costs and accommodation. Assistance with finding accommodation can be given.

Representatives of port authorities, companies, and individuals, with an education level equivalent to at least a B.Sc. or comparable work experience, interested in attending are requested to pre-register.

For more information, please contact Mr. Frans-Herman Cammel at info@iadc-dredging.com or visit www.iadc-dredging.com

IADC Secretariat LADC PO Box 80521 2508 GM The Hague The Netherlands Phone: + 31 (0)70 352 33 34 Fax: + 31 (0)70 351 26 54 E-mail: info@iadc-dredging.com Website: www.iadc-dredging.com

> Ports & Harbors | May 2010 31

Riding on the wind

North European ports are well placed to take advantage of the boom in offshore wind power, writes *P&H* reporter *Jem Newton*

nergy-hungry industrial countries such as the USA and China are following with great interest pioneering efforts by north European countries to build huge offshore windfarms in water depths up to 60m over the next decade. The hostile marine environment in which the wind turbines will operate poses major engineering challenges.

The German government has announced plans to install 5,000 turbines in the next 10 years in areas of the Baltic and the North Sea averaging 30m in depth. At the same time, the UK has announced Round 3 of its coastal windfarm development (see map opposite), comprising an estimated 6,000 units in nine offshore zones up to 60m depth.

Ports will play a key production and logistics role in installing these huge turbines, which like North Sea oil rigs will have to withstand storm-force winds and constant battering and erosion by the open sea.

UK and German ports are engaged in confidential negotiations with the winning bidders and other companies in the turbine supply chain, so are unable to comment, but industry players were willing to talk in general terms about what would be required.

"The good news for ports is that these turbines will be so big they will have to be manufactured near the waterside – a blade can be over 70m long, a nacelle could weigh 500 tonnes and tower sections could be 300 tonnes – they just can't be transported by road," Julian Brown, director of UK energy consultant BVG Associates, told *Ports & Harbors*.

"Clearly, the UK ports nearest the offshore sites will be in the best position to offer logistics support. Most of them will operate on an operations and maintenance basis once the turbines are commissioned, which is a fairly small deal in terms of land," commented Patrick Walters, commercial director of Associated British Ports.

He explained: "As soon as you move up into turbine assembly facilities you are talking larger tracts of land. I believe there are only two or three ports that will fit the bill as a production centre, probably along the UK's east coast."

Across the North Sea, however, there is some scepticism about the UK's ability to host a large production centre. "I know that some manufacturers are looking for sites in the UK, but they lament a deindustrialisation trend there in recent decades, so they are not sure of finding people with the right skills," Andreas Wellbrock, managing director of Germany's BLG Contract Logistics, told *P&H*.

His most immediate concern is the obvious one for a pioneering industry: the lack of basic technology and expertise. He revealed: "We are still trying to work out the right way to build offshore windfarms; there's no standardisation and little experience we can derive from other industrial sectors." Wellbrock explained that BLG's important contribution to the industry is its willingness to take on supply chain management. "It's such a new industry that no one has looked into

Plans to harness Scheldt winds

The Antwerp seaport area has been identified as an "excellent" location to set up large-scale wind turbines, the port authority said in a statement. In association with Left Bank Corporation, and in collaboration with private partners, the authority hopes to build a windfarm in the port area on the left bank of the River Scheldt.

The two organisations signed a collaboration agreement in March to draw up an area coverage wind turbine plan for this region. Their intention is "to make maximum use of the possibilities for developing renewable energy within the port area," the port said, adding that this would be "in agreement with port users". Operators within the port will be consulted and the results announced in June. The outcomes will then be discussed with the port users and other stakeholders. A wind plan is also being considered for the right bank of the Scheldt.

Photo: iStockphoto



Planned UK windfarm sites

Round 3 zones	1: Moray Firth	4: Hornsea	7: West Isle of Wight
UK continental shelf	2: Firth of Forth	5: Norfolk	8: Bristol Channel
12nm limit	3: Dogger Bank	6: Hastings	9: Irish Sea

integrated supply chain management. We are now looking at the whole supply chain from supplier through production on the assembly line right up to installation offshore," he said.

So far, Germany has completed a small pilot farm of a dozen 5MW turbines off the North Sea port of Emden with an annual output that meets the needs of an estimated 50,000 homes.

The past few months have also seen an increase in newbuilding orders from offshore companies in Europe for larger turbine installation vessels. The current generation of installation vessels, such as the *Mayflower Resolution*, will be too small to handle turbines of the dimensions needed for North Sea farms.

Outside Europe, governments have been slow to grasp the potential of offshore wind for a wide range of reasons. Renewable energy was a low priority for the Bush administration and the arrival of Barack Obama in the White House in early 2009 has seen a flurry of activity to create a US renewable energy framework that will see the first offshore windfarms being built off the northeast coast and in the Great Lakes within the decade.

"Things are now moving forward; there are 17 proposed projects in 11 states," Bonnie Ram, programme director of the Environmental Sciences and Policy Group for US energy consultant Energetics, told *Ports & Harbors*. She said that after the enabling legislation in 2005, state legislatures decided not to wait for federal government but started to make their own plans for offshore wind.

Ram explained that the issue has become especially pressing for northeastern states because they do not have many options for renewable energy supplies, the region is densely populated and wholesale electricity prices are much higher than elsewhere in the US. "Suddenly offshore wind started to look attractive for them," she said.

Among the Atlantic states with whom the relevant federal body – the Mineral Management Service – is now working closely regarding offshore energy development are: Maine, New York, New Jersey, Virginia, South Carolina and Florida. "The seas off the Pacific coast are deeper," she added, "so states there are looking at other forms of renewable marine energy."

Asia, too, is starting to show interest in offshore wind and China's first offshore wind energy forum will be held in Shanghai in June. In January, the People's Republic's energy administration announced plans at provincial level for offshore wind development. Given the energy with which China has approached past engineering projects, the first turbines might be appearing off its coasts before 2020.

Yasutsune Kanatani, who works for Scottish Development International in Tokyo, told *P&H* that, apart from a small offshore pilot project funded by Japanese energy body NEDO at Setana Port, there is clearly interest within Japan, but no offshore energy generated as yet. "The main difficulties are that Japan's coastal waters are too deep, heavily fished and there is insufficient wind. In addition, over 50% of Japan's energy needs are already supplied by nuclear power, so there is a lack of government commitment to offshore wind," he told *Ports & Harbors*.

Japan also lies in one of the world's most seismically active regions, adding to the engineering challenges. Japanese engineers are considering either turbines conventionally anchored in very deep water or floating wind turbines similar to the Hywind prototype undergoing trials off the Norwegian coast.

Windfarms may be a relatively clean source of energy, but they do not always get a favourable reception. Extensive tests have shown that windfarms can affect the radar of nearby ships, so mitigation measures and evaluation tools have had to be developed to determine the extent of this new threat to maritime equipment. Measures include making modifications to wind turbines, such as reducing their radar cross-section, and relocating navigation buoys and radar beacons.

Another phenomenon observed since the UK's small Round 1 farms became operational is the occasional occurrence of microclimates, particularly sea fog and the accumulation of clouds on an otherwise cloudless day. Research is continuing into mitigation measures to counter this side-effect.

Some governments unwilling or unable to invest in offshore wind power have expressed interest in tidal and wave energy prototypes. These may also have a promising future in energy-hungry societies. **PH**

Weighing up the price of greening

P&H reporter *Jem Newton* considers the European view on investing in the environment during a recession

Protecting the environment and cutting costs can both be achieved, two reports reveal The global economic downturn has given European ports a breathing space that has allowed them to assess their environmental management and to plan how they can make their future operations more sustainable. Two major surveys have been issued since the fourth quarter of last year, both taking an in-depth look at ports' attitudes to environmental management.

Last October, engineering and environmental consultant Royal Haskoning published *Green Ports* – an analysis of the views of the UK's leading port decision-makers on the main challenges they face in the near future. And in February, the European Sea Ports Organisation (ESPO) published its review of environmental port management in Europe, which is likely to lead in turn to a review of its environmental code of practice.

Unsurprisingly, the number one challenge facing UK ports, according to the *Green Ports* survey, is operational and cost efficiency. But another clear outcome of the survey, Royal Haskoning told *P&H*, is that port

decision-makers largely support sustainability and environmental improvements and that such measures can result in cost savings.

"A large percentage of the respondents said that implementing more environmentally friendly procedures could save ports money. Most ports seem to take environmental improvements seriously, but, as always, operational efficiency and profitability are their major drivers," the consultant told *P&H*.

Royal Haskoning added that there is a very strong link between reducing emissions from port equipment and buildings and the cost savings achieved on energy use. "These reductions can be obtained both by using less energy, by using the port equipment more efficiently or by small investments in energy-saving procedures, insulation and proper maintenance of port equipment," it said.

Ports are also under increasing regulatory and compliance pressure to reduce their carbon footprints. Many ports are well aware of the penalties they may incur for failing to comply with environmental



regulations – expenditure they can ill afford in today's economic climate.

But should ports be asked to increase their nonoperational investment in a time of financial austerity? One only has to look to the example of London Gateway, which is likely to set a new industry standard for good environmental practice from its terminal design onwards. Because of the current uncertainty in the UK and worldwide, it hasn't yet committed to construction beyond dredging and terrain preparation.

"It's true that many ports are suffering considerable reductions in their income due to the economic downturn and this has led them to look carefully at all their expenditures," the consultant commented. "In fact, the survey was carried out in mid-2009 because Royal Haskoning felt UK ports might be reconsidering their commitment to environmental improvement.

It concluded, however, that most ports have made good progress on environmental improvements and are maintaining those commitments despite the economic situation. "We note that most UK ports are now showing a small recovery in trade. We see this improvement continuing and we believe that ports will continue to invest in environmental improvements," it said.

A recession – when a port may be operating at less than full capacity and its management is subjecting costs to close scrutiny – is a good time to be considering structural changes to the way the port operates.

Royal Haskoning business development director Richard Marks – co-author of the *Green Ports* report – said there were a number of appropriate costcutting measures that could be implemented quickly. "Ports can also review their operations and in particular they can look at improving the management of the movements of port equipment by using their terminal operating systems or other management systems to reduce the distances travelled by port equipment or by reducing the amount of idle time and by improving the maintenance procedures for that equipment," he told *P&H*. Many improvements to energy use can be made in buildings for relative modest expenditure, which can nevertheless provide valuable savings in heating, lighting and better insulation, Marks added.

On the ground, several ports have already started to implement cost-cutting measures of this kind. One such is Southampton: "Our major focus in the past 12



• Ports should use terminal operating systems to reduce idle time

Richard Marks *Co-author of* Green Ports

European port priorities

2004	2009
1: Garbage/port waste	Noise
2: Dredging operations	Air quality
3: Disposal of dredged material	Dredging operations
4: Dust	Disposal of dredged material
5: Noise	Relations with local community
Source: FSPO EcoPorts Environmental Review 2009	

months has included a commitment to an intensive programme of electricity and water monitoring to further our understanding of resource consumption. We are also investing in waste recycling facilities at Southampton's cruise terminals to manage and maximise recycling opportunities of passenger waste," port director Doug Morrison, of Associated British Ports, told *Ports & Harbors*.

Turning to the more recent *EcoPorts Environmental Review 2009*, unveiled by ESPO at its Green Port 2010 Conference in February, the survey's remit extended right across Europe. It also had a different focus to the UK report in that it asked European ports for their 10 environmental priorities rather than asking specific questions about environmental sustainability and climate change.

"A major outcome of the review was the redefinition of the top environmental priorities of European port sector," said ESPO secretary-general Patrick Verhoeven.

The current top priority – according to the survey of 122 ports in 20 European maritime countries – is noise pollution, followed by air quality. The European Noise Directive helps explain the high priority given to noise in the port environment.

Also of significance are two new entries in ESPO's priority table that were not considered important when the last survey was published in 2005. "These priorities are the port's relationship with the local community and energy consumption," said Verhoeven. "These concerns clearly reflect the political priorities of energy efficiency and climate change, as well as the significance of good port-city relations for the operation of a sustainable port."

ESPO has launched several initiatives recently to address these new concerns. First, it aims to update its Environmental Code of Practice, which reviews EU port regulations and suggests recommendations for their implementation. "The code is due to be updated in 2011," commented Verhoeven.

A recently introduced initiative is the annual award on the Societal Integration of Ports, first won in late 2009 by the Spanish port of Gijón. The distinction rewards innovative projects by port authorities to develop cooperative synergies with the community where they are located and promote a positive image of the port as a good place to work in and live near. **PH**

For more information and a copy of the ESPO environmental review go to: www.espo.be

Ports share data to reduce carbon footprint

The Carbon Footprinting Working Group of IAPH's World Ports Climate Initiative (WPCI) says the guidance document circulated last November is only the first step in helping ports to quantify their greenhouse gas (GHG) emissions. Some 55 ports worldwide already support the footprinting initiative and the group has made an appeal for other members to support the project.

"The purpose of quantifying emissions is to gain awareness and effectively plan for reduction strategies," project group member Lisa Wunder, of the Port of Los Angeles, told P&H. "The next step for WPCI's Carbon Footprinting theme is to develop an online calculator tool that can be used to assess greenhouse gas emissions from different shipping routes as well as cleaner technologies."

The guidance document, prepared by the Port of Los Angeles, is intended as a resource document to assist ports in

developing or improving their GHG emissions inventories and to learn from each other. The input of as many ports as possible is crucial, because the project group sees emission inventory building as a dynamic process, and user input is vital to provide information and improvement in content, so the project can be updated periodically.

Many of the 55 participating ports are located in northern Europe, the USA and Japan. These are all regions that have started to look seriously at regulatory measures to control GHG emissions. But the managing director of IAPH's Europe office, Fer van der Laar, told P&H that he believed the main factor behind the ports' participation was their keenness to address the problem. "Most have joined out of interest in the common

problem and trying to learn from other ports," he said. But he believes the success of the carbon footprinting initiative depends on the participation of as many ports as possible. "We're always actively looking for new members and would like to appeal again to other IAPH members to join us in this initiative," van der Laar said.

The guidance document offers an introduction to the carbon footprint concept, explains the basics of an emissions inventory and looks at estimation methods for both



stationary emission sources and mobile ones, such as ships, trucks and trains and various cargo handling equipment. The project group also believes it is important to involve the rest of the supply chain – both before and after the port cargo processing phase - to ensure reduction strategies are as effective as possible. "We believe that a growing consumer interest in purchasing sustainable 'green' products will drive manufacturer and supplier interest in modelling greenhouse gas emissions along

the supply chain to determine environmentally friendly transit options," said Wunder

Next steps

What are the next steps envisaged by the Carbon Footprinting Working Group? Ralph Appy, Environmental Management Division director at Los Angeles, has suggested the following:

- Get comments from the greater WPCI Group
- Incorporate comments
- Determine if web-based calculators are of interest
- Determine if recommendations need to be strengthened
- Finalise report and post on WPCI site.

Emissions control progress at MEPC

The 60th session of the Marine Environment Protection Committee (MEPC), held at IMO between 22 and 26 March, struggled to make progress on key climate change initiatives.

MEPC did, however, move forward on a number of issues including approval of amendments to the MARPOL Convention creating clean-air zones around the coasts of North America.

Having formally adopted a North American Emissions Control Area (ECA), ships within 200nm of the Pacific, Atlantic and US Gulf coastlines will be required to use fuel with no more than 0.1% sulphur or employ sulphur abatement by the start of 2015.

The US Environmental Protection Agency has indicated that it will fast-track adoption of the amendment into US law, potentially requiring ships to burn fuel with a maximum 1% sulphur as early as 2012.

American Association of Port Authorities president and chief executive Kurt Nagle welcomed the adoption of the tighter emission controls, which he said would "over time, favourably impact air quality in and around America's seaports".

Canadian enforcement of the ECA will follow, the country having finally deposited the articles of ratification for MARPOL Annex VI with the IMO. Another MARPOL amendment, banning the carriage and use of heavy grade oils in the Antarctic, was also adopted.

Work continued on guidelines



Amendments to MARPOL came out of MEPC 60

to aid the implementation of the Hong Kong Convention on ship recycling, resulting in text on developing a Ship Recycling Plan. Work is to continue on developing guidelines for recycling flagless and non-party ships by parties to the convention.

As the committee granted basic approval to eight ballast water treatment systems and final approval to another four, IMO secretary-general Efthimious Mitropoulos repeated his appeal to member states to ratify the Ballast Water Convention.

The committee also adopted a resolution to encourage the installation of ballast water management systems on new ships, in expectation of the convention's entry into force.

On the vexed issue of climate change and greenhouse gases, a working group was able to develop text on the Energy Efficiency Design Index (EEDI) and Ship Efficiency Management Plan (SEEMP) which was accepted by the committee. But many developing countries remain implacably opposed to their adoption as mandatory instruments. Even before the meeting, discontent over these technical and operational measures had been building, with the industry divided on the methodology for the EEDI and its application to different ship types.

The issue of market-based mechanisms (MBMs) – carbon trading or a bunker tax – was not discussed at all.

Non-Annex I countries to the Kyoto Protocol also decided that not just MBMs but any measure touching climate change should be subject to the concept of 'common but differentiated responsibilities' - that developing countries would be required to do less and receive financial assistance to do it. Opposition to the energy efficiency measures left the meeting running over time on the last day and the IMO's timetable for implementing a response to climate change falling behind schedule.

US Coast Guard keeps control of spills

A US federal court has thwarted efforts by the state of Massachusetts to curb US Coast Guard authority in oil spills. The US District Court in Massachusetts decided to grant motions filed by the US government and a shipping coalition to prevent the state from enforcing its manning and tug escort rules governing tankers operating in Buzzards Bay.

The coalition is made of Intertanko, the American Waterways Operators, the Chamber of Shipping of America and BIMCO. The ruling is "significant in that it upholds US Coast Guard authority over vessel operations in US waters" and reinforces a 2000 US Supreme Court decision upholding federal preemption laws, Intertanko said.

The dispute dates back to April 2003, when a tanker grounded and spilled more than 300 tonnes of oil into Buzzards Bay. The state then imposed strict escort provisions on all oil transporting vessels, together with other restrictions. But the Coast Guard complained that the law usurped federal jurisdiction.

Shortsea sector wants more time to develop EEDI

MEPC 60 delegates recognised that the IMO's Energy Efficiency Design Index (EEDI) needs to be adapted to fit the specialist nature of ferry and ro-ro tonnage. Interferry delegate and director of sustainability for Stena Line, Johan Roos, said he would prefer to see faster implementation of market-based measures, such as carbon trading, and more time allowed for the EEDI methodology to be tested in practice.

That puts Interferry at odds with most of the industry, which wants the EEDI made mandatory as soon as possible.

"The importance of the shortsea sector is that there was recognition that the 'one size fits all' approach is broken. We have been given a clear opportunity to try and work on and resolve the outstanding issues," he said.

While tanker, bulker and container ship owners have in the main been satisfied with the design index's methodology and the baselines used to calculate energy efficiency for these ship types, Roos said ferry owners now hope they have the opportunity to demonstrate alternative formulations.

"There need to be new ways of formulating the EEDI which take account of factors like service speed and timetables. The formulations had no recognition of these measures and shortsea is all about timetables. A system that didn't recognise that could be pretty disastrous," he added.

Interferry will seek to present its case to the EEDI inter-sessional working group and at MEPC 61 – an opportunity Roos said it has been denied until now. He reiterated that any serious proposal has to be subject to trials, with proper data capture to establish the practical reality against the baselines.

The MEPC has agreed to establish an Expert Group on EEDI to undertake a feasibility study and impact assessment of the various proposals submitted for a market-based instrument for maritime transport – the group will report back to MEPC 61, which will meet in October.

China puts forward antipollution law

China introduced new regulations on 1 March 2010 to prevent ships from polluting its marine environment and detailing the penalties to be imposed for violations, according to a statement by the International Chamber of Shipping.

Owners, operators and managers, and ports and loading/discharging terminals, must develop formal emergency response plans for potential pollution incidents. Presumably, for ships, a shipboard marine pollution emergency plan (SOPEP) manual will suffice.

Pollution prevention measures must be carried out for certain ship operations, such as ship scrapping, ship-to-ship transfer of dangerous cargo, dumping wastes and supplying and receiving bunkers. There are provisions detailing the procedures for discharge and receipt of ships' waste. The regulations further introduce into Chinese law a compulsory insurance regime for all ships. The regulation provides that all ships – except those of less than 1,000gt and not carrying oil cargoes – must carry insurance to cover claims for pollution.

The limit of liability is that in the People's Republic of China (PRC) Maritime Code (LLMC 76) insurance must be provided by an entity approved by China's Maritime Safety Administration (MSA). The operators of any ships carrying bulk hazardous and pollutant liquid cargo and operators of other ships of over 10,000gt are now obliged to contract with an MSAapproved local clean-up contractor.

It is not yet clear whether owners' existing insurance that complies with the requirements of the Chinese-ratified International Convention on Civil Liability for Oil Pollution Damage (the Civil Liability Convention, or CLC) 1992 and the Bunker Convention 2001 will suffice. Also, any remuneration paid as agreed upon in contract to avert or minimise loss may not be limited in accordance with the PRC Maritime Code. Receivers of persistent oil cargoes are required to contribute to the PRC Fund, which would compensate for ship-induced pollution claims in excess of CLC limits. China is not a party to this fund convention and the PRC Fund is apparently a local variant of this principle.



Injuries and deaths during lifeboat drills have prompted IMO to draft safety guidelines

Lifeboat safety a priority

An IMO sub-committee has urged ship operators to evaluate and, if necessary, upgrade lifeboat on-load release mechanisms ahead of full regulatory approval for the measure.

A number of serious injuries and fatalities have occurred during drills and inspections as a result of unsafe release points.

The IMO's Sub-Committee on Ship Design and Equipment (DE), which met in late February, has agreed draft guidelines to evaluate and replace these mechanisms. The resultant recommendations will be submitted to the Maritime Safety Committee (MSC) for approval this month.

However, DE said operators should take action "at the earliest available opportunity".

MSC is also expected to approve amendments to the International Life Saving Appliances (LSA) Code and SOLAS Chapter III, which require safer design of the release mechanisms and ensure noncompliant equipment is replaced no later than the first scheduled drydocking of the ship after the SOLAS amendment enters force.

Over the past six years IMO has adopted several measures to reduce the number of lifeboatrelated accidents – giving guidance on the use of fallpreventer devices, for example.

DE is also continuing to develop a draft safety code for ships operating in polar waters. This would cover the full range of design, construction, equipment, operational, training, search and rescue, and environmental protection matters relating to ships navigating polar waters.

Floating on a bed of bubbles

NYK Line held a ceremony in March to name an innovative ship that generates bubbles on its underside to reduce water resistance and therefore carbon emissions. The heavy-load ro-ro module carrier was named *Yamatai*.

The Japanese carrier jointly developed the air lubrication system with shipbuilder Mitsubishi Heavy Industries; the system reduces the frictional resistance of seawater by means of bubbles generated by blowing air along the vessel's hull. The system is a response to sustained demand for effective environmental measures to counter global warming and its designers said they hope to reduce CO_2 emissions by about 10%, as well as using less fuel.

NYK decided to try out the system on module carriers because they have a wide, shallow-draught

hull that generates relatively little water pressure. This minimises the electric energy required by an air blower to supply the bubbles. The flat, wide bottom of the module carrier means the air is retained for longer under the vessel. A second vessel, *Yamato*, is due to be completed in November. Both ships were built at Mitsubishi's Nagasaki shipyard. It has a ro-ro rampway to move 1,000-tonne prefabricated structures of plant facilities that are destined be installed on oil/gas development sites or industrial locations.

NYK Line believes *Yamatai* to be the first vessel "engaged in overseas transport to make use of a permanently installed air-lubrication system using an air-blower". The project was subsidised by Japan's Ministry of Land, Infrastructure, Transport, ClassNK and the Nippon Foundation.

Wärtsilä and SHI talk ships

Wärtsilä, of Finland, has signed a deal to develop a new breed of gas-fuelled ships with South Korea's Samsung Hl. The deal has been done to create efficient ships that will meet tough future environmental regulations, explained Wärtsilä senior manager Marit Holmlund-Sund.

The agreement involves using LNG to fuel ships, a development that will be especially relevant in emission control areas. Wärtsilä will provide the engines and mechanical propulsion while Samsung will concentrate on the design side – how best to incorporate fuel storage facilities and gas-powered propulsion machinery in modern vessels.

Call for airline-style ticketing in Philippines

In a bid to address serious safety concerns, the Philippine Coast Guard (PCG) is urging introduction of a ticketing system for passenger shipping similar to that used in the airline industry.

More than 50 ferries were delayed in the days leading to the Easter celebrations this year in consequence of overloading.

The PCG is now working to implement rules and regulations based on the newly enacted Republic Act 9993, otherwise known as the Philippine Coast Guard Law of 2009. Under this law, the Coast Guard is empowered to conduct inspections on all merchant ships – including prior to departure – to enforce compliance with safety standards, rules and regulations. The agency is also responsible for detaining a ship that does not comply with safety standards, rules and regulations.

In its recent inspections, PCG boarding teams reported several instances in which passengers without tickets were able to board ferries. Some operators were alleged to be selling more tickets than the ships would be permitted to carry under their safety certification, and these cases are being investigated by the PCG, the Maritime Industry Authority (Marina) and port authorities.

For example, coastguard inspectors found the ro-ro ferry *Maria* Matilde had about 800 supposed paying passengers, with 60 others not able to board. Yet its operator, Montenegro Shipping Lines, said it had sold only 580 tickets and could not explain how it came to have so many on board.

Another ferry, the *Princess Annabel*, was delayed after a number of paying passengers could not board. It did not sail until all passengers had disembarked and a recount was carried out of genuine ticket-holders.

Vessel operators appear to have difficulty ensuring that nontravellers disembark before departure because passengers put company officials under pressure to maintain the advertised sailing times. Coastguard officers at Batangas reported a record number of passengers – more than 34,000 – on 1 April, with additional ships and voyages supplementing the schedule.

PCG Commandant Admiral Wilfredo Tamayo has urged ferry companies to rethink how tickets are sold, together with embarkation and loading of cargo in ports and terminals, to prevent overloading, excess passengers and improper cargo stowage and securing. Cut-off times for passenger embarkation and cargo loading must be strictly observed, he said, adding that operators should stick to approved ship maintenance procedures to avoid engine breakdowns.

Saudi Arabia signs anti-piracy code

The Kingdom of Saudi Arabia has signed the Djibouti Code of Conduct aimed at suppressing piracy and armed robbery in the western Indian Ocean. Saudi minister of transport Dr Jubarah Bin Eid Alsuraisry signed on behalf of his government during an official visit to IMO's London headquarters in March.

IMO secretary-general Efthimios Mitropoulos welcomed Saudi Arabia's support as a boost to the effective implementation of the code of conduct in the region. "The unabated acts of piracy – not only in waters off the coast of Somalia and in the Gulf of Aden, but also in the wider expanse of the western Indian Ocean – continue to be in the public spotlight," Mitropoulos said. "The support of Saudi Arabia for the effective implementation of the Djibouti Code of Conduct and for efforts to protect international shipping by the naval forces deployed in the region are, therefore, important contributions."

Saudi Arabia has already provided bilateral financial support for activities to ensure maritime safety, security and environmental protection in the Strait of Malacca and the Strait of Singapore.

Signatories will review their national legislation to ensure they have laws in place to criminalise piracy and armed robbery against ships and adequate provisions for the exercise of jurisdiction, conduct of investigations and prosecution of alleged offenders. The code also provides for the sharing of piracy information through centres being established in Sana'a in Yemen, Mombasa in Kenya and Dar es Salaam in Tanzania. It is also envisaged that a training centre will be established in Djibouti.

The Djibouti Code of Conduct was adopted in January 2009 by a regional meeting on maritime security, piracy and armed robbery against ships for western Indian Ocean, Gulf of Aden and Red Sea states. Twelve other maritime countries had previously signed the code: Comoros, Djibouti, Egypt, Ethiopia, Kenya, Madagascar, Maldives, Seychelles, Somalia, Sudan, United Republic of Tanzania and Yemen.

> Four posts have been created at IMO specifically for promoting and providing support to implement the Djibouti Code of Conduct.

The Saudi minister of transport signs the anti-piracy code at IMO headquarters Photo: IMO

Boosting handysize efficiency

Lloyd's Register and Shanghai Bestway Marine Engineering have signed a memorandum of understanding to increase the energy efficiency of handysize bulk carriers. This MoU is said to be in response to pressure from owners and regulators to offer more cost-effective and environment-friendly ships. It is hoped it will result in a more fuelefficient bulk carrier.

Nick Brown, LR's country and marine manager, China, said: "Economic and legislative drivers are motivating designers to reconsider the environmental impact of their products. In the foreseeable future, the environmental impact of commercial ships will increasingly influence their designs, the way they're operated and their eventual disposal."

One its mandates is to support safe, sustainable shipping and it is bringing its expertise to the table "to support the maritime industry as it searches for greener forms of trade transport," Brown said.

ELAA mission accomplished

The European Liner Affairs Association (ELAA) will cease activity and hand over its responsibilities to the World Shipping Council (WSC) in July. The Brussels-based association of container shipping lines has announced that its carrier members agreed at their 17 March meeting in Taipei that the ELAA had successfully completed the tasks for which it was set up and will round off its business by 1 July.

An outstanding concern for ELAA's members is how to maintain and expand its database of freight rates and volume, which will not be taken over by the WSC, based in Washington DC.

ELAA was set up in 2003 to discuss with the European Union's Directorate General for Competition (DG Comp) the replacement of the liner conferences in the EU. This was achieved with the publication of the Maritime Transport Guidelines in 2008. The ELAA's work was later extended to encompass the forthcoming revision of the EU's Consortia Block Exemption Regulation. The World Shipping Council already has an office in Brussels and will take over responsibility for all regulatory affairs worldwide for the liner industry from 1 July.

'K' Line's guinea pig in recycling project

"K" Line has provided one of its older ships to a Japanese project to develop an advanced ship recycling system, in response to an initiative by the Japanese Shipowners Association (JSA).

"K" Line's car carrier New York Highway arrived at the port of Muroran in Hokkaido in March. It was built in 1985 by Oshima Shipbuilding and made 156 voyages during its seagoing career.

The idea is to develop a modern ship recycling system and the pilot project has been organised by the

New York Highway will help advance ship recycling methods

maritime bureau of the Ministry of Land, Infrastructure, Transportation and Tourism.

JSA member "K" Line contracted the sale of the carrier to Teraoka, a member of Muroran Ship Recycling Study Group, which was awarded the project by the bureau. The group will be managed by Japan Marine Science and Teraoka, with other members executing the project.

Dismantling of ships has traditionally been carried out in developing countries where labour costs are low and demand for scrap steel strong. There have been projects in European countries to

start 'green ship recycling' on a sound business basis, but so far the cost of recycling has proved financially unviable.

But there has been a strong movement internationally to put an end to the environmental pollution and labour accidents caused by unsafe recycling methods. In May 2009, the IMO adopted the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, aimed at protecting the environment and improving the safety of workers in ship recycling facilities.

One of the most important

requirements of the convention is compiling an exact inventory of hazardous and harmful materials on board the ship that is to be scrapped. This inventory should be submitted to the recycling facility when the ship is handed over.

Although the new convention has not yet come into effect, such an inventory has already been completed for New York Highway in compliance with the convention's guidelines.

The inventory was made in advance with the assistance of the Japan Ship Technology Research Association and the approval of ClassNK.



Photo: FotoFlite

Fuel suppliers should assist operators to switch fuels

Retrofitting a typical Panamax ship to handle low-sulphur fuels could cost \$0.5M or more, according to figures prepared by Danish trader and broker OW Bunker.

Its technical director Steffen Kortegaard pointed out that costs can vary hugely from ship to ship, but estimated that retrofitting segregated bunkers, settling and service tanks would cost \$100,000– 130,000 – not to mention the lost revenue while the ship is off-hire.

The company said in a recent statement that it believes that fuel suppliers should take "a greater responsibility in working with ship owners and operators to help them overcome the technical difficulties... to meet sulphur dioxide regulation."

Some have experienced problems switching fuel, the company noted, including loss of propulsion, engine failure, filter blockages and damage to auxiliary pumps. It cited statistics following the Californian Air Resources Board's July 2009 implementation of its low-sulphur regulation, which showed that loss of propulsion incidents increased from an average of 23.6 incidents a year between 2004 and 2008 to 67 in 2009. "All these problems have a cost", the company noted.

And the solutions also have costs. In addition to the expense of additional tanks, for example,



Operators need help to meet sulphur dioxide regulations

Kortegaard mentioned onboard blending facilities, which he estimates could cost \$50,000– 60,000. But this arrangement offers benefits, he indicated, since it allows the vessel to load just two fuels and blend the full range of products from 0.1% to whatever is the maximum sulphur content available. It can be monitored, logged and documented by coriolis mass flow meters and engineers can switch rapidly from one fuel to another.

Those changes need to be controlled and an automatic changeover valve might cost \$30,000. "This can, of course, be done manually, but one single changeover failure can be very expensive," he remarked to *P&H*.

To address these problems, he urges "a change in the relationship between the fuel supplier and the ship operator," describing what he terms "a partnership of responsibility based on a mutual understanding of the challenges". In short, "the customer's success is equal to our success."

Solutions include developing a fuel procurement strategy depending on operators' trading routes and their commitment to the environment, the company's statement suggested. For example, an operator might always purchase fuel oil with a quality of no more than 1.5% sulphur, or might choose a double-fuel system to cope with occasional visits to emission control areas. "The key is to have a plan," said Kortegaard "both from a technical perspective and as part of an overall risk management strategy." He insisted that its success "is based on, and driven by, a partnership approach between the fuel supplier and the customer."

US wants clarification from China

US importers' concern over the confidentiality of 2010 liner contracts to be filed with the Chinese government led US regulators to seek clarification of China's tariff rules.

The rules, administered by the Shanghai Shipping Exchange (SSE), became effective in August 2009. They require liner carriers in the trans-Pacific trade to file tariffs as well as certain negotiated rates that apply to Chinese container exports.

Earlier this year the National Industrial Transportation League (NITL), which represents major box shippers including Wal-Mart and Sears, sought help from the Federal Maritime Commission (FMC) to get more information from China on how contract information is used and assurances of confidentiality.

Among the things NITL is trying to ascertain is whether negotiated rates will be made public and whether the SSE or China's transport ministry is responsible for enforcing the rules.

"We're not sure how it works, and we haven't been able to get a good translation of the rules," NITL VP Peter Gatti told *P&H*. "That's why we're enlisting the help of the Department of State and the FMC to understand them and the effect they could have on our members."

The FMC, tasked with protecting US maritime commerce from unfair foreign trade practices, is concerned that annual contract terms currently under negotiation with carriers could be compromised.

"Shippers are very nervous because many of them are changing their distribution strategies" based on higher rates sought by carriers, FMC chairman Richard Lidinsky told *P&H*. "They're putting into contracts fresh bits of information based on these new strategies. When people enter service contracts here at the commission, shippers and carriers are entitled to confidentiality. We would hope no other government would violate that."

"Carriers are caught in the middle, because they have to comply with the rules of both countries," Lidinsky said. "But concern by shippers is probably shared by carriers as well."

Associations work together for seafarers

The International Transport Workers' Federation (ITF) and international ship managers' association InterManager signed a memorandum of understanding on 23 March. The associations' intentions are to work together on maritime safety, training and preventing the criminalisation of seafarers.

InterManager secretary general Guy Morel commented that the

signing "reflects our focus on the care for our seafarers and our belief that, with better liaison and co-operation, we can minimise unnecessary duplication of effort, improve efficiency and enhance our impact.

"We have already seen what can be achieved when the industry unites on issues such as criminalisation and piracy, and we hope to build on those lessons." Jon Whitlow, ITF secretary for the seafarers' section, commented: "This is a positive step towards developing closer ties on matters of common interest with international bodies representing shipowners and operators. We hope that searching for common ground and improving communications and liaison will result in a more powerful united voice on industry issues."

Savannah beckons for Mid-term Meeting

Georgia Ports Authority will be the host, and the Marriott Riverfront Hotel the venue, for the 6th Mid-term Board Meeting, which will be held in Savannah, Georgia, USA, from 7 to 9 June.

The three-day event includes IAPH Technical Committee meetings and four port forum sessions in addition to the board meeting itself. Speakers for the port forum in particular have been invited from a broad range of industry sectors including economic service providers, ports, retailers and ocean carriers.

There will be a chance to debate topics such as how the economic slowdown is influencing the way logistics providers do business; new hot spots for global trade; whether ports should combat the 'war on terror'; and creating a greener supply chain.

Activities get going with dinner at the Chatham Club, and the following evening members will have a chance to view the port from the river aboard the *Savannah River Queen*.

The three days will be brought to a close with a traditional US Low Country Boil – a one-pot

Membership notes

announce that the following new members

The IAPH secretariat is pleased to

have joined the association



Southern sounds on the bank of the Savannah River

stew of corn, sausage and seafood – at Fort Jackson.

Eating and networking opportunities aside, members will find this a great opportunity to visit the region that is home to the largest single-terminal container facility in North America – Garden City Terminal. The second of the port's

Associate members

Global Maritime & Port Services Pte

Address:	28 G	ienting Lane, No 08-06, Platinum 28,
		Singapore 349585, Singapore
Telephone:		+65 6748 8895
Fax:		+65 6748 8859
Email:		lksheri@gmaritime.com
Website:		www.gmaritime.com
Representative:	Lalchand Kishi	nchand Sheri, chief executive officer
Nature of business	activities:	Port consultancy

Dolphin Exhibitions

Address:	PO Box 68, Bildeston, Ipswich, Suffolk IP7 7ZY, UK
Telephone:	+44 1449 741801
Fax:	+44 1449 741628
Email:	info@dolphin-exhibitions.co.uk
Website:	www.transtec-neva.com
Representative:	Roderick Keay, general director
Nature of business acti	rities: International maritime
	transport exhibition and conference organiser

Regular member

Port of San Diego

Address: Telephone: Fax: Email: Website: Representative: PO Box 120488, San Diego, CA 92112, USA +1 619 686 6237 +1 619 686 8055 rpopham@portofsandiego.org www.portofsandiego.org Charles Wurster, president and chief executive officer deepwater facilities is Ocean Terminal. The deepwater ports of Savannah and Brunswick, both of which come under the jurisdiction of the Georgia Port Authority, are linked to inland barge operations in Bainbridge and Columbus. This connection acts as a gateway for raw and finished cargoes. The Mid-term Board Meeting offers a chance to find out more.

The accompanying persons' programme includes local favourites such as lunch at the Gryphon Tea Room, tours of the historic squares in this elegant town founded in the 1730s by General James Oglethorpe, and a visit to the Savannah Candy Kitchen factory, renowned for its Southern-style confectionary.

Other attractions to enjoy at your leisure include Europeaninspired architecture, museums and a wide selection of foods. It also boasts an array of boutique clothing and antiques shops.

Book before 14 May and you can take advantage of the special rates that have been arranged. The Georgia Ports Authority looks forward to welcoming you. *More info: www.gaports.com/IAPH*

Honorary member passes

Honorary member André Pagès passed away on 4 February at his home in Bordeaux, France. He was 94 years of age and is survived by his wife, Christine, one daughter and two sons.

Pagès' IAPH career started in the late 1960s when he represented his country as alternate director and then director on the board. He also served on the IAPH Executive Committee from 1971 to 1973.

He played a leading role in the growth and improvement of IAPH by serving as chair of the IAPH Committee on Legal Protection of Port Interests from 1973 to 1985 – the period when containerisation was spreading across the world and vessel traffic was increasing.

Pagès was at the leading edge of the debate, addressing and protecting the interests of ports, including the legal protection of navigable waters and the limitation of liability for the owners



André Pagès in 1985 at the IAPH World Ports Conference in Hamburg

of seagoing ships. He also represented the association at numerous IMO meetings, especially its Legal Committee, at which issues affecting ports' interests were extensively debated in the 1970s and 1980s.

OPS survey goes online

A detailed report of the WPCI Onshore Power Supply (OPS) survey sent out last year – detailed in *Ports & Harbors*, March issue, pp28–29 – is now available online.

Project co-ordinator Susann Dutt, environmental controller at Port of Gothenburg, explained that 53 ports responded to the questionnaire, which was sent out to all WPCI member ports, as well as others. The questionnaire asked ports about the current status of, and future plans for, OPS. Of the respondents, 85% are considering introduction of OPS technology or expansion of existing quayside power supplies in the next five to 10 years. Environmental benefits were cited by 85% as a major reason for implementing OPS, 63% believe there are societal benefits to be gained and for 20% the economic benefits were significant.

To read the full report, please visit the Port of Gothenburg's website: www.portgot.se.

Newton joins the team

Jem Newton has joined the *Ports & Harbors* editorial team based in Redhill, UK. He has worked for the recently renamed IHS Fairplay as a writer, sub-editor and commissioning editor since 2003. Previously, he worked for newspapers and international business magazines and worked for Reuters news agency in Rome and Brussels between 1985 and 1992. In addition to English, Newton speaks five European languages plus Arabic. He looks forward to working with IAPH and its members.



Dates for your diary

A selection of courses and conferences

May

- 17-21: Maritime Week Americas 2010 Miami, USA *www.petrospot.com*17-28: IT & EDI in Port Business Antwerp, Belgium
- **17–28:** II & EDI in Port Business Antwerp, Belgium www.portofantwerp.com/APEC
- 18–19: Managing Carbon Emissions and GHGs in Shipping
 London, UK
 www.lloydsmaritimeacademy.com
- **18–20:** RORO 2010 Bremen, Germany *www.ropex.com*
- **19–20:** Marine Pollution 2010 London, UK *www.lloydsmaritimeacademy.com*
- **19–20:** Coastal Engineering and Management Asia Singapore *www.coastalengineeringasia.com*
- **20–21:** 8th ASEAN Ports and Shipping 2010 – Ho Chi Minh City, Vietnam *www.transportevents.com*
- 27-28: ESPO 2010 Helsinki, Finland www.espo-conference.com
- 27–28: 2nd Annual China Port Expansion and Efficiency Summit 2010 Qingdao, China www.noppen.com.cn/events/2nd_port/2nd_port.asp
- 31 May- Tasks and Responsibilities of Forwarders, Agencies and
- **11 June:** Shipping Lines Antwerp, Belgium www.portofantwerp.com/APEC

www.aapa-ports.org

June

1–2:	Africa Ports and Harbours Congress 2010 – Johannesburg, South Africa www.terrapinn.com/2010/portza/index.stm
1–2:	Port Finance and Investments 2010 – Amsterdam www.millenniumconferences.com
8–10:	TOC Europe 2010 – Valencia, Spain www.tocevents-europe.com
7–9:	IAPH Mid-term Board Meeting – Savannah, USA www.gaports.com/IAPH
14–25:	Container Terminal Management – Antwerp, Belgium www.portofantwerp.com/APEC
15–17:	Seawork International 2010 – Southampton, UK <i>www.seawork.com</i>
21–25:	35th IADC International Seminar on Dredging and Reclamation – Delft, Netherlands <i>www.iadc-dredging.com</i>
July	
21-23:	AAPA Port Security Seminar and Exposition – New Orleans, USA



✓ We are proud of the fact that today over 70 train operating companies serve the port

Keeping a competitive edge

Hamburg Port Authority's international affairs director, *Manfred Reuter,* offers some suggestions on how to keep a port one step ahead

The competitiveness of a port depends on several factors and it is the responsibility of the port authority to weigh the relative importance of each factor in relation to the success of the port and to act on them accordingly. Optimum infrastructure and high-quality services are essential, and the port also needs a variety of 'adjusting screws', such as terminal handling charges, hinterland transport costs and port calling fees, which encompass the port dues raised by the port authority, pilotage, tugboat and mooring services fees.

To keep a port competitive, the costs and quality of hinterland transport services are of outstanding importance, as they represent a large proportion of the overall cost of logistics.

The terminal handling companies of Hamburg's port industry recognised early on that smooth running and affordable hinterland transport logistics increased the amount of cargo handled at their own quays. Since 1991 they have played an active role in improving hinterland transport conditions. Today, subsidiaries of Hamburg's terminal operators run a wide variety of intermodal terminals – often in co-operation with national train operators – in Poland, the Czech Republic and Hungary, among others. An efficient network of offices and agents in a large number of countries allows operators to control transport chains from the port to the place of destination in an efficient manner and meet the continually rising customer demands.

The services offered include low-cost transport to the place of destination, deliveries to and collection from customers across a wide area, electronic data processing-supported order and processing systems, status and depot messages, customs services, and import and export processing.

Every day around 220 trains arrive at and depart from the Port of Hamburg.

- Every year the railway moves roughly
- 1.9M teu. For distances of more than
- 150km, trucks play only a minor role – about 70% to 75% of all the port's containers are transported by rail.

To assist businesses meet the demands of today's customer, HPA provides an in-port railway infrastructure for a fee. This network comprises around 300km of tracks, more than 60 railway bridges and approximately 880 sets of railway points. As owner and manager of this network, HPA ensures that all train-operating companies are guaranteed equal access to these facilities.

We are proud of the fact that today over 70 train-operating companies serve the Port of Hamburg and conduct their business here. The ensuing competition this brings will continue to benefit the port. RH

Manfred Renter



A positive impact at every point

Take the pressure off with proven berthing and mooring solutions

We understand the stresses and strains of safe berthing and mooring. With vessels, cargo and people requiring constant care and control, you need to diffuse the pressure at every point. Our proven solutions are engineered for the most demanding commercial ports and terminals, so they won't let you or your customers down. From design to application, we're here to help you make a positive impact.

Port & Harbour Engineering by Adrian Jarvis



Register at **takesthepressureoff.com** for your chance to win a copy





The right piece for the puzzle

Every day, millions of things are moved both across continents and within countries. To keep global cargo flows running smoothly, innovative cargo handling solutions are called for. Of such innovations, Cargotec has the widest offering in the industry. With our three market-leading daughter brands, Hiab, Kalmar and MacGregor, we offer cargo and load handling solutions for operations on land, in ports and at sea. Whether you are the biggest shipping company in the world or the owner of a single truck, we have the right piece to complete your puzzle, and help your business succeed.