



# PORTS HARBORS

Official Journal of the International Association of Ports and Harbors

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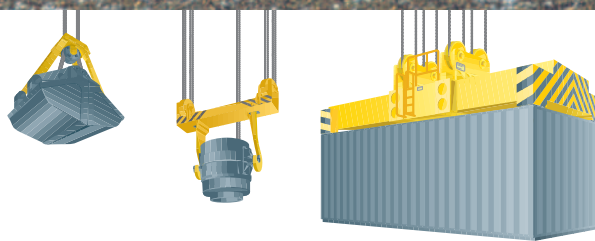


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Getty Images

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## PORTS & HARBORS

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## PUBLISHER

**Dr. Satoshi Inoue**  
Secretary General, IAPH  
info@iaphworldports.org

## EDITOR

**Nick Brown**  
nick.brown@lrfairplay.com  
+44-(0)1-737-379-148

## ASSISTANT EDITORS

**Penny Allen**  
penny.allen@lrfairplay.com  
+44-(0)1-737-379-158  
**Stephen Cousins**  
stephen.cousins@lrfairplay.com  
+44-(0)1-737-379-156

## SALES MANAGER

**Adam Foster**  
adam.foster@lrfairplay.com  
+44-(0)1-737-379-710

## DESIGN & PRODUCTION

**Phil McAllister**  
phil.mcallister@lrfairplay.com  
+44-(0)1-737-379-165  
**Matt Ramsdale**  
matthew.ramsdale@lrfairplay.com  
**Neal Thompson**  
neal.thompson@lrfairplay.com  
**Mark Ames**  
mark.ames@lrfairplay.com  
+44-(0)1-737-379-170

## MANAGING EDITOR

**G. Paul Gunton**  
Lloyd's Register-Fairplay Ltd  
paul.gunton@lrfairplay.com

## EDITOR-IN-CHIEF

**Tony Slinn**  
Lloyd's Register-Fairplay Ltd  
tony.slinn@lrfairplay.com  
+44-(0)1-737-379-159

## ASSOCIATE EDITOR

**Yuko Akamatsu**  
Assistant Under Secretary, IAPH  
ph@iaphworldports.org

## EDITORIAL & PRODUCTION

**Lloyd's Register-Fairplay Ltd**  
Lombard House, 3 Princess Way  
Redhill, Surrey RH1 1UP,  
United Kingdom  
Tel: +44-(0)1-737-379-000  
Fax: +44-(0)1-737-379-001  
Web: www.fairplay.co.uk

## SUBSCRIPTIONS

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7th Floor, South Tower,  
New Pier Takeshiba  
1-16-1 Kaigan, Minato-ku  
Tokyo 105-0022, Japan  
Tel: +81-3-5403-2770  
Fax: +81-3-5403-7651  
Email: ph@iaphworldports.org  
Web: www.iaphworldports.org

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# Mens sana in corpore sano

The strength of essays submitted for the IAPH's Akiyama essay contest clearly shows the good health of the association, and its encouraging focus of thought

As many as 70 entries were submitted for the IAPH 50th anniversary essay contest. Since 1979, IAPH has been running the competition every two years under its programme to assist developing member ports. To celebrate this year's Golden Jubilee however, the contest was opened up to the entire membership, with a theme specially chosen as "Action for a Quality Port".

I was truly impressed by such a large number of high-quality submissions that were sent in. They show us the firm commitment of our member ports to making a quality port.

While ports are technologically advancing very rapidly, it is the people working there that determine how successfully the

port works as a whole. In other words, port staff and workers remain the key to success, no matter how automated and sophisticated ports become. Without experienced and devoted people, ports can never function to the satisfaction of their customers, or the communities they serve.

Therefore, the training of port staff and workers is playing a more critical role

“It is the people of the port industry that push forward challenging efforts”

than ever before. Ranging from how to formulate port strategies and develop reliable community relations to how to handle dangerous cargo, or how to safely work at our terminals. Last year, for example, in the process of the ISPS Code implementation, every port provided extensive seminars and training on security to port staff and workers. Awareness and preparedness of port people are absolutely key to securing a port, even when equipped with the most advanced security systems.

'A Quality Port' would no doubt have to meet a long list of requirements, such as safety, security, efficiency and environmentally friendliness. At the end of the day though, it is the people of port industry that push forward such challenging efforts toward the quality port. As such, the IAPH will continue to help member ports develop and enrich their human resources. **PH**



**Dr Satoshi Inoue**

Secretary General – The International Association of Ports and Harbors



## Port updates

### Lübeck, Germany

The German ferry port of Lübeck-Travemünde is mulling plans to install cold-ironing in the near future. "We expect a demonstration project to come on stream later this year," Hans-Gerd Knoop, managing director of maritime research institute GAUSS stated. Participation will be voluntary, so shipping companies will be able to compare the costs of traditional self-sufficiency and piped-in electricity.

### Chennai, India

Chennai Container Terminal has procured and installed four new rubber tyred gantry (RTG) cranes and one twin-lift quay crane. This new equipment brings the P&O Terminals-operated port up to a total of 24 RTGs and seven quay cranes. The installations were designed to improve the terminal's container handling capacity "beyond current throughput requirements."

### Grand Bahama

Grand Bahama Island is hoping to become a Container Security Initiative (CSI) port and the Hutchinson Ports facility there has begun scanning US-bound boxes for radiological agents. Air and ship passengers bound for the US from the island have long cleared US Customs before departing and now officials there hope to extend the same practice to US-bound cargo.

### Thamesport, UK

X-Press Container Line announced in late July that it is to introduce a third weekly service operating out of Thamesport in south east England. This latest venture from the British-owned feeder operator will link Thamesport to Dublin and Rotterdam and will be known as the RDX service.

### Shreveport, USA

Louisiana's Shreveport has been selected as the location for a US\$200M steel production plant. Located within the port, the new 200,000ft<sup>2</sup> facility will produce around 500,000 tons of steel coils for Canadian and US construction programmes. This will see approximately 300 barge shipments through the port every year.



## Immingham's flying delivery

The UK Port of Immingham's Exxtor Terminal handled its first consignment of components bound for the giant new Airbus A380 in early August.

The unusual delivery was made by out-of-gauge transport specialist Ferryways, from Airbus' Toulouse base and bound for Broughton in Cambridgeshire, where the massive wings are being built at the world's largest wing-assembly plant.

When construction of the wings is completed, they will retrace

their route back up through Immingham and from there, by sea to Toulouse to be mated with the aircraft's fuselage.

Ferryways only began using Immingham in January this year, but since then, volumes and demand for the service have grown, encouraging the company to increase its traffic to three vessels making nine calls a week.

Dealing with this sensitive and outsize cargo requires specialised handling and according to Immingham's operator, Associated

British Ports, the workforce at Exxtor have been specially trained and are working flexibly to meet the demands of Airbus.

Looking at a map of the UK, Immingham may not immediately spring to mind as the most obvious port to use for Broughton, but Exxtor's flexible layout played a key part in the choice, according to Ferryways. Uncongested access to the port and straightforward road links onward to the Broughton facility also contributed to the selection.

## Tangiers gets US security funding

Morocco is to be the recipient of US\$374,000 in aid to help fund security programmes at the proposed new Tangiers-Mediterranean port in the north of the country.

This funding from the USA will mandate participation in the Customs-Trade Partnership Against Terrorism (C-TPAT), and Container Security Initiative (CSI) as well as full International Shipping and Port Facility Security code compliance, in anticipation of broader trade between the two countries under the US-Morocco

Free Trade Agreement (FTA).

US Ambassador Thomas Riley inked the grant deal on 22 July with Morocco's President du Directoire Saïd Elhadi. According to US Trade and Development Agency (USTDA) spokeswoman Donna Thiessen, Morocco considers the Tangier-Mediterranean Special Agency that is developing the new port to be a key part of its broader efforts to orient the country towards free trade. This can be seen in the country's FTA with the United States and European Union.

The USTDA-funded technical assistance scheme includes provisions for the design of safety and security programs specific to Tangiers-Mediterranean that are compliant with the ISPS Code, C-TPAT, and CSI.

Technical assistance will also assist the agency responsible for the port in the development of tender documents for the procurement of safety and security equipment and services, as well as a strategy for the acquisition and payment of these items and services.



# Australia mandates protected pilots

Australia's Senate is debating legislation designed to extend the country's Barrier Reef compulsory pilotage regime out to the Torres Strait and could be put in place by the end of this year.

This will possibly be backed up with the threat of up to A\$275,000 (US\$213,000) in fines for corporate shipowners whose vessels do not take pilots on board. The fines are reduced, but still substantial if a master or individual owner is caught without a pilot, leaving them liable for up to A\$55,000.

According to the Maritime Legislation Amendment Bill 2005, "the new provisions are broadly similar to those requiring compulsory pilotage for transits of the major shipping routes in the Great Barrier Reef area under the

GBRMP Act".

It follows that certain vessels declining to employ pilots through Torres Strait will be in contravention of Australian law and will risk prosecution should they call at an Australian port.

Last month the IMO's Marine Environment Protection Committee agreed to extend the existing Particularly Sensitive Sea Area (PSSA) designation for the Great Barrier Reef to the Torres Strait. Importantly, however, a bid to gain IMO agreement on compulsory pilotage for certain vulnerable international waterways was unsuccessful.

Under the same new piece of legislation, Australian marine pilots will gain full protection from liability claims. The Bill seeks to

amend Australian law so that the owner or master of a ship remains liable for any damage caused by the ship even if a pilot is on duty under compulsory federal laws.

The law has been introduced to prevent a repetition of the events which followed the *Doric Chariot* grounding in July 2002, when the pilot was prosecuted under Australia's federal government environmental (Great Barrier Reef) laws. The case against the pilot was later dropped.

According to the explanatory notes with the bill, the rationale is that "Pilot immunity from civil liability claims is a longstanding convention and is necessary because of the inability of pilots to insure themselves against potential liabilities".

# Shooting questions US security direction

A firearms incident at the US Virgin Islands' St Thomas docks has provoked a rethink of security at the port.

In the St Thomas incident, a guard was trying to break up a fight between a barge worker and a disgruntled would-be passenger, when his sidearm was discharged at the docks in Red Hook on Pillsbury Sound.

This has prompted the the port authority to re-evaluate its current practice of employing armed security guards, and consider

replacing them with regular police officers, following a trend being embraced by many other US port and terminal operators.

Amongst these, for example, are ports like Charleston in West Virginia, which chose to forego the less expensive guards several years ago, swapping them for sworn police officers.

Alternatively, many terminal operators such as SSA Marine have further opted to use unarmed guards to avoid potential accidents and liability issues.

The St Thomas altercation began when the man was denied boarding because he was unable to produce proper identification as is presently required under the heightened security alert state for US ferries.

Darlan Brin, executive director of the island port authority, told the media that the incident is serious and being investigated. "If having armed guards is causing us so much trouble, perhaps it's best that we don't have armed guards," he said.

# Le Havre opens up to new towing outfit

The Port Authority of Le Havre has given its approval for the establishment of a new towage company, to be known as the Société Nouvelle de Remorquage du Havre (SNRH), at the port.

The company is now awaiting a final administrative green light, which is only considered to be a formality, before starting its towage business at Le Havre in the early days of 2006.

In action, SNRH will operate four tugs with a 60t bollard-pull, with a

further vessel in reserve.

The announcement was predictably met with dismay by Les Abeilles, the sole tug operator in the port at the moment. The company stated that the arrival of SNRH will be a blow for the local towage business.

A spokesperson from Les Abeilles said that the company will likely be forced to lay up three tugs and cut its staff numbers if it is to remain competitive.

In reposte, SNRH claims that it

had no problems finding its first clients, with numerous shipping lines seeking lower towage tariffs than those proposed by Les Abeilles. "We have already signed with a number of shipping lines" a spokesman said.

It is planning to start up business in time to capitalise on Le Havre opening its giant new container complex, Port 2000. This new complex is set to boost the port's traffic, especially for the port's shipping movements.

## Port updates

### Dunkirk, France

Four major industry players have submitted bids to take over the management of Dunkirk's container terminal, which is currently run by Nord France Terminal International. The bidders include APM Terminal, CMA CGM, Dubai Ports International and Australia's International Infrastructure Management. The interest comes on the back of heavy investment and a subsequent resurgence in Dunkirk's popularity with the box industry, though only one third of its 600,000 TEU capacity was used last year.

### Inchon, RoK

The Republic of Korea's (RoK) Ministry of Maritime Affairs and Fisheries has signed an agreement with Ssang-Yong Construction to build three new general cargo berths at the port. Each berth will have the draft and length to accommodate a 20,000DWT vessel. The W113.9Bn (US\$112.2M) project will begin in October and lead towards a completion date of March 2009.

### Mumbai, India

Ten major companies have made it onto the Mumbai Port Trust's shortlist to run a new INR11.9Bn (US\$273.8M) offshore container terminal. The trust will now address Requests for Proposal to AP Moller, Dubai Ports International, Evergreen Marine, Hutchison Ports Holdings, Mistui OSK Lines and P&O Ports. Consortia made up of United Liner Agencies and HHLA Container Terminals, Gammon India and Dragonas. The winner will have to foot INR9Bn of the development costs.

### Everett, USA

Ground was broken on the Port of Everett's new rail/barge facility on 11 August. The facility is designed to cater for oversized cargo, including aeroplane parts from the local Boeing factory that won't fit in standard trucks or rail reception facilities. Washington state provided the port with a US\$15.5M grant for the construction and pier users will pay the remaining US\$10M. The in-water portion of the facility should be open by February 2006.



## Port updates

### Cartagena, Colombia

Cartagena port operator SPRC has reportedly begun US\$300M modernisation and expansion work at the Caribbean port. This is intended to increase the port's container throughput to 1.2M TEU per annum and enable it to accommodate larger vessels. The initial work reportedly includes dredging the port's access channel to 15m in order to receive vessels of up to 8,000 TEU.

### Houston, USA

Osprey Terminals is to build a new container transloading facility on a 19-acre plot it acquired in mid-August on Texas' Cedar Bayou. The company says the facility has received approval from the US Army Corps of Engineers, for multiple berths and "improvements consistent with developing a full service container yard and marine operation". The project should be completed in early 2006.

### Rio de Janeiro, Brazil

Rio de Janeiro's state port authority (CDRJ) has announced that it is to seek private funding to build a third berth at the Angra dos Reis port. The CDRJ president announced the intention at the XIV Port Conference, but said that he wouldn't be seeking formal proposals – estimated to be in the region of R\$300M (US\$22.1M) – until the end of the year.

### Teesport, UK

In mid-August, PD Teesport reported issuing an unprecedented number of security passes from a new office opened in January. The five-strong team have created over 1,000 permanent photographic ID cards, an average of 800 visitor passes per month and 10,000 vehicle permits.

### Gdynia, Poland

Baltic Container Terminals has ordered a raft of new container handling gear from Kone and Kalmar for its Gdynia operations. This spending spree include two new quay cranes and four rubber-tyred gantry cranes as part of a US\$100M investment plan to boost capacity to 1M TEU and push the port as the main Baltic container hub.



Cape Town's container facilities are to see massive expansion under new plans

# NPA plans Cape Town expansion

South Africa's National Port Authority (NPA) has revealed huge new redevelopment plans for the container terminal at Cape Town.

These new developments will focus on redressing "the current imbalance between stacking, berth and equipment capacities at the container terminal" according to an NPA statement. It added that numerous projects have been identified under the programme, though the start of each project is still subject to environmental planning clearance.

Recent trends have seen the numbers of box ships calling at Cape Town dropping, but as elsewhere, those that do put in are growing in size.

As such, the Ben Schoeman containerside dock is central to these plans, and plans will see it deepened to a maximum depth of 16m below mean sea level, with an estimated one million cubic metres of material to be removed from the dock by cutter suction dredger.

This huge amount of dredged material may have already found a home, to the north-east of dock, where the expansion plan envisages enlarging the stacking area.

This will be extended 300m seaward, increasing the container handling-capacity from its present 535,000 TEU to 1.6M TEU per year. However, as

much as six million cubic metres of fill-in material will still be required to complete the project, with plans in place to source this from the ocean floor to the north of Robben Island.

In addition to the dock deepening, the NPA is planning some serious development for the quayside, which may see a piled concrete deck-type quay structure built from berth 601 to berth 604, where the container ships tie up at present and construction of a new crane rail. This new construction will bring the quay face 10m further into the port.

The new crane rail will enable operators to use a new container gantry crane of 30m gauge, or use the existing 20m gauge gantry crane on the deepened quay.

Total costs to give the port a new lease of life are estimated at around R1.3Bn (US\$204M), with the dock accounting for R550M and crane replacements at roughly R600 million.

# New cruise for harwich



Eastern England's Harwich International Port became the base for a new northern European cruise route in late July, when Thomson Cruises made its first call.

The company's *Thomson Celebration* arrived at the port on 24 July to pick up passengers for a 13-night cruise up through the Baltic and around Norway's Fjords. The ship will now be a regular visitor to Harwich, running seven cruises throughout summer.

# US moves onto inland waterways

Osprey Line has got behind the USA's push to make more use of its inland waterways in a big way, carrying out the largest single unit tow container movement in the history of the US Inland Waterway System.

The MV *Bill Watson*, owned by Kirby Inland Marine, successfully pulled a barge loaded

up with 375 individual 40ft containers of agricultural products being transported between Memphis, New Orleans and Houston.



## More crude for Novorossiysk

Novorossiysk port planned to increase tanker shipments of crude oil in August, despite the oil pipelines to the port having reached capacity.

Government data at the beginning of the month projected that Novorossiysk will load 3.89M tonnes of oil (920,000 barrels daily) during August. This is 3% higher than July's figures.

Sergei Grigoriev, vice-president of the pipeline agency Transneft, explained that this gain was to come from increased rail shipments to the port.

He warned that "a boost of shipments to the port is possible only by railroad. I see no indication of oil moving from one port to another."

Port planners at Novorossiysk want to prove him wrong, and recently issued ambitious plans to add railway capacity bringing the oil export tonnage up to 65M tonnes per annum.

However, other maritime sources say this is unlikely because of acrimony between port officials, the regional government, and the national railroad company.

## US ballast water budget

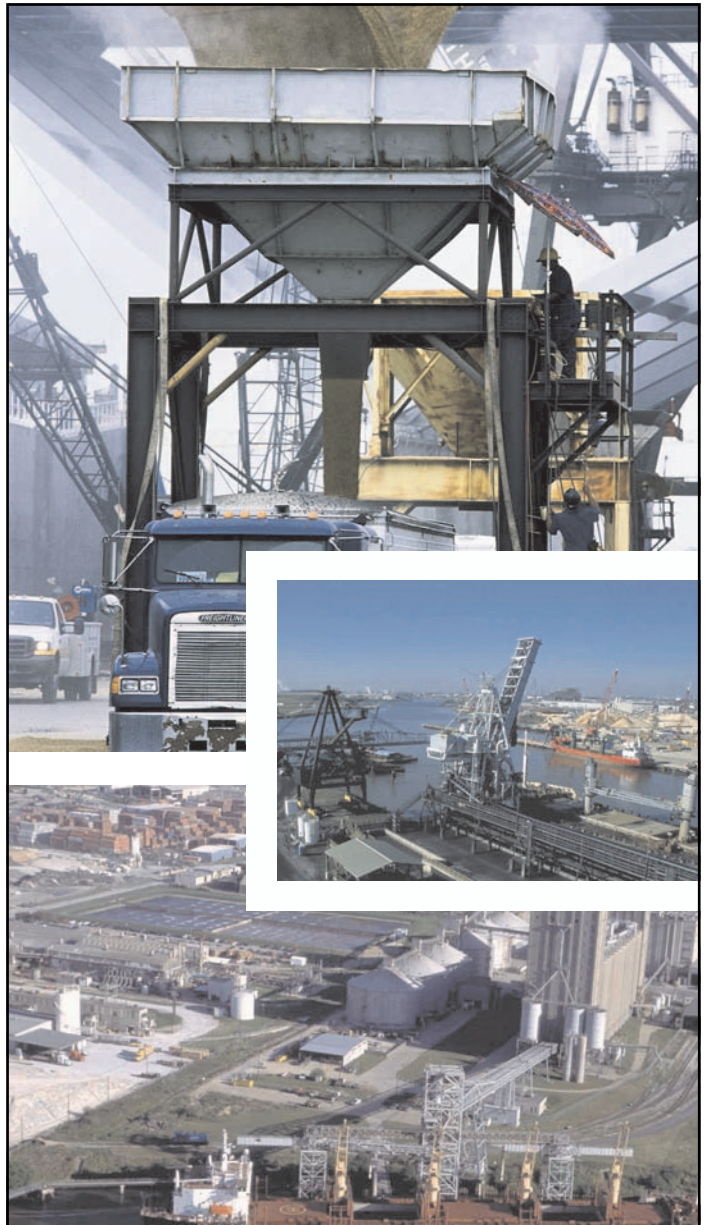
Ballast water programmes in the USA will receive a cash injection of US\$20M a year if a new draft amendment and the overall bill receive final legal approval.

The US senate's Commerce, Science and Transportation Committee inserted an amendment for the funding – together with another annual US\$5M for the Federal Ballast Water Demonstration Project to be led by the National Oceanic and Atmospheric Administration – into the Ballast Water

Management Act of 2005.

The bill aims to amend the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990, to establish a new national approach to addressing invasive species in ballast water. One key element is that it would supersede any state and local laws relating to ballast water.

Though good news for the beleaguered ballast water lobby, this funding windfall will be taken from the US Coast Guard's stretched budget.



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## Port updates

### Savannah, USA

Georgia Port Authority announced record results for the 2004 to 2005 financial year, handling 1.76M TEU, a growth of 12% on the previous year. The Port of Brunswick was singled out for hitting its own record, having handled 326,051 auto and machinery units.

### Mina Salman, Bahrain

Bahrain's Ministry of Finance and National Economy has selected Hague-based APM Terminals to run the port of Mina Salman and related services in Bahrain. Following traditional work-sharing agreements, APM will now run the facility in partnership with local company Yusuf bin Ahmed Nakoo Holdings.

### Bremen, Germany

Privatisation at Bremen's port has enabled the state government to cut its port management spending by 15% since the Port Authority was privatised three years ago. According to Bremen's minister for economics and ports, Jörg Kastendiek, "transforming the authority into a private entity has boosted transparency and accountability allowing substantial savings."

### Natal, Brazil

Four years of lobbying has encouraged Brazil's Ministry of Transport to allocate R\$60M (US\$25M) for development of the country's north eastern Port of Natal, almost doubling the berthing areas to 971m. This will afford the port another two berths, giving it a total of five. Half of the money has been allocated for the dredging of the extended berthing down to 13m.

### Plymouth, UK

Northrop Grumman Sperry Marine has upgraded the vessel traffic management system (VTMS) at Plymouth Harbour and the Devonport Royal Naval Dockyard. The upgrade added two new radar towers into the existing sensor network. This gives the port authorities greatly improved situational awareness in the sensitive areas of Plymouth Sound.

# Japan slams Filipino ports

Ports in the Philippines have been slated for being inefficient, unsafe and unsuitable for modern operations in a Japanese funding agency's study.

A report released by the Japan International Co-Operation Agency (JICA) at the end of July noted that most of the ports are old and not designed for modern cargo operations or for the kind of modern vessels shipping companies want to introduce in the near future.

The study, commissioned by the government in Manila, was part of a plan to modernise domestic shipping and secure financial support. As such, its critical investigation has revealed that the country's leading domestic ports are plagued by low productivity, poorly fitting ramps for the many domestic ro-ro's and insufficient draughts for large vessels.

The study also aimed to promote technology transfers to



Philipino ports are looking to modernise

Filipino operators and will be used to form policies based on the findings. A leader of the report's research team said that JICA's recommendations for general port improvements would be reported back in October.

However, the Philippine Ports Authority's general manager, Oscar Sevilla, called findings in the report baseless. Sevilla added that a JICA representative had already called to set up a meeting at

which to apologise for the port findings.

The report, however, was not the first study to stress the inefficiency at Filipino ports. JICA's report has joined a long list of detractors including the Asian Development Bank, the UN Economic and Social Conference for Asia, and the Pacific and Maersk Line. They all issued research papers criticising the country's lack of infrastructure.

## FTA routemap to unclogging British ports

In an effort to improve the flow of containers and freight in the UK, the Chamber of Shipping, Freight Transport Association (FTA), UK Major Ports Group, Sea and Water, British International Freight Association and Rail Freight Group have published an 'action plan' that they hope will "tackle the immediate congestion problems being faced by their members".

"Our members, many of whom are cargo owners such as shippers, were encountering problems and delays last year [2004] in getting hold of their cargo," said Dr Andrew Traill, head of freight, maritime and air cargo policy at the FTA. He added "they asked that some of the problems be resolved for next year". In response to the industry's struggle to meet demand during the last quarter of 2004, Beating Port Congestion, offers some ideas on how different parties within the supply chain can keep freight moving.

Covering four pages with nearly every point beginning with the word 'communicate', the overlying message advocates sharing information, along with co-operation and co-ordination between parties. "This is essentially the message we are trying to demonstrate," explained Traill. "You can't be involved on your own" and that the different industries within the supply chain all need to be committed.

It offers advice for the shipper, rail freight operator, road haulage provider, port and terminal and ocean carrier. Suggestions include 24-hour and weekend working flexibility and maximising carrying capacity by rail. In addition it suggests that carriers adhere to scheduled arrivals and sailings and ports communicate essential information during peak hours.

The guide also acknowledges



the shortage of deep sea container port capacity in the country, but has produced this document to enable the industries concerned to make a difference in the short-term. To get a copy of the guide, visit the FTA's website on: [www.fta.co.uk](http://www.fta.co.uk)

## Terminal resurrection at WCT

Zeeland Seaports has come up with a proposal to rescue stalled plans for the Western Scheldt Container Terminal (WCT) in Holland's Western Scheldt, an area near Vlissingen.

With the exception of the main channel, the entire Western Scheldt is covered by the EU's habitat directive and the initial WCT proposal was turned down by the Council of State in 2003 on environmental grounds, citing concerns that the terminal would destroy an environmentally-sensitive dune area known as the Kaloot, bordering the terminal.

Zeeland's new plans aim to settle these objections by

shortening the quay by 600m, to a total length of 2,000m, saving the beach area at either end of the terminal.

Nevertheless, environmental pressure groups remain dissatisfied with the plans and will continue to oppose the project.

New plans are also sketchy on ways of overcoming the Council of State's original objections about increased rail and road traffic that are inevitable if the terminal is to achieve the 2M TEU that Zeeland believes is possible.

If the company manages to convince the Council this time round, the WCT could become operational in 2010.

## Singapore selects harbour identification system



**Singapore's busy port**

ST Electronics has recently been awarded a contract by the Maritime Port Authority of Singapore for the supply of a Harbour Craft Identification & Monitoring System (HCIMS).

The HCIMS requirement traces its origins back to the wake of the terrorist attack by small suicide craft on the US Navy destroyer USS *Cole* in Aden, Yemen in October 2000. It was further bolstered by the attack on the French-owned supertanker *Limburg* off the coast of Yemen two years later.

Worldwide recognition of the need for enhanced maritime security has increased significantly following these examples of port and vessel vulnerability.

ST Electronic's cost-effective tracking solution enables the port authorities to identify, monitor and track vessels in and around Singapore's coastal waters.

Based on GPS and General Packet Radio Service technology, the front-end transponder unit is mounted aboard small vessels and sends real-time information such as craft ID, position, course and speed to the monitoring centre, via an existing Telco shore-based infrastructure.

The HCIMS gives maritime and port authorities greater real-time visibility of vessels, enabling them to make more informed decisions quicker, and therefore how to respond to potential issues.

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## Port updates

### Baltimore, USA

Port police officers at Baltimore have blown the whistle on the port's "significant security problems." They slam the port for problems ranging from holes in security fences to unattended gates and inoperable alarms and cameras. They were complaining that repeated requests for security enhancements had gone unanswered by port officials. Baltimore port officials replied that they hope to draw on US\$15M in available state and federal funds to seal up the apparent security gaps.

### Hong Kong, China

DPI Terminals' new facility handled its first vessel at the Asia Container Terminal (ACT) facilities in Hong Kong in July, when the feeder vessel *MV Saga* dropped in to unload 121 containers for transhipment to mainline vessels. The company expects the ACT to handle over 1M TEU in its first year of operations.

### Seattle, USA

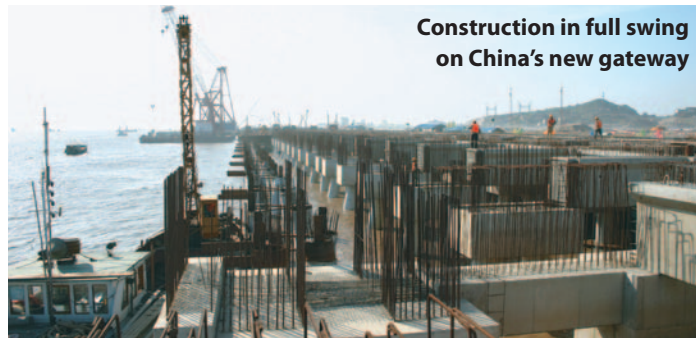
The port of Seattle became the second major US port to provide cold ironing services to cruise vessels in late July, when two ships from Princess Cruises ships, the *Diamond Princess* and the *Sapphire Princess*, plugged into shoreside power for the first time. Princess already uses cold ironing for its ships calling at Alaska's Juneau Port.

### Constanta, Romania

DPI Terminals set a new record for the Port of Constanta in July, when it made 2,425 container moves to turn the *Marmara Sea* around in 33.3 hours. This is the greatest number of moves for a single vessel ever carried out by the port.

### Port Hedland, Australia

Western Australia's Port Hedland bulk commodity facility officially became the first port in the country to pass the 100M tonnes of trade mark in late July, when it reported trade figures of 108.5 million tonnes for the 2004-05 financial year. This impressive load is nearly 21% up on the previous year. The port expects to shift over 120M tonnes in 2005/06.



Construction in full swing on China's new gateway

## Yangshan touts for business

Shanghai International Port Group (SIPG) has approached the world's major shipping lines to move their established China-Europe services to the new Yangshan Deepwater Port by the end of the year.

"It is the first step in our plan to move the deepwater operations from the Waigaoqiao terminals to Yangshan," SIPG spokesman Pu Xueqian told *P&H's* sister magazine, *Fairplay*, in early August.

Sixteen Asia-Europe services will be shifted to the five-berth Phase I terminals, which Pu said would be operational "before the end of the year". This would divert 3M TEU to

Yangshan, accounting for over 70% of the capacity at the new offshore port.

"It is a good thing for the lines, and we are working together to make the transition a smooth one. The major lines need more depth than we can offer at Waigaoqiao."

Some of the lines that will have to move their operations include Maersk Sealand, CMA CGM and OOCL. The Waigaoqiao terminals will feed transshipment cargo to Yangshan, while also continuing to serve smaller international vessels and those involved in the river trade.

## Colombo breaks monopoly

The Sri Lanka Ports Authority (SLPA) has invited firms to supply the bunkers in Colombo port after a recent court ruling ended the effective monopoly held by Lanka Marine Services (LMS).

Far from being punitive, the new order opens up the bunker operations. In fact SLPA chairman Dileepa Wijesundera has invited both LMS and Lanka Bunkering Services (LBS) to supply bunkers.

LMS had full control of the market under de facto monopoly conditions established in the early days of its privatisation.

"We have now been authorised to open bunkering in Colombo port, which we believe will help reduce prices," stated Wijesundera.

Furthermore "this means that

the whole industry will benefit from new players coming into the market, where prices of bunkers will now become more competitive than that supplied by a monopolistic supplier," said Mohamed Reza, the managing director of LMS.

The out-going restrictions caused Chemoil Corp to withdraw from a joint venture with LBS to supply bunkers in Colombo.

Despite the two firms previously having been prevented from supplying bunkers in Colombo by a writ application filed by LMS, the company has maintained that it was not trying to block other suppliers. However, LMS refused to comment on the grounds that the matter was in court.

## Malaysia fights for visibility

Choking haze and smoke from Indonesian forest fires disrupted port operations through Port Klang and Penang in July and early August, prompting talks on solutions to the annual problem.

Wind and heavy rains had brought the ports relief by 15 August, but the problem makes for very difficult working conditions at the ports. A China Shipping-owned container vessel CSCL Kobe ran aground at South Channel while being piloted towards Westport on 8 August because of poor visibility, according to Port Klang Authority general manager Datin Paduka Phang. The vessel was freed 12 hours later and was reported to have suffered no damage.

A spokesperson for Westport confirmed terminal operators were no longer subject to any disruptions as the haze had almost disappeared with the official air pollutant index (API) reading down to 62. Penang has also resumed normal operations with the haze clearing over the northern region.

The government had declared a haze emergency in Port Klang and Kuala Selangor when the API reading shot past 500. Operations at Port Klang were suspended for several hours on the afternoon of 10 August.

Despite these trying conditions, however, both ports reported that there was no congestion or bunching of vessels arising from earlier disruptions.

Malaysian and Indonesian officials are now holding talks in Jakarta on "cloud seeding" and other operations that may be needed to overcome the haze problem, which is largely caused by the peat and forest fires in Sumatra and other parts of the Indonesian archipelago.

Reports of uncontrolled, illegal forest burnings are also exercising government planners as Indonesia lacks the necessary assets to clamp down on farmers.

# Proven Results

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*Mr. Zhubao, General Manager  
Beilun Second Container Terminal Co., Ltd. of Ningbo Port*

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**Dredging  
underway at  
Prince Rupert**



## Hydraulic options

*P&H* looks into the role of hydraulic dredging in North America through experience gained in Prince Rupert, Canada

**A**ll over the world, port authorities striving to keep their facilities competitive and operating efficiently often turn to increasing the capacity of docking areas and channels to accommodate larger vessels and more traffic.

This approach also has the happy coincidence that deeper docking areas and channels mean shorter turnaround times for visiting vessels by reducing the need to impose prop-wash restrictions on them, allowing for faster entry to and exit from the port.

Expansion aside, it is a fact that sedimentation is unavoidable at many facilities, resulting in a need for maintenance dredging at regular intervals. As *P&H* has reported in the last three issues however, there are inherent challenges associated with the dredging necessary to maintain or increase depths, including occasionally severe disruption to port operations.

Beyond this, environmental concerns and regulations can also be a real challenge, as the need to protect aquatic life and habitat means that regulators may restrict the times of year when dredging can take place

and the types of technologies that can be applied.

Contaminated sediments add further challenges and options are limited because traditional approaches to sediment removal, such as clamshell dredging, often result in unacceptable resuspension and mobilization of the contaminated material.

All of this means that although environmental regulators might like to see the contaminated sediment removed, this may be outweighed by their reluctance to allow dredging in the first place.

This was the case in a recent situation near the western Canadian port of Prince Rupert. The problem dated back to 1977, when an industrial transformer near a private industrial dock failed, discharging PCB-containing oil into the marine environment.

Although the regulators ordered the remediation of the contaminated sediments, and were in favour of dredging, they were reluctant to accept dredging because of its potential to create a greater problem through contaminant migration.

Additional complications at this particular site

included tidal fluctuations of up to eight metres and cross-currents up to two knots.

### Going hydraulic

The European development of low turbidity hydraulic auger dredging, associated technologies and their successful application at multiple sites in 2004 brought a new potential solution to these issues.

Fairly simple in concept, this technology has proven very effective. From the dredging surface, the hydraulic dredge pulls the sediment-and-water slurry towards a submerged pump, which then pushes the slurry through a pipeline to a remote 'materials and water' handling facility.

Unlike other, more traditional dredging techniques, sediments are not pulled through the water column, which greatly minimizes sediment re-suspension and subsequent migration from the site.

Canadian regulators approved the technology and gave the the remediation a green light, to remove 50,000m<sup>3</sup> of sediment for treatment.

The key reason for the acceptance of this technology was the low turbidity generation and reduced risk to the environment realized by this approach. This reduced risk is advantageous, whether or not facility sediments are contaminated.

The major potential site of sediment re-suspension during low turbidity hydraulic auger dredging is at the dredge head. In Prince Rupert, turbidity control at the dredge head was managed through the configuration of doors fitted onto the dredge head itself, and tightly controlled operation of the dredge head. This kind of dredging can be done at low water-to-solids ratios, which further reduces turbidity generation.

Experience from the Prince Rupert operation shows how the new dredging technologies can help solve several challenges related to dredging, which opens the door to wider application of these technologies in North America.

### Regulating turbulence

From the regulators' perspective, limiting sediment re-suspension and migration was one of the biggest attractions of the hydraulic dredging approach.

Turbidity levels generated by the auger head were recorded by continuously-recording turbidity sensors and environmental monitors, collecting real-time turbidity data. If measurements indicated that turbidity was likely to exceed allowable levels, the operator could immediately make changes, such as reducing the auger speed. This real-time monitoring is a big improvement over the past, when variances could not be detected right away, and environmental effects might not be noted until several hours or days after the event.

This ability to immediately react is what particularly appealed to the Canadian regulators for the Prince Rupert operation. But the low costs of hydraulic dredging also proved predictably attractive to operators in the harsh world of cost-benefit analysis.

One of the benefits of hydraulic dredging is its speed, which is potentially up to twice as fast as traditional

“ The reduced turbidity is advantageous, whether or not the sediment is contaminated ”

methods, in turn meaning that port operations are disrupted for less time.

It can also mean reduced dredging costs, focusing only on the material that needs to be removed. In Prince Rupert, a GPS system attached to instrumentation on the barge, dredge head and boom recorded all dredge movements. This enabled the operator to control exactly where the auger head was, at all times, within 5cm either side of the datum.

### Charting ahead

Using a 3D computer-generated model as a 'dredging blueprint', accurate positioning of the auger head also allowed 'hot spots' of contamination to be removed separately. By convincing regulators that the worst areas would receive the required level of treatment, it was not necessary to subject the entire sediment body to higher-cost procedures.

Further, this ability for accurate positioning enables the dredge to work close up against pilings and other underwater structures with special attachments, as well as being particularly useful in navigational dredging and harbour area 'house-keeping'.

Additional cost savings can come from the fact that hydraulic dredging can transport the slurry directly to the material-handling and treatment facilities, without the need for the intermediate-handling of sediments that some traditional dredging approaches require.

Crucially, this sensitivity can free the port operator from the straitjacket of tight environmental controls, offering expanded dredging windows.

In the Prince Rupert case study, the best times of year for dredging are seriously complicated by their coincidence with the salmon-spawning season. However, due to the environmental benefits of the low turbidity hydraulic dredge, it proved possible to obtain regulatory permits for hydraulic dredging at times when traditional dredging would ordinarily be prohibited.

The expansion of the dredging windows, the reduction in environmental risks, and the flexibility of application further combine to allow for routine maintenance dredging. This allowed the port to operate efficiently and develop a reputation for solving problems promptly, such as responding to sediment deposition within a port channel.

These new technologies related to hydraulic dredging will have an increasing role to play in helping ports maintain their competitive position. **PH**

*This report's authors, Carolina Johansson and Robert McLenehan, are members of engineering consultants Golder Associates.*





# Fremantle battles bottlenecks

*P&H's Evelyn Duffy studies Western Australia's plans to preempt congestion*

**F**remantle has achieved an annual trade growth of 8% and is adopting a coordinated approach to planning for new freight facilities to ensure that it is equipped to cope with the resulting boom in trade.

As such, Fremantle Ports Authority is cooperating with the State Government and sister industries to ensure that its transport infrastructure will not be hampered by bottlenecks.

A major part of this plan has included the development of new AUS\$29M (US\$21.5M) rail freight facilities on North Quay. An Australian joint venture, Henry Walker Eltin/MVM, is expected to complete the North Quay Rail Project – including a 900m rail loop and a rail terminal – in December. The first track for the rail loop was laid in June of this year.

Fremantle Ports chief executive officer Kerry Sanderson said planning for the North Quay Rail programme projected a positive message about working in partnership to avoid capacity constraints in Australia's export transport system.

Sanderson stated that the new North Quay Rail Project would enhance rail efficiencies, reduce pressure on roads and help the port avoid any capacity constraints.

The upgrade included 3.2km of new track, a new access road and rail bridge, realignment of Port Beach

Road and new truck weighing facilities. These new facilities would remove inefficient shunting from the existing Leighton marshalling yards, allow longer trains to enter the port, reduce terminal costs and thereby lower the cost of using rail for shippers of containerised goods.

"With our upgrade at Kwinana," she continued, "and a deep harbour to maintain our position as first and last port of call from Europe, Africa and western Asia, the new rail and port facilities demonstrate the working port's determination to meet our commercial, environmental and social responsibilities."

Sanderson added that terminal costs were one of the key disadvantages faced by rail, compared to road transport and the new facilities would play a vital role in assisting rail to improve its market share of container cargo.

## Making it work

Western Australia's planning and infrastructure minister, Alannah MacTiernan, said the North Quay Rail Loop project would improve the efficiency between Fremantle and the Kewdale container terminal, as well as reduce the impact of road freight in the local area.

She added that the state government is keen to reduce congestion of heavy freight traffic in and around the port, and has set a target to triple rail freight in and out of the port by 2012.

"The new works are a key part of the strategy – which includes the Kewdale Freight Terminal – to take 320,000 containers off local roads each year," MacTiernan said. "This can be achieved by four 600m trains travelling both ways each day."

She said rail was an efficient way to move containers and had fewer social and environmental impacts than road freight, adding that the last financial year the number of containers moved by rail increased from 3 to 7% without any infrastructure improvements.

Stage 1 of the North Quay development will handle 400m trains and Stage 2 will expand this, providing the ability to cater for trains up to 600m long. The dual gauge rail loop will then give trains from regional areas direct access to North Quay in the inner harbour.

## Into the port

Sanderson said that in addition to the North Quay Rail Freight Project, planning was underway for new port facilities in the Outer Harbour at Kwinana. Furthermore, preliminary studies are looking into the need to deepen Fremantle's inner harbour to accommodate bigger ships.

"There are grounds to be optimistic about the capacity to manage growing trade volumes in the metropolitan area," Sanderson said. "These developments will be crucial in maintaining the economic development of the metropolitan area and its hinterland, and in securing our standard of living."

"We are moving as quickly as we can, consistent with good planning and community consultation, to ensure that the necessary transport and port facilities are available when they are needed so we can manage trade volumes in the short and long term." **PH**

# Rise of the robots

*P&H's David Worwood discovers how automation will change the face of port operations in Brisbane*

**S**elf-positioning machines that never tire, go on strike or need a tea-break used to be the province of science fiction, but in the Australian port of Brisbane, the concept has already become reality.

Operator Stevedore Patrick expects to give the green light to a full-scale automated straddle carrier terminal by the start of 2006. A small pilot facility has been running at Brisbane's Fisherman Islands berth seven for about three years. But its new terminal, encompassing berths seven to nine, will be ready in early January, by which time 18 automated straddle carriers – built by Finland's Kalmar Industries – will be able to handle an impressive 500,000 TEU a year.

Four ship-to-shore gantry cranes, which remain manually operated at this stage, will load and discharge the vessels. Thus far Cosco's ships have been using the berth seven pilot terminal, and the hardstand area was slightly expanded by April to accommodate the North China Express service of Cosco, P&O Nedlloyd, MOL, NYK and K Line.

The quay cranes at the trial site have consistently achieved rates of more than 23 container moves per hour, peaking at 35 moves per hour, with the new yard technology successfully coping with the workload.

In effect, the automated terminal at berths seven to nine will take over from Patrick's current container operations at Fisherman Islands berths one to three, which are being transformed into a major facility for break bulk cargo and vehicles.

## Shoulders of giants

Automation of container-moving equipment is not a new phenomenon, with three major European terminals already using different technology. However, Patrick Technology & Systems says the scope of automation in Europe has been limited to rail-mounted gantries, combined with automated guided vehicles as the interface between quay cranes and the RMGs.

The more expensive European designs require a large amount of equipment and considerable infrastructure, including underground cables and transponders, while Patrick's robot straddles are free-ranging within the terminal boundary, allowing greater operational flexibility.

Development of the Autostrad began in 1996, with extensive assistance from Kalmar and the University of Sydney's field robotics experts. The project accelerated in 2001, when Patrick acquired berth seven at Fisherman Islands as a trial working site.

The driverless straddle is able to locate itself precisely, pick up and transport a container by using



Source: David Worwood

an array of sophisticated navigation systems, including millimetre wave radar, inertial navigation, encoders and a differential global positioning system.

## Guaranteed protection

Safety is an essential consideration, given the size and speed of the straddle carriers. No personnel are permitted inside the terminal's fenced boundary and the machines' engines are programmed to cut out should these physical limits be breached. Indeed, the fail-safe design incorporates multiple levels of redundancy and the developer believes that the Autostrad operations are actually a degree safer than the conventional, manual alternatives.

The automated straddles also feature a modular design, which allows rapid replacement of parts and minimises downtime. Furthermore, each machine's condition is continually monitored through Kalmar's wireless LAN-based remote machine interface. The system also analyses equipment trends as a way of anticipating faults before they occur.

It's not just in equipment terms that the port plans to save money. The technology can also be set up to minimize pavement wear, an important cost factor for terminal operators.

Patrick has been reluctant to divulge the labour-related savings of its automation project, but logic indicates that these could be significant.

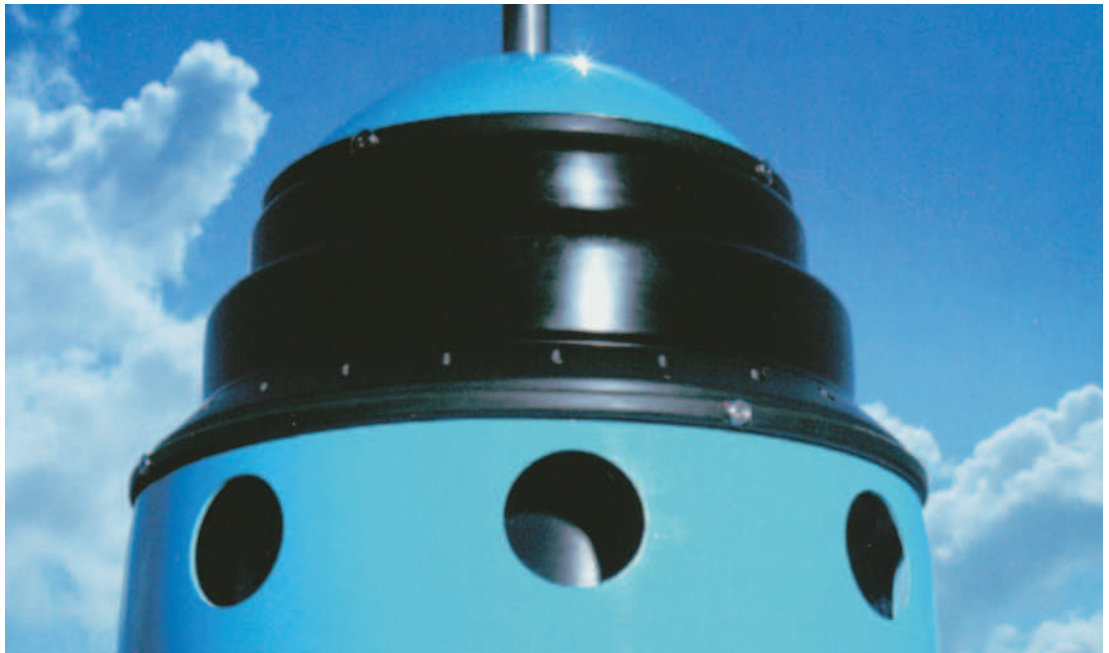
Nevertheless, it hasn't all been plain sailing. In February this year, the project was delayed by about two months when the company constructing the terminal pavement, Henry Walker Eltin, unexpectedly went into voluntary administration.

Patrick subsequently engaged a new contractor, Civdec, to complete the work and it is now expected that berth nine will be completed by late August.

The first stage of the full-scale terminal, involving additional reefer space, truck grids and stacking area, is now due to open in September. Shipping clients will progressively be relocated in September, October and November and the fourth and final quay crane transferred in December. The remaining truck grids and stacking space should be delivered by the end of the year or early January. Just how well this ambitious project performs is sure to be scrutinised closely by ports around the world. **PH**



The top of  
QinetiQ's  
'Blue Egg' port  
protection sonar



## Tracking hidden threats

Kathryn Bell discovers there's a lot going on to increase port security below the waterline

**W**orldwide tightening of port and harbour security has driven development of a new generation of sonars designed to 'image' ship hulls beneath the waterline in order to provide early warning of diver intrusion.

Harbours, ports and shallow coastal waters present a real challenge for sonar performance, as water depth, seabed topography and variable sound profiles can lead to reverberations, multipath reflections and poor range. In this type of environment, divers could pose a major threat to high-risk ships and installations.

At the same time, narrow-band sonar systems struggle to deliver either the resolution or the range required to provide adequate warning to positively identify and respond to an approaching threat.

### Unscrambling the picture

However, there are a number of wideband products and solutions currently available to extend the security picture beneath the waves in vulnerable ports. A case in point is the Cerberus Swimmer Detection Sonar currently being developed in the UK by QinetiQ, the commercial arm of what was formally the Defence and Evaluation Research Agency.

Cerberus, or the 'Blue Egg' as it is more fondly known, is at the centre of QinetiQ's integrated harbour-domain awareness products. The heart of the Blue Egg is a high-resolution, wideband active-search sonar and its 360° transducer array enables threat detection at

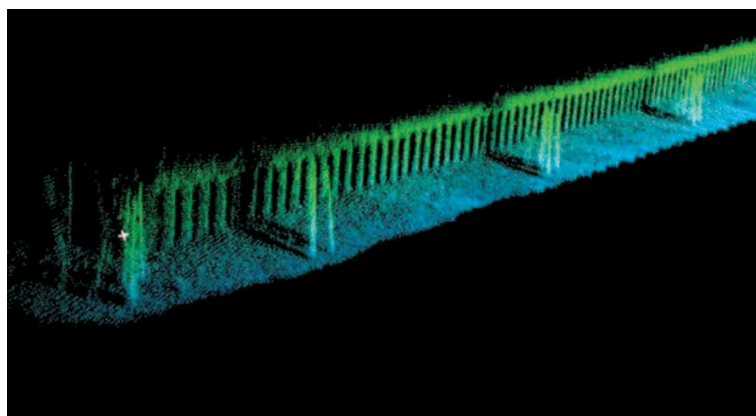
ranges of up to 800m. Cross-referencing advanced sonar processing with a database of known target signatures, potential threats can be rapidly assessed and classified, minimising false alarms and providing maximum response time for security forces.

It can be deployed in a number of scenarios, including: harbour installation (from a wall or jetty); ship deployed (to provide 360° coverage beneath a vessel); sea-bed mounted (again, to provide 360° coverage of shoreside and offshore assets); and as part of a 'trip-wire' perimeter defence system.

Cerberus is a self-contained system, which QinetiQ says is easy to deploy and maintain, as it can be placed in a static position on the seabed and monitored remotely. It can be deployed as a single unit to provide area protection or in greater numbers to provide a security perimeter, with each unit acting as a node in a wider network. Each individual unit can track at least 50 targets at one time.

An advanced electronics system digitises and processes the sonar signal in the offshore unit. This data is streamed back through a fibre-optic cable to the processing platform on the shoreside, where sophisticated algorithms identify potential threats by analysing direction, speed and behaviour patterns.

Run through a standard PC-server, this generates an image that the operator can then zoom in on. Crucially, QinetiQ notes that the operator console is simple and doesn't require a trained sonar operator.



**Above from left :  
harbour wall as  
seen by Coda's  
Echoscope;  
Lockheed Martin's  
SDS; and the full  
view of Cerberus**

#### **North American picture**

Another similar system is Lockheed Martin Canada's Swimmer Detection Sonar (SDS), a 360° long-range, high frequency, wideband system. It is designed to protect harbours, high-value coastal assets such as nuclear facilities, oil platforms and pipelines, as well as surface ships from underwater intruders.

Exact specifications are classified, but the detection system is capable of automatically detecting, classifying and tracking intruding swimmers at what the manufacturer terms 'long range' in difficult operating environments. However, Lockheed Martin states that the SDS will automatically detect, classify and track an intruder within a minimum 500m radius of the acoustic sensor in high-reverberation salt water conditions.

The system is easy to use and can be integrated with surface surveillance equipment such as radar, infrared cameras, and close-circuit or low-light TV cameras to provide a full security picture.

Sophisticated classification algorithms differentiate human swimmers from other marine life, to reduce the false alarm rate. It can be deployed either over the side of a surface vessel, or in a harbour as a permanent or re-deployable, transportable asset.

It continually monitors the coverage area and will alert the operator when an alarm is raised. It can either operate as a stand-alone sensor or as part of an integrated system.

With defence and maritime security such a big business south of Canada's border, it is no surprise that there are similar systems in the US market too. California-based C-Tech's CSDS-85 Omni Active Surveillance Sonar is a third-generation, high-performance system designed to detect underwater intruders trying to enter restricted areas.

Like Lockheed Martin's system, the CSDS-85 can be deployed from the seabed, dockside or from a ship, and can be integrated and operated with a series of sonar systems to cover a wider area. It can also be integrated with other sensors, including passive sonar, surface sensors and cameras to provide an overall tactical picture of a specific area.

C-Tech's sonar is currently providing harbour surveillance, perimeter surveillance for coastal facilities including power plants and pipelines, monitoring access to strategic waterways and the protection of high-value assets such as offshore-oil rigs or ships.



The CSDS-85 features a high-resolution, real-time display, narrow vertical beams, automatic target detection, automatic or manual target tracking and a 360° field of view. Operators can also set an automatic detection facility for targets above given perimeter thresholds, with selected areas or static returns excluded from the alarm and display. The sonar may be operated from a local or remote console and the display may be recorded for video playback.

#### **Active innovation**

Another system, Kongsberg Mesotech's SM2000 Defender underwater surveillance, advanced diver and swimmer detection sonar system is actively deployed with the US Coast Guard for high-value asset protection. The SM2000 has a 90KHz sonar head at its core and is available to provide fields of 90° and 180° sector coverage.

The MS2000TT integrated target tracking software module can detect and track up to 30 targets simultaneously, classifying them as fish, divers, vehicles or unknown, though the operator can manually override the classifications. A threat level can be assigned to each target, and target data can be formatted and fed into any integrated command and control system already in use.

The Defender software displays all targets identified and tracked, superimposing them onto any electronic chart display. Once a target is detected and classified as hostile, the system emits an alarm, followed by range and bearing information.

Showing the growing awareness of this threat, yet another system is the CodaOctopus Echoscope-HI Harbour Inspection Sonar, which is a 3D acoustic sonar system that can 'image' fixed and moving objects at up to 200m in real-time.

Unlike 2D sonars that generate narrow beams, or a fan-shaped beam, Echoscope covers a wide area using advance beamforming techniques to distinguish static objects from moving targets. Data is collected and stored for fast and easy processing, identification and reporting.

If an area of interest is identified after an initial sweep, the frequency can be changed and the search narrowed. **PH**

*Kathryn Bell is an independent defence analyst based in London*





# Making the most of your assets

*P&H uncovers how studies of Alabama's McDuffie coal terminal have enabled the port to make wide-ranging efficiency improvements*

**L**ately it seems that the scarcely believable rise of container traffic has claimed everybody's attention, but in the background a number of ports have been quietly boosting their bulk cargo traffic as well.

Alabama State Port Authority's port of Mobile is one of these and has managed to make some impressive improvements at its McDuffie coal terminal.

In just two years, the terminal has managed to increase its coal handling to 18M tons, a hefty increase of 4.5M tons per year. And yet, the Port Authority is confident enough to predict that in another two years, the terminal expects this to have grown to a staggering 30M tons.

Perhaps more impressively, these substantial increases in throughput haven't required heavy investment or masses of new machinery at the port and have focused instead on fostering a cultural shift in the workforce. This is all the more worthy of note because a high proportion of the workers are long-serving – traditionally the least open to changes in work patterns – and have been at the terminal for around 30 years.

Though facilitated by the workers, the terminal's growth has been driven by demand for imports of

steam coal for the state's power plants and exports of high quality metallurgical coal mined within the state.

## **Leaning towards new culture**

When the terminal first started looking for ways to improve its business, it rapidly became clear that there were no external quick fixes, and that any solutions were going to have to capitalise on the wealth of operational experience the Port Authority had built up in-house.

According to the Port Authority's vice president of operations, Smitty Thorne, "efficiency experts came to us claiming they could save us all kinds of money, but they didn't know anything about our operations."

As a result, the Authority's director, Jimmy Lyons, approached the University of Alabama, asking it to study processes and structure at the terminal and make suggestions as to how operations could be streamlined. During this process, the McDuffie terminal was rigorously benchmarked by the university's Alabama Technology Network (ATN) and measured against an operations management programme originally developed by car manufacturer Toyota, and known as Lean Manufacturing.

Based on the Japanese principle of 'Kaizen' –

**Coal throughput  
has jumped  
at Mobile's  
dedicated bulk-  
cargo terminal**

meaning incremental improvement – the heart of this Lean process is a steady but firm commitment to avoid waste in all its forms, from poor use of time to inefficient use of energy and defective products.

In terms of McDuffie's first-hand experience, it specifically "refers to a team approach to quickly tear down and rebuild a process layout so that it will function more efficiently."

The investigation of McDuffie convinced the ATN facilitators that it could gain productivity efficiency, while simultaneously establishing organisational procedures for training new staff.

**Practicality of Jargon**

The above explanation sounds like typical management jargon, but McDuffie managed to draw several practical motions from this lexical tangle.

Key to this, the ATN facilitators met with key personnel from the various operations sides of the terminal, including the crane operators, support staff and logisticians and got them working together for the first time.

Not only did this afford the various teams an understanding of the requirements and rigours of each other's day to day functions, it provided them all with a common goal, irrespective of their function. This was namely to increase their overall efficiency and work together tightly as an integrated team.

In addition, the teams were given performance-related goals and through widespread publication of the results – in an in-house newsletter and on ubiquitous performance level posters scattered around the workplace – fostered a competitive culture and pride in success.

One millwright, a Kenneth Sasser, stated that "before [the implementation of the Lean program], we just came to work and did our jobs, now we're more aware of how to be productive. It just makes me proud to work in a place that cares."

This had the knock-on effect that it also made the personnel aware that their individual team success rested on close interdependence with the other teams. For example, the support teams of electricians and millwrights now work very closely with the crane operators. As you would expect, this has helped to ensure that the machinery is used to the optimum.

As such, the engineers and electricians are now constantly carrying out preventative maintenance on machinery whenever it is not in use. They have also set up crash response teams to repair any machine that breaks down mid-use as a priority, thereby ensuring that there is maximum unloading capacity available at any given moment.

**Going introspective**

This process has also been executed within teams to great effect. For example, the crane operators suggested a totally new pattern of working to increase efficiency amongst themselves.

They now work in pairs, rotating every two hours to ensure continuous operation of the cranes without needing to shut the machinery down for their



“These substantial increases in throughput haven't required heavy investment or masses of new machinery”



statutory breaks. This has been particularly important in productivity terms, as the shut-down and restart cycle of the cranes can take anything from 30 minutes up to an hour – which is patently unacceptable – even without the wasted fuel and wear on the machinery.

Under the new system, the handover is as simple as switching seats and the outgoing operator doesn't leave the crane until his incoming counterpart is at the controls and shifting coal. This also gives them the opportunity to update each other on any potential issues or key developments that they may need while on shift.

Together, all of these relatively simple processes have resulted in a 40% productivity increase, enabling them to unload up to 35,000 tons of coal per day.

Even with this level of success, though, the Port Authority is not going to rest on its laurels and believes that it is absolutely vital to maintain this momentum. It has therefore set up a dedicated Lean team to manage the process and identify new ways to keep the terminal's performance moving in the right direction.

In fact, the Port Authority is very keen on the incremental aspect of the Kaizen principle, and holds 'Kaizen Events' every six to eight weeks, to focus on selected areas of the business, to see if there are still further efficiencies that can be made and how the teams can continue to work smarter. **PH**

**New crane  
operator working  
practices have  
greatly increased  
efficiency at  
McDuffie terminal**



# Beware of the liability gap

*Captain Barry McGrath* warns of the semantic deficiencies and definitions that may leave ports and Port Facility Security Officers wide open



**A**s we are all well aware, by the time the International Shipping and Port facility Security (ISPS) code came into force, all ships and ports were required, not only to comply, but to show that they complied.

Widespread certification and backpatting across the industry notwithstanding, the sad fact is that just because a port facility has a Document of Compliance does not automatically mean that all the security requirements have been put in place. However, this document is being internationally accepted as proof of compliance.

This means that though appearing compliant in paperwork terms, over twelve months after ISPS started, many ports are still nowhere near complying with the spirit of the code and will take many years before they can state honestly that they are fully compliant.

Clear evidence of this can be seen in the amount of ISPS work still being carried out by ports and their contractors despite certification.

It need hardly be said that having a Port Facility Security Plan in the office, a PFSO to look at it and some form of documentation of compliance means nothing if the supporting infrastructure is not in place.

### Mixed message

There is an apparent dichotomy in the situation as PFSOs have been selected to check that the visiting ships are compliant, when it is patently obvious to ships that the port facilities in question are not.

In ports however, security can be easily improved and very effective, particularly onshore with infrastructure such as fences, lighting, cameras and additional personnel to bring all the different components together into a single effective secure arrangement. Security can also be reinforced when the contracting government decides that national security is at risk.

Through all of this, though, the PFSO is in a difficult position if it is found that the PFSP has not been fully implemented, as he is legally responsible under the code and will most probably be made legally responsible under contracting governments' internal regulations, placing him in an unenviable and invidious position.

Up at the frontline, it is these PFSOs and their afloat counterparts – Ship Security Officers – who often have to make decisions in isolation, usually within a short period of time and in many cases without fully understanding the implications. More support on information, implementation of the security plans and explanation of the legal responsibilities should be offered to all maritime security officers.

Though the main onus of developing and proving compliance has so far largely been

on the moving nodes – the ships – it must be remembered that the code is a two way street. The ports must speed up their side of the implementation bargain by completing the required security programmes as soon as possible.

On investigation of the ISPS-listed duties and responsibilities of PFSOs it becomes apparent that there are requirements being made of the security officer that may be far outside the scope of his or her training and experience.

The most obvious of these is the "recognition, on a non-discriminatory basis, of characteristics and behavioural patterns of persons who are likely to threaten security". Though initially sounding fairly innocuous, there are two points of concern in this statement – 'non-discriminatory' and 'characteristics'.

Additionally, training requirements sketched out in Part B Section 18.1 state that the PFSO should have knowledge of, and receive training "as appropriate". This use of the word 'appropriate' is a convenient catch-all, leaving it open to decide what range of subjects should be taught. This hardly leads to uniformity and common standards throughout the industry.

Furthermore, the idea that someone with the very limited training given in an approved two or three day training course can decide on a non-discriminatory basis how a person may be a threat to security is difficult to understand.

This is compounded by the fact that attendance at a training course and receipt of the approved certificate means that as far as the ISPS code is concerned, the student is qualified to carry out this particular duty to the satisfaction of the contracting government that approved the issue of the certificate.

### Vulnerability

As certification is accepted as proof of competence in all aspects of the maritime security officer's duties, any security incident could result in the PFSO being regarded as negligent in their duties and responsibilities if they were unable to determine on a "non-discriminatory basis" if the particular person was in fact a threat to security.

As the certificate does not normally state which parts of the required training sections the security officer has received, how would a PFSO prove after an incident that they haven't received training in all the requirements and not just the ones deemed 'appropriate'?

The fact that he has little or no knowledge on how to deal with this aspect of the code's requirements will not be considered as a defence because ignorance is inadmissible.

Even more confusingly, in the following section of the code (18.2.3) "port facility personnel having specific security duties... as

appropriate" should have sufficiently developed knowledge to be able to perform their duties, including "recognition of characteristics and behavioural patterns of persons who are likely to threaten security."

Note that here there is no mention of "non-discriminatory basis" applied to these facility personnel. Similarly, in Section 18.3.3 the "non-discriminatory" fact is not included for any other port facility personnel.

### Breaking the taboo

Despite this situation and the requirement for PFSOs to make their judgment on a non-discriminatory basis, port facilities or individuals could well be accused of discrimination if they attempt to carry out their duty or responsibility as required by the ISPS code. In fact, this immediate threat alone may make them more reluctant to comply rather than the distant threat of legal action if an incident occurs.

A number of countries have mooted – and indeed made de facto – movements towards placing blanket bans on crew of certain nationalities from leaving their ships when in port.

Strictly taken under the ISPS code, any country that sets out these restrictions is breaking the non-discriminatory requirement with implied racism, as it is obviously using racial profiling on a country-based, discriminatory basis.

In fact, how can a person who has attended an intensive three-day course – of which the above topic is a very small part – be expected to carry out this function at all? Never mind in a competent and fair manner without being accused of racism. Worse, where does this leave other port personnel who have attended a half day course, or been instructed by the PFSO who may themselves have had little or no training as a trainer?

As this ISPS code duty and responsibility is simply not realistically achievable, it must be removed when the code is amended, before someone is held responsible for something they have no hope of ever complying with, as spelled out under the code.

Further, the code should include a compulsory training programme for all port users with a requirement to complete the course prior to taking up duties. It should also include a liaison programme between the port authorities and all other interested parties overseen by the port security committee. **PH**

*Capt Barry McGrath is head of the International Maritime & Shipping Security Organisation, a non-profit organisation supporting the maritime industry deal with its ISPS Code obligations. For further information please visit [www.imssso.com](http://www.imssso.com) or contact the author at [enquiry@imssso.com](mailto:enquiry@imssso.com)*



**A warning of the potential danger in a port area**



Source: David Worwood

# Be careful out there

*Mike Compton* spells out developments in international port worker safety

In the past, the dock industry has traditionally been seen as being on a par with construction, mining and other heavy industries in terms of creating the situations in which accidents can more readily happen.

Safety of workers generally only first began to surface as an issue in some parts of the world in the early part of the 19<sup>th</sup> century, but it was not until the start of the 20<sup>th</sup> that real dockwork legislation began to be widely adopted.

This movement was led by the UK, the reforming industrial powerhouse of the time. The first set of safety regulations anywhere in the world was adopted by that country as the Docks Regulations 1904, following a detailed survey of the industry published in 1899.

Accident levels are now much lower than in the past and the bleak image of safety in the industry is no longer so.

This happy state of affairs is a reflection of the fundamental changes in the way in which the work is now carried out, the very different perceptions of safety and health now held, and the efforts of people at all levels to bring about prevention and reduction of accidents and ill health. However, there is still room for improvement and there should be no let up in prevention efforts and activities.

## **Worldwide standards**

In 1929, the Geneva-based International Labour Office (ILO) published the first of three Conventions on the

health and safety of dockworkers. The second was adopted in 1932 and the third, which is the current Convention 152, in 1979.

These instruments have formed the international basis for individual national safety laws ever since, and they will continue to do so for the foreseeable future.

The latest evolution effectively entails the principles to be observed, while a complementary Code of Practice (CoP) describes in practical detail how those principles may be achieved. This CoP was first published in 1958 and has just been revised, with a completely new edition published by the ILO in February of this year.

These represent the basic international standards and, insofar as dockwork involves the loading and unloading of ships, the work is international so international standards must be applied. Even with the cargo that is handled, such as in the packaging, marking and declaration of cargo, or with the handling of freight containers, internationally agreed criteria are absolutely essential.

This has obviously led other key international organisations to become closely involved in the field and the two foremost of these are the International Maritime Organisation (IMO) based in London and the International Standards Organisation (ISO) in Geneva.

The former has adopted and kept up to date many codes relating to the full gamut of cargo-handling operations. These include loading and discharging of ships, the stowage and securing of cargo and related activities, including grain, timber, solid bulk cargoes,

containers, packaged dangerous goods, safe transport in port areas, irradiated nuclear fuel, cargo stowage and securing, safe loading and unloading of bulk carriers, packing cargo transport units and, lastly, fumigation.

As recently as last May, it decided to publish completely new guidance on "serious structural deficiencies in freight containers" and a manual on the operation of the BLU Code for Terminal Representatives. The first has already been published and the second is due out later this year.

ISO also has many standards that relate to the work of ports, in particular on cranes and other lifting appliances, various cargo-handling gear and freight containers. These are constantly under review and, for example, 45ft containers are currently being incorporated into the general international standards for freight containers.

### International representation

From the other side of the fence, industry is represented at the international level by two organisations for health and safety concerns, namely the IAPH and ICHCA International.

The IAPH obviously has its Port Safety Environment and Marine Operations committee (PSEMO) chaired by Fer van der Laar from Rotterdam. The committee meets normally twice or three times per year at international venues and it guides the IAPH representatives in their activities on behalf of the Association.

As the IAPH is a Non Governmental Organisation (NGO), recognised by many United Nations Agencies including the IMO and ILO, it is regularly represented at meetings organised by those organisations and participates in the discussions and decisions they make.

It also collaborates with other international groups representing shipping interests and, for example, is one of three author organisations of the International Safety Guide for Oil Tankers and Terminals (ISGOTT). First published in 1978, this is the accepted standard for these operations and its fifth edition is expected this autumn.

ICHCA International is also a widely recognised NGO and its International Safety Panel, chaired by the author of this article, has published some 35 authoritative guides to health and safety in cargo handling, with another eleven currently under development.

IAPH and ICHCA International work closely together and were jointly responsible for the IMO's decision to carry out a recent survey of maritime administrations' inspection programmes for containers carrying dangerous goods.

### The problems

Somewhat worryingly, research for the International Safety Panel has concluded that there is no international collation of accident statistics on the industry and nor is there any reasonable likelihood of having one.

Nevertheless, experience has shown that certain basic points can be emphasised.

“ The largest single cause of injury in the dock work industry remains slips, trips and falls ”

The first of these is that about 30% of injuries associated with cargo handling occur on board the cargo ships being worked. Therefore, safe access onto and about the ship and safe operations in the hold or on deck, together with safe gear and required equipment is essential.

While many ports now provide the necessary quayside cranes – especially for container operations – there are still parts of the world that rely on ship's lifting gear and that brings other, internationally based requirements, into effect.

Both the gear registers and the lifting gear itself should be examined before any shore-side worker is permitted to drive or operate it. Furthermore, the proliferation of deck cargoes – especially with container ships – resulted in safety concerns regarding working at heights for lashing purposes, the so called "container top safety" issue.

However, action taken by the regulators and the industry, together with the introduction of the semi-automatic twistlock, has largely been overcome this.

The lack of safe places of work carrying out lashing operations on deck is a real concern and the industry and regulators are presently involved in action to improve the situation.

The hatchless container ship solved all of these issues but has not proved to be popular with ship owners and charterers, regrettably so from the cargo handling point of view.

At the modern port terminal, traffic and pedestrian control can be real issues. With many large, fast machines in use, with limited visibility, pedestrians should be barred, or if they have to be there, systems and procedures must protect and ensure their safety.

This not only applies to visitors, but to the workforce as well. Achieving this and maintaining the necessary vigilance at all times can seem to be difficult to maintain, especially when the accident rate at ports is substantially down. But when an accident happens and if there is serious injury, it is likely to be more severe than in the past.

With regard to cargo, there is considerable international concern over the general level of compliance with the International Maritime Goods Code (IMDG Code).

The string of major ship fires and explosions caused by packaged dangerous goods over the last seven years has caused a comprehensive awareness programme to be held around the world.

This series has been organised and run by the Through Transport Club (TT Club) and ICHCA International, and has been officially endorsed by IAPH. The essence of that message is that, although



the prime responsibility for classification, packaging, stowage and securing within cargo transport units, documentation, marking and segregation in CTUs is that of the cargo interests, all those in the transport chain can play a part by operating diligent checking procedures in ensuring that the provisions of the Code are followed.

Despite this, for all of our sophisticated equipment and working methods, the largest single cause of injury in the dock work industry today is the very simple and very human "slips, trips and falls on the same level".

In prevention terms, this raises questions over the construction and layout of surfaces that people walk on, the maintenance, general condition and tidiness of those surfaces together with the footwear worn and its condition.

At one time, port workers would not have been provided with any personal protective equipment and, equally, many would not have seen themselves wearing it. But a veritable sea-change of opinion has occurred, wherein it is now commonplace for footwear, high visibility garments, gloves and safety helmets to be issued and worn. Although difficult to quantify, it is known that lives and injuries have been saved as a result.

The latest edition of ILO's Code of Practice on Safety and Health in Ports has been thoroughly revised and provides the most comprehensive guide at this time

to the promotion of safe and healthy cargo-handling operations in harbours.

It is also hoped that it will have another effect. It is understood that the ILO is concerned that ratification of its Convention 152 has not been as high as it might be. After 26 years, the number of countries that have ratified it still only stands at 23.

Some countries cannot ratify it due to the federal nature of their laws (Australia, Canada and the USA, for example). But even then, Australia and the USA have revised their domestic laws so as to give effect to the Convention.

Canada is in the process of doing so and other countries have also reflected the Convention in a similar way, despite not ratifying it. Nevertheless, it is still a low number and it is hoped that the impetus now given by publication of the CoP will accelerate such ratifications.

Unlike in the past, the issue of port worker's safety could now be said to be almost as dynamic as the industry they work in. Much has been achieved in the recent past, considerable improvements have been made and accident levels have decreased. However, new challenges arise almost daily and, with the ILO CoP to guide, there must be no let up in prevention efforts.

The well known 1980s TV catchphrase "let's be careful out there" applies just as well to the port area as it did to Hill Street Blues. **PH**

## Radiating confidence

Cobalt 60 shipments are vital to world health, but *P&H* discovers that communication and education of safety issues need to be bolstered to overcome dockside difficulties

**R**adioactive material has PR issues. Though shipments of radioactive materials, such as cobalt-60, are heavily regulated and are completely safe if shipped in the prescribed manner, there is a worrying trend whereby some shipping companies, ports and states are refusing to accept radioactive (Class 7) materials because of the stigma attached to radioactive cargoes.

This is a real cause for concern because cobalt-60 plays a vital role in the medical world. International (UN) bodies have flagged this issue. They have raised concerns that refusing the material entry to a port could have real negative impacts on public health.

As such, the IMO and International Atomic Energy Agency (IAEA) believe it is vital to raise awareness of the regulatory requirements and safety practices underwriting properly shipped cobalt-60 and communicate these issues to port workers to ensure the safe and smooth flow of such vital materials.

**Without Cobalt 60 shipments, routine theatre sterilisation would be impossible**





**A Type B(U)  
radiation and  
impact-shielded  
container**

The IMO's Ship to Port Interface Committee ran a study into the reasons for the denial of cobalt-60 shipments in 2004. It reported back that they rested largely on underlying political considerations such as 'nuclear-free zones', existing statutory requirements, "or a lack of awareness of the issues involved."

The strongest tool to combat this latter concern is through raising awareness of the safety of these shipments. The IAEA is establishing an advisory group to address these matters.

#### **Safety First**

In its natural state, cobalt-59 exists as a component of the earth's crust. To become cobalt-60, the cobalt-59 is placed in a nuclear power reactor where it is bombarded with neutrons.

In its radioactive form, this cobalt-60 emits gamma rays strong enough to pass through both the packaging and the product to be sterilized, killing any pathogens, but not making the products themselves radioactive. As David McInnes, Vice President of Government Affairs at Canada's MDS Nordion explained to P&H "it's a similar concept to a dental x-ray, which obviously doesn't make the patient radioactive."

The demand for sterile medical disposable products is increasing as the world's population is growing and aging, and new applications for cobalt-60 are being found and utilized. Together with the facts that cobalt-60, like any radioisotope, decays over time, and most countries are importers of this material, the need to ensure this key medical isotope is effectively and efficiently shipped around the world becomes increasingly important.

If ships carrying cobalt-60 are not allowed to offload or pass through a port, the possible result is that the continued and timely supply of sterile medical products could be jeopardized.

In a recent example, a southern European port refused the offloading of a cobalt-60 shipment on grounds that it didn't want to handle radioactive material. The result was that the cobalt-60 containers had to be transferred through a northern European port and then transported by truck across the continent. This is cost inefficient and prolongs the time the cobalt-60 is in transit and not in use in sterilizing medical products.

#### **Packing Secure**

This situation has arisen despite strict requirements from the IAEA and IMO that prescribe the exact conditions for the safe shipment of these radioactive materials. There is a perhaps understandable degree of frustration from within the irradiation industry that

they are being penalised, despite their compliance to detailed and extensive regulations, and their exemplary safety and security record.

In 2004, the IMO's Facilitation Committee stated that "these products can be, and are, safely transported by all modes when done in compliance with the requirements."

Central to these requirements is the fact that cobalt-60 is transported in Type B(U) packages, which are subjected to extensive testing prior to licensing. This testing involves drop tests from significant heights as well as fire or thermal tests. Naturally, these testing requirements are established within legislation which is based on IAEA requirements.

The containers are therefore extremely robust and are constructed of lead and steel to ensure their radioactive contents are kept safe. To put this in context, the standard Type B(U) package for shipping cobalt-60 weighs approximately 5,400kg, though they only contain about 2kg of cobalt-60.

According to an IAEA statement, "over several decades of transport, there has never been an in-transit accident with serious human health, economic or environmental consequences attributable to the radioactive nature of the goods."

The IMO further declared that the efficient shipment of cobalt-60 and, in fact of all consignments of class 7 radioactive materials which have medical applications, "have a humanitarian dimension." As such, the IMO added that the safe and smooth transit around the world "is in the interest of public health and is thus for the benefit of the society at large".

The IMO Facilitation Committee reasserts that all shipments of cobalt-60, "when carried in compliance with the relevant provisions of SOLAS Chapter VII and of the IMDG Code, should not be denied on the grounds of safety." In July 2005, the IMO continued its work on this matter and developed a Circular to encourage those involved in shipping to facilitate cobalt-60 shipments. **PH**

## **Uses of Cobalt 60**

Though many people have never even heard of Cobalt 60, it is an absolutely vital element for the medical industry.

- It is used to sterilise everything from bandages and dressings, to surgical implements and synthetic heart valves, which aren't robust enough to withstand steam sterilisation. Cobalt 60 is used to sterilise over 40% of all disposable medical supplies across the world, including an estimated 80% of all surgeon's gloves.
- It can also be used to treat cancer patients and increase the safety of blood transfusions.
- Cobalt 60 has a more everyday impact sterilising poultry, spices and herbs, killing off any pathogens and harmful spores, helping protect it for longer.
- In addition to its health benefits as described above, it can further be used to improve the safety and reliability of industrial fuel oil burners.



# Forewarned is forearmed

*P&H* looks at Penang's high-tech means of preparing to handle dangerous cargoes

**A**iming to streamline its port safety planning capabilities and offer a new service to its customers, Penang Port Commission (PPC) has innovatively extended its Dangerous Goods Declaration System – known as DGOnline – and Pre-arrival Notification of Security System (PANS) for access wirelessly.

The systems had already been available for two years via traditional online services, but the new version meant that port users could access the real time status of dangerous goods declarations via GPRS-capable mobiles or XHTML and Palm Vii palm-tops. For the first time, they could also search a comprehensive dangerous goods database with the same systems from the field.

Not only this, but as PANS can be viewed through the system, at the same stroke it means that the Port Facility Security Officer can process the declaration of pre-arrival notification of security wherever they are, 24 hours a day.

## Accelerating safety and service

According to the Commission, these new capabilities have increased safety at Penang's port, providing a "first response to enhance maritime security".

Almost as impressively, the whole system was developed in-house by PPC's own staff, backed up by three university students on secondment, so the total costs for setting up the new system were actually a staggeringly low US\$2,500. The system also has very low storage requirements for the data, needing only 100Mb each month, which can be simply backed up to a local database.

This online boost eases compliance with the key legal requirements of the PPC By-Laws amendment of 1989, which requires all hazardous substances to be declared to the port authority at least 48 hours before their arrival. As such, it has seen great take-up by port users.

These requirements are fairly standardised internationally, to safely control the flows of potentially disruptive and hazardous substances around the world.

## Rating the hazard

Penang estimates that around 50% of the world's cargo transported by sea annually can be classed as hazardous in one way or another, but itself handles approximately 10M tonnes of hazardous substances each year, and more than 10,000TEU of containerised hazardous materials.

So the potential for something to go wrong is quite substantial, with no prior knowledge of exactly

The screenshot shows the 'Pre-arrival Notification of Security' form. Key fields include:

- 1. Declarant:** EVER VITAL SDN. BHD.
- 2. IMO Number:** 8958671
- 3. Date Submitted:** Thursday, Feb 25, 2005
- 4. Registration Number:** 2987
- 5. Gross Tonnage:** 748
- 6. ETA:** Friday, February 25, 2005
- 7. Load/Discharge/Through:** Not Applicable
- 8. Light Duty:** PMSI 8448.7
- 9. Security Level:** Level 2
- 10. Previous Security Level:** Level 1
- 11. Security Incident For The Past 10 Ports:** No
- 12. Valid International Ship Sec:** No
- 13. Expiry Date:** Thursday, June 23, 2005
- 14. Issuing Authority:** 00000000
- 15. Date of Issue:** Thursday, September 29, 2004
- 16. Ship Security Officer:** 1404010, 4/04/04, Phone: 0193912459, Email: 1404010@ppc.com.my, MMSI Num: 523101
- 17. Declaration:** I/We (EVER VITAL SDN. BHD.) hereby certify that all entries on this form (Registration Number: 2987) are true and accurate.

**APPROVAL NOTICE**  
**STATUS:** Successful  
**REMARKS:**  
 Designation: Port Area Security Officer (PASO) of Penang Port Commission\*\*  
 Valid: 24 February 2005 (11:07:08 am+7)  
 \*\*Computer Generated, Signature not required

**Penang's cutting-edge system can be accessed wirelessly well as by standard internet browsers**

what hazardous substances that are being dealt with, it's easy to imagine a container being mis-handled, used inappropriately, or stored unsafely. However, tools like the new online systems greatly help the port to plan ahead and manage the substances safely, with minima risk to the port workers.

## Time on my side

As always with planning operations, time is of the essence and Penang discovered that late declarations didn't leave sufficient time to plan ahead. The beauty of the new system is its ease-of-use and friendly intuitive nature, which helps the port user make their declarations in a simple and timely manner.

It also negates the need for time-intensive and inefficient duplication of work, with office staff having to manually enter the declaration data as they did before the system was installed. Furthermore, it's 'always-on' nature completely opens the availability window to enable users to declare their intentions whenever is convenient to them, including outside the PPC's office hours.

Using mobile phones or palmtops, the system may be expected to be fairly slow and time consuming, but according to Penang, the GPRS actually enables the user to push data at between 20 and 30Kb per second, which is around twice the speed expected from a standard dial-up modem. **PH**

*This article was based on an essay by Syahril Akmar bin Suid, the chief marine office at Malaysia's Penang Port Commission.*

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# Looking inland for relief

*José Luis Estrada* explains how goods flow has been streamlined into Spain's capital

**A** quick glance at a map of Spain shows Madrid – located in the very centre of the country as far from the sea as is possible to be – as the least likely place to build a port in the entire country.

However, in an effort to link the capital with the country's coastal access points, this is just what has happened with the construction of the country's first 'dry' port.

The Madrid Dry Port is known locally by the Spanish Puerto Seco de Madrid (PSM). In effect, this rewards visitors with the traditionally coastal sight of an intermodal container terminal located in Coslada, a township neighbouring on Madrid.

The PSM constitutes an innovative initiative as, unlike other dry ports in the world, which are generally fed by a single sea port, in our case a total of four competing ports combined to participate in the initiative, sharing the costs and exploiting the synergies and economies of scale that are generated.

As such, the depot is fed by a direct rail link to the ports of Algeciras, Barcelona, Bilbao and Valencia. These four ports currently handle the highest container traffic on mainland Spain, with Algeciras responsible for the most, handling a hefty 2,937,381 TEU.

According to the original plans, the official purpose of the PSM's development company is "the design,

## PSM's vital statistics

Madrid's dry port has proven a real boon to the city and alleviated throughput pressure on the coastal ports. The following statistics give an impression of the port's capabilities.

- The terminal currently extends over 12Ha of land, with possibilities for extension.
- It has two train reception and delivery tracks 420m long.
- Four tracks – extendable to six – 350m long for train loading and unloading, with a final length of 750m.
- One 750m<sup>2</sup> container freight station.
- One empty container depot, currently under construction, of 16,000m<sup>2</sup> with a storage capacity of 1700 TEU.
- The current equipment consists of an RMG crane, two reach stacker moving cranes, two locotracors, one lift truck for empty containers and three fork lifts.
- Terminal capacity including the planned extensions exceeds 100,000 TEU per year.

construction, marketing, management, exploitation and operation of the container terminal, known as the Puerto Seco de Madrid, and the provision of services facilitating both the handling and the transport distribution of goods".

The PSM began operations in September 2001 and, by 2004, had handled 22,396 containers, roughly equivalent to 36,531 TEU.

With the success of the concept for the four original ports, it is planned that other Spanish ports will be connected to the PSM facilities in the future, as and when their traffic with the capital city warrants.

### Strategic overview

The PSM initiative was designed with a twin strategic aim in mind, to promote the interests of the State-owned Spanish Port System as a whole, and also of each individual port involved. These covered a subordinate aim to promote the interests of Madrid as a top level logistics platform in Europe.

In addition, the initiative was intended to promote the use of rail transport over road haulage in line with the EU policy for boosting combined transport. Underlining this commitment, the Madrid Dry Port forms part of the Trans-European Combined Transport Network.

Coslada was chosen as the location of the PSM because of its existing integration into the Madrid metropolitan area.

Additionally, it is ideally placed to serve a vast metropolitan production centre – the second largest in Spain – and consumption centre, with a population of four million and a further seven and a half million in the wider Madrid service area.

It also benefits from the existence of good national and international intermodal connections, building on both the radial motorway network and the intercity rail network. Air connections are also exemplary, with the PSM located directly next to Madrid's international airport, Madrid-Barajas.

Coslada enables the concentration of logistics services firms and their integration into several major

development schemes currently under way, the foremost of which include the Coslada Integrated International Transport Centre (the CITI), the Madrid-Barajas Air Cargo Centre and the Vicálvaro rail station specialising in goods traffic.

### Owning up

Funding of the development did not come cheaply, as may be expected, and the development company for the dry port is Puerto Seco de Madrid SA, which is under majority public ownership.

Broken into its constituent groups, the shareholders are the Puertos del Estado Public Organisation of State-owned Ports, the Port Authorities of Algeciras, Barcelona, Bilbao and Valencia, the Madrid Regional Government, the public company Entidad Pública Empresarial de Suelo (SEPES) and finally, the Coslada Local Council.

The four main ports linked up to the PMS and Puertos del Estado hold 51% of the share capital, backing this port strategy above any other.

Operation of the terminal and the rail transport between the PSM and the sea ports has been contracted out under a ten-year concession to the private company CONTE-RAIL SA, owned by RENFE. The latter is Spain's National Rail Board and was the only available rail operator in Spain up to 1 January 2005. Dragados SPL and Puertos del Estado hold 4% of stock in RENFE.

The PSM, through its CR concession, provides a number of key services.

At the dry port terminal, it offers container handling, warehousing, haulage, rail car handling, train formation, documentation and data services.

In support, the PSM also provides customs services, container consolidation and deconsolidation, container washing services, goods storage and an empty container depot.

At the port's rail terminals, the site provides container handling, train formation and the supply of documentation and data. In addition, the concession is also responsible for providing rail transport between the dry port and the seaports. **PH**

*José Luis Estrada is Director of Port Planning and Development, Puertos del Estado and Chairman of the IAPH Logistics Committee - see pg 44.*

## Soaking up the flow

The four ports that feed into Madrid's dry port have the biggest container throughput in the country. Broken down individually, they each pass a staggering amount of traffic directly on to the intermodal logistic base outside Madrid. In 2004, distribution figures were as follows:

■ Algeciras	6,214 TEU
■ Barcelona	5,682 TEU
■ Bilbao	3,515 TEU
■ Valencia	21,120 TEU

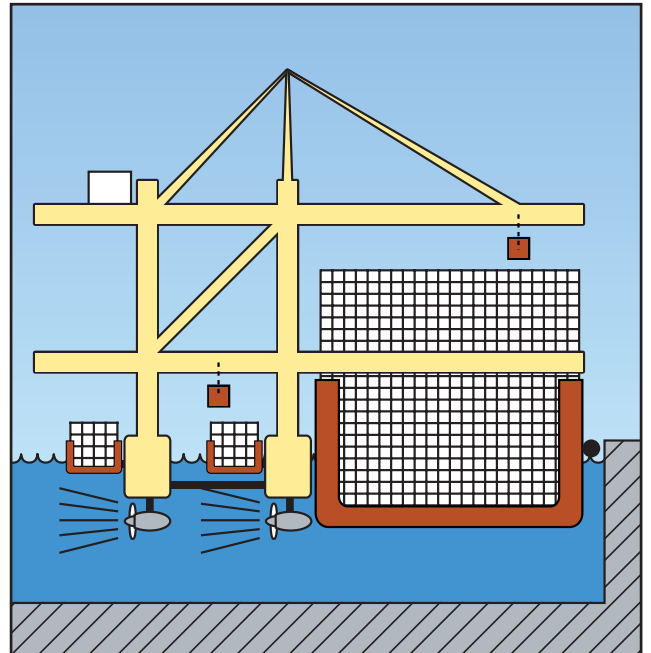
**Though this view could be any coastal port, it is actually just outside Madrid, hundreds of miles inland**



# Floating off the drawing board

P&H's *Janny Kok* looks at suggestions being floated to accelerate the discharging of container vessels and their seamless onward distribution

**Conceptual floating crane model**



**E**ver-growing container vessels pose many potential challenges for ports and harbours the world over, not least of which is how to minimise these leviathans' time alongside and increase the pace of discharging and reloading the vessels.

Many analysts have suggested replacing quayside cranes and heavy lifting gear to match the width of the new vessels with further-reaching dockside cranes. But these systems are expensive and necessitate the replacement of existing cranes, which may still have plenty of life left in them.

Instead, the acquisition of floating cranes may provide the answer to the demand for fast handling of vessels. These are claimed to be less expensive than land based cranes, and more flexible. Not only would floating cranes enable ports to retain their existing gear, but they could also be used even in ports which currently aren't fully equipped for receiving container ships.

At least that is the argument of Holland-based consultancy Royal Haskoning's Jan van Beemen and its business development manager Prof Hans Ligteringen. Together, they developed the floating container crane concept as part of the company's Container Terminal of the Future project.

The project itself is part of a series of projects for the Academic Centre of Transport (AC TransPORT), which benefits from the support of the Erasmus University in Rotterdam, the Technical University in Delft and the Rotterdam-based port industry. Together they do surveys to achieve more innovative port management and solutions for logistic management and handling.

## Planning and preparation

The future terminal concept relies on 'smart stevedoring' in both the departure port and also the later ports of call. Containers, destined for the hinterland, should be transhipped immediately to barges to continue their

voyage to their final destination.

These barges can then also be used as shuttle service carriers to nearby terminals within the port of call, or as part of a network of terminals. The idea is to use the older terminals in the network as a dwelling place, with 'state-of-the-art' new terminals used for sea-to-sea transshipment or other specific handling.

"The floating crane concept emerged to fulfil the wish to be able to handle containers from the 'idle' water side of the vessel, without having the disadvantages of the indented berth", Van Beemen said.

The idea is not totally new, but rather is an evolution and refinement of existing concepts from around the world. Van Beemen explained: "We got inspiration for our design from experience with ro-ro pontoons, large floating bulk cranes, transport of heavy loads over water, and we were intrigued by Hong Kong derrick barges. There is the promise of using the water as a 'foundation' for heavy equipment, as well."

Nevertheless, he is aware of the bottlenecks in the concept, particularly in getting the stevedore plan onboard ships fit for the floating crane concept.

Critics point to further bottlenecks that could arise if the stevedoring plan isn't precise enough to be able to get containers positioned for immediate transshipment into the hinterland.

Part of this hinterland transport is carrier haulage, partly merchant haulage and the rest 'something in between'. On occasions, it is a last minute decision on which modality is to be used.

Critics believe it is impossible to realise a fast and efficient transshipment from seagoing vessels onto barges in such cases. Besides, the flow of containers coming from seagoing vessels is much more substantial than the available numbers of barges can handle. At least in the short term

Above that, there is also the engineering challenge of getting the floating container crane itself stable

enough to do the precise job of loading and unloading containers.

However, Royal Haskoning has discussed the concept with Hutchison Port Holdings-owned terminal operator ECT and APM of Denmark's AP Møller, as well as Dutch crane constructors Kalmar and Huisman-Itrec. Furthermore, the Port of Rotterdam and the Technical University Delft are also involved in the discussions to optimize the design of the floating crane and the required logistical planning.

#### Putting down roots

Some of this ground has been covered before when former floating bulk stevedore Jan Rijdsdijk handled bulk carriers successfully in the Port of Rotterdam in the 1980s and early '90s. In the '90s, he became owner of Holland-based crane construction company Fiege. During that period, Rijdsdijk first mooted the concept for a floating container terminal complete with cranes dedicated to handle the flows of goods coming from specific container barges.

The idea was to collect containers from terminals to load them onto the floating terminal in order to discharge them later. In this way, barges could load or discharge their full container load themselves using the concept, rather than having to call at all of the required separate terminals.

Rotterdam's port authority and the barge operator Hein Danser both showed interested in Rijdsdijk's idea, but for safety reasons they were hesitant to make it reality.

Van Beemen suggested that "perhaps the market was not ripe for the idea at the time." However, he believes that the container stevedoring business has changed substantially since 1995 and added that "Royal Haskoning is not solely interested in developing the floating container bridge crane as a tool, but also in logistic concepts, which may be made possible by the floating crane concept."

As such, he is currently looking into Rijdsdijk's solution and studying the potential for cooperation. Both Rijdsdijk and Van Beemen agree that their concepts need some fine tuning and they hope that together, they may be able to solve the issues.

In particular, they are looking to solve the thorny stability issues of the floating container crane. "The existing design resembles that of an ordinary land-based bridge crane on two pontoons, forming a kind of catamaran structure."

The problem is finding the right balance in the process of loading and unloading, they believe. The average crane weighs about 1,600 tonnes and a container not more than 34 tonnes. Stringing that weight out beyond the centreline can hamper the balance of the floating construction, through the long reaching 'arm' of the crane.

Without a fixed structure to place foundations into, the result may be that the crane will heel over with the loss of the whole construction. "We are considering the possibility," he continued, "to stabilize the crane through a mooring system with suction pads attached to the vessel." **PH**

## Wiri opens Auckland's options

*P&H* investigates New Zealand's plans to improve speed, flexibility and customer service with an inland port

**T**he looming spectre of container congestion is no longer so much of a concern for the Port of Auckland (POAL), since it decided to build a new inland port at Wiri.

Due to be declared operational as *P&H* was going to press, the new facility builds on experience gained from the very successful inland port at East Tamaki, which has been operational and actively relieving pressure since 2002.

Like East Tamaki, the new facility will clear containers out of the immediate port area as soon as possible. However, with a storage area initially of 5Ha – later growing to 10Ha – it is a much larger site.

It is located in the heart of Auckland's established industrial areas, and therefore is already surrounded by a solid road infrastructure. Not only that, it is also strategically placed next to the North Island Mainland Trunk Line railway, which simplifies both

inward and onward logistics, giving customers more options.

However, this position isn't expected to yield railway success to start with and POAL initially expects to use trucks to shuttle containers between the Axis Intermodal terminal and Wiri, mostly at night. In fact a new joint venture company – Interport – has been set up by Tapper Transport and NZL to run this service under contract to Axis International.

"Once volume builds," Grange Pole, POAL's manager of inland ports explained, "we will look to use rail shuttles into the Axis Intermodal rail exchange. We're working with Toll Rail and Ontrack to make that happen."

This traffic will be managed by a new electronic system known as Axis Direct, which will plug straight into existing Axis Intermodal products and help customers to view their shipments throughout the full transport system.



Wiri isn't only designed to counter the congestion issues. Scott Paterson, general manager of logistics at POAL firmly believes that the move will afford both importers and exporters a better service from the port.

"Today the port is very much like 'your container is here, come and get it. And please be sure to get it in the demurrage free period,'" he stated. Obviously it's in the port's interest to keep its own areas uncluttered and traffic flowing smoothly in and out of the port, but Paterson argues that it is also a benefit to importers and exporters too.

For example, the large storage area provides much more cost-effective temporary storage than the port area, enabling customers to come and pick up their containers when it is best for them. Even better, they can do so without having to enter the constrained and congested traffic of the immediate port area.

A secure site, Wiri will also be set up as a comprehensive inland clearance depot, complete with customs, and ministry of agriculture and fisheries personnel. This means that importers can move the containers straight from the wharf into the collection areas at Wiri, but the service is expected to suit exporters even better.

#### Smooth runnings

With the rigorous checks and investigations into container traffic mandated by the various international security regulations implemented recently, exporters have to get their containers to the port early – and in a strict time slot – or run the risk of their containers getting stuck in a security bottleneck at the port.

By contrast, POAL contends that using the inland port eases traffic and enables the exporter to get the container into the inland port as much as ten days early, without incurring the potentially weighty storage

fees portside. In fact, at Wiri customers will get up to six days demurrage free.

"We then ensure everything is in order," Pole continued, "securely store the container and deliver it to the port within one or two days of vessel arrival. That relieves pressure on the exporter, it relieves congestion on the roads during the daytime, and makes for an orderly container receiving system."

Unusually for a port development project aimed at increasing throughput, Paterson believes that the local residents are behind the scheme and will actually benefit from it. To support this, he points to the port's commitment to increasing after-hours transport of containers – getting the trucks off the city streets during commuter times – and later increasing use of rail assets, which will see truck traffic reduced still further, especially on cross-city routes.

In turn, the transport industry itself stands to benefit because trucks and trains can make shorter, more profitable runs.

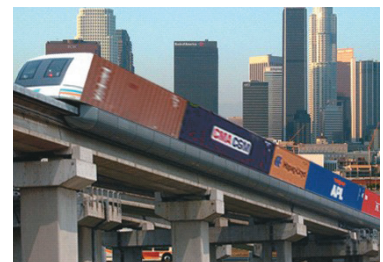
POAL plans to run Wiri around the clock and Paterson believes that this will be a key benefit to customers. "The fastest way to deliver an urgent import container is not always directly from port to the importer" he asserted. "Most importers only receive containers during weekdays between say 7AM and 5PM."

This means that 30% of the 24/7 window is closed to import deliveries. Paterson explained how his inland port concept can help, sketching out that "urgent containers discharged outside import hours can be repositioned to the inland port ready for a speedy delivery the next morning."

Nevertheless, POAL recognises that the Wiri solution isn't necessarily a panacea for all customers. "Our experience with East Tamaki is that this will not suit everyone, but many do see the value." **PH**

## Sci-fi cargo lifting

*P&H* discovers that rapid maglev trains may be the future of heavy cargo lifting on the USA's west coast



**F**or a long time, no self-respecting science fiction film would be released without a glimpse of impossibly sleek, futuristic magnetic levitating (maglev) trains whooshing along swooping rails in near-silence.

But in reality, largely for cost and infrastructure reasons, they seemed to fall out of fashion for much of the world outside of Japan and Germany. However, they may yet be the shape of things to come, especially in environmentally-conscious and techno-philic areas like the western seaboard of the USA.

The green lobby's impact on the port and maritime industry in California is well-documented, as can be

seen with the early-adoption of cold-ironing and the keen studies of traffic management to reduce truck emissions amongst other concepts.

So a study by California State University's Center for Commercial Deployment of Transportation (CCDoTT) Long Beach facility into the feasibility of procuring quiet, zero-emissions maglev trains for the ports of Long Beach and LA may well bear fruit.

The CCDoTT study has been split into three main parts, focusing on technical, economic and institutional feasibility. The project is into its second year and just completed a 'reality check' on the programme in July.

It comes as part of a wider concept to build a

**Maglev trains are facing a resurgence in popularity, as evidenced by this mooted Italian system**



transshipment container depot or inland port at Victorville up country, where containers could be processed and passed on to their destination. Advanced as the plans are, if the authorities take the plunge and can find the funding, the CCDoTT believes that maglev trains could be sprinting containers between the ports and Victorville within ten years.

### The clean alternative

Currently, one of the main stumbling-blocks with the inland port strategy are the inevitably increased emissions from truck or train traffic that would ferry the containers inland., hence the maglev focus.

On top of the green compulsion, the Cal State team believes that maglev trains could significantly increase the ports' efficiency. According to their predictions, where a truck would take the best part of a day to haul a single container up to Victorville and a diesel locomotive one or two days, a maglev train could whisk a whole load in only 90 minutes.

Projections based on work with Transrapid Maglev Engineers state the system could pull 20 sections, each efficiently carrying standard 40ft containers weighing up to 30.5 tons – either singly or double-stacked – using the same proven technology as a maglev passenger train recently opened in Shanghai.

Even better for the port's customers, CCDoTT's projections also calculate that the system could be substantially cheaper than using traditional rail systems. The estimated costs of using a shuttle train to move a container into an inland distribution centre are estimated at about US\$450 and around US\$300 by truck, but CCDoTT reckons that this can be slashed right down to US\$150 using a maglev train.

These figures are obviously still slightly arbitrary because there are no fixed case studies to work with and this is one of the first times maglev has been seriously considered for heavy cargo lift, because of the complex physics involved in balancing weight, performance and cost.

The Cal State team's figures were modelled on moving these 20 containers on two lines. With a train running at 90mph and leaving the terminal every three minutes, CCDoTT's figures suggest that the system could move 10M TEU each year, a substantial proportion of the 13M that were shifted through the twin ports in 2004.

Inevitably with so many apparently overwhelming benefits there is a catch, and it's a significant one. The system would require hefty setup investments with

a totally new, raised rail infrastructure and support network, including a power source capable of the heavy demands a maglev rail will draw on it.

Maglev electricity doesn't come for free in pollution terms, but with electricity generated remotely, away from population centres, the trains will run quietly and cleanly through built-up neighborhoods.

The project selected commercial, off-the-shelf technology as the most realistic model, but even so, CCDoTT estimates that there will be little change from US\$25Bn. These can be expected to be whittled down as the programme builds in intensity, but they are likely to remain staggeringly expensive.

Having read that figure, it appears quite understandable that the technology has some uphill struggles facing it in terms of general perceptions of maglev as a high-cost technology. However, the CCDoTT points out that the alternatives are far from cheap, with highway upgrades expected to cost in the order of US\$30Bn. Similarly, the rail infrastructure will cost only marginally less than the maglev outlay.

It also depends what price is put upon the standard of living and health of local residents living along the rail and road routes, who would face soaring levels of pollution and diesel particulates from the increased truck and train traffic.

Perhaps more of a challenge to the system is that the relative lack of experience with maglev technology has fostered a mindset that it is untried, though the technology seems to be experiencing something of a resurgence in popularity, with new passenger lines being considered across the world. There are even several mooted passenger lines under consideration in the USA, notably along the west coast. **PH**

## How maglev works

The guiding principle behind maglev trains is a very simple one, predicated on the observation that like magnetic poles repel each other.

Harnessing this energy to enables a whole train to be levitated up to 10cm above a guide track on a magnetic 'cushion' and propelled along by varying the polar charge. Rather than a traditional motor, a maglev train is propelled along by manipulating electric coils in the track and the guideway walls flanking it.

By changing the polarity in front of the train it is 'pulled' along. Simultaneously reversing the magnetic field behind the train 'pushes' it down the track.

As the train 'floats' above the train tracks there is no friction with the tracks, enabling the trains to very efficiently reach and maintain high speeds. The fastest maglev trains can reach over 310mph.





## IMB piracy figures still dropping

Piracy remains a serious concern to shipping, but according to the International Maritime Bureau's (IMB) Piracy Reporting Centre, the numbers of actual attacks are going down.

Late July saw the Centre release its latest piracy report, covering the first six months of the year, stating that the number of attacks reported worldwide had dropped from 182 in the same period of last year to 127 in 2005. Though this is obviously a good sign, the fact that there is still some way to go before the problem could be considered to be eradicated is cause for concern.

The drop in these statistics could be partially explained by the absence of pirate activity for the first two months of the year in the

tsunami-struck Malacca Strait. But the Strait has seen a real resurgence since February and Indonesia can still lay claim to the dubious honour of having the greatest number of attacks.

With 42 incidents, Indonesian waters account for one third of all attacks across the globe.

### Wider perspective

The other traditional piracy hotspots of West Africa, the Indian subcontinent and the Caribbean around Jamaica and Haiti all remain active, but this year has seen a worrying increase in attacks off the Horn of Africa.

This is particularly so off the coast of lawless Somalia, where there were eight distinct and very vicious attacks in the three

months leading up to July. In the whole first half of 2004, there was only one attack and three the previous year.

Perhaps more worryingly, even the substantial concentration of naval presence in Iraqi waters hasn't deterred the development of a new generation of pirates. Until April 2005, piracy was virtually unknown in and around Iraq, but since then there have been a flurry of attacks.

The first of these, on 22 April, befell a Maltese-flagged bulk carrier, which was boarded by three armed men while she was lying at anchor off Umm Qasr. The raiders assaulted the crew and made off with cash and personal belongings.

Emboldened, on 31 May a Cypriot tanker was similarly boarded by armed men, who assaulted the Master and crew, while the vessel was waiting for a berth at the al-Basrah Oil Terminal. Finally, shots were fired and more cash was taken from a US tugboat and barge while underway at Umm Qasr in June.

Though the attacks are clearly pirate-related and not directly aimed at the US-led coalition, it follows that the security situation in the country has enabled the situation.

### Raising solutions

These incidents have flashed the Malacca Strait and piracy in general back onto headlines across the world and once more raised the debate of private military companies providing

armed escorts to vulnerable vessels.

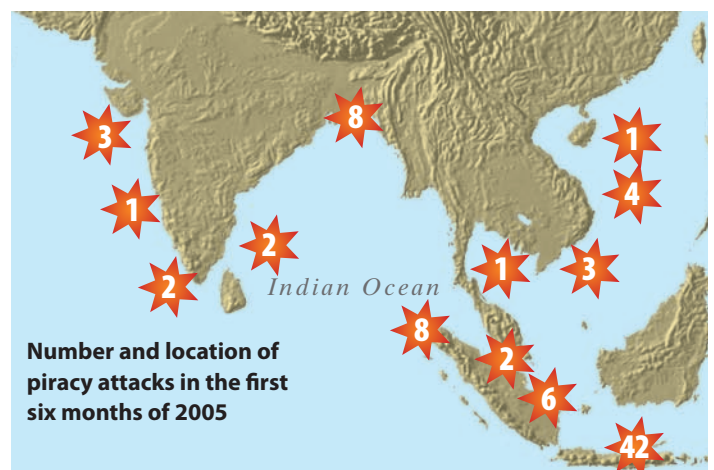
There is no question of Malaysia's feelings on the issue however, and the IMB advises that the Royal Malaysian Navy will detain any vessels so protected.

The IMB is unsure as to the legality, efficiency and necessity of these teams. However, it warns that "armed security escorts and guards are inherently in a clearly privileged position with respect to their vulnerable charge." Adding that "instead of closing the security weaknesses, it may create opportunities for exploitation."

The report continues that "only law enforcement agencies can bring piracy under control. Private armed response will raise the level of arms used by both sides and make these waters an even more dangerous place"

There is cause for some optimism however, as a raft of new developments may go some way to help solve the situation. These events have included the reassessment of the strait as a war risk area by Lloyd's Register, with attendant cost implications for shipping and ports; the 15 August Aceh peace deal; and increasing numbers of nations sending warships as Strait escorts.

These measures have additionally finally prompted the littoral states to discuss closing up the hot pursuit loophole that the IMB cites as one of the biggest and longest-running problems for the effective solution of the problem by the various law enforcement agencies. **PH**



# ISU warns on pollution risk



**New anti-pollution measures may have the opposite effect, according to the ISU**

The International Salvage Union (ISU) believes that new regulations proposed by Spain and Mexico could be instrumental in a future *Prestige*-type disaster.

The new controls govern ship-to-ship (STS) transfers of cargo and bunkers, and are currently being considered by the IMO's Marine Environment Protection Committee (MEPC). It has been given high-priority status and a completion target date of 2007.

According to ISU president Hans van Rooij, the proposed new

measures would give coastal states greater control over operations executed outside territorial waters if there is danger of pollution.

However, the ISU believes that far from protecting the environment, if the proposals become law the controls could actually hamper salvage efforts and pre-emptive operations to clean up a stricken vessel. The ISU is also worried that the measures could undermine the IMO's recently adopted guidelines on

Places of Refuge.

Van Rooij's concern is that these provisions could convince coastal states that a stricken vessel could be safely dealt with at sea, using the regulation to justify refusing a ship's legitimate requests for shelter of casualties or for removal of polluting cargoes and fuel.

"Spain and Mexico," he added, "are arguing the case for new powers to restrict or ban STS operations in Special or Particularly Sensitive Sea Areas. Yet these are the very areas most at risk." **PH**

## Union warns shipjumpers on the rise

The Maritime Union of New Zealand released a warning in July that unless working conditions are improved for ship crews, the number of personnel jumping ship while in port will rise drastically.

The Union's general secretary Trevor Hanson, stated that the situation is likely to continue for the foreseeable future because many crew are treated "like slaves" on board.

He asserted that "the first place the Labour Department and police should be raiding are the

overseas and joint venture fishing fleets, which a Government report released in May 2005 said were rife with exploitation, intimidation and violence."

Furthermore, incidents of crew members jumping ship from 'flag of convenience' vessels are also common, because they are badly treated.

The Maritime Union believes that in New Zealand at least, stronger regulation of the fishing and shipping industry, and higher wages will go some way to ameliorate the problem. **PH**

## ICS pushes EU involvement

The International Chamber of Shipping (ICS) sent an open letter to the EU's Directorate of Fisheries and Maritime Affairs in late July, requesting participation in the EU's Maritime Policy Review (MPR) and urging ICS members to get involved.

Generally regarding the EU's work on behalf of its member states in a positive light, the ICS urged the EU to closely consider how the MPR will impact the EU position on the future of the United Nations Convention on the Law of the Sea (UNCLOS). In particular, the ICS noted the convention's importance for shipping, as well as the wider maritime world of economic exploitation rights, fisheries and defence.

Chris Horrocks, secretary general of the organisation, stated that "reviewing UNCLOS is therefore a highly sensitive matter and ICS earnestly believes that these broader issues must be given due weight in the Review".

Horrocks also took the opportunity to once again warn against the EU continuing to seek full membership of the IMO as part of its drive towards securing a collective EU voice in the UN.

In essence, he argues that the intrinsically global nature of the maritime industry requires as wide a regulatory base as possible. The IMO's extant legislative and regulatory success rests on widespread technical argument, he contends, with a base of knowledge from across the membership. Rather than adding to this, suborning European members under a single EU flag would disastrously reduce the scope for independent intervention by national experts.

Further, Horrocks points to a worrying trend towards the politicisation of debate at the IMO and is concerned that EU membership would only exacerbate this.

The EU is expected to publish the initial results of its MPR as a 'Green Paper' at the beginning of next year. **PH**



## PIANC unveils five year plan

The International Navigation Association (PIANC) has mapped out its new strategy for the next five years of development and growth.

So big have been the changes in the world of navigation over the last few years that the Association had to make a clean sheet reappraisal of its future, according to its president Eric Van den Eede. "To do otherwise is to risk our survival," he said.

The plan is currently in its consultancy phase, having drawn together comments, ideas and recommendations from the association's Working Groups, Commissions, National Sections and individual members.

PIANC has adopted a mission statement to guide its development in the 2006-2010 Strategic Plan, endeavouring to take "responsibility for – and play a major role in – the development and improvement of global waterborne transportation." To accomplish this, the association is to "work cooperatively with others, including nation states, organisations and individuals to disseminate highest quality technical products and materials that educate and guide public and private organisations in the navigation sector to achieving greater public benefits and to garner greater public support."

This consultation phase is open until October and will then be refined by the council in December ahead of final conclusions to be drawn in February next year.

The strategy as it stands can be viewed at [www.pianc-aipcn.org/main/strategic.html](http://www.pianc-aipcn.org/main/strategic.html) **PH**

## IBIA launches pollution guide



**Fuel oil sampling under Marpol Annex VI**

Following the introduction of the Marpol Annex VI on 19 May, the International Bunker Industry Association (IBIA) has produced a

new simple guide to the strictures of the new regulations.

In typical fashion, Annex VI is a complex legal document, which –

though essential as a legal definition and backgrounder – isn't terribly helpful on a day-to-day basis. It's with this in mind that IBIA has created an online guide to the Annex for suppliers and buyers from any of the 25 countries that have so far ratified it.

The guide provides a quick reference list of all of the key points of the new Annex, spelling out the exact requirements for the bunker fuels. As well as the limits on sulphur content, it provides instructions on the sampling parameters to ensure quality and what the Bunker Delivery Note must contain.

In addition, it describes the Annex requirements within a Sulphur Emission Control Area and the means to comply with the Annex before entering.

The guide can be viewed at [www.ibia.net/imo\\_info.asp](http://www.ibia.net/imo_info.asp) **PH**

## IMO settles PSSA debate amicably

Two years of political wrangling and territorial disputes came to a head in late July, when the IMO secured a compromise deal defining exactly what constitutes a Particularly Sensitive Sea Area (PSSA).

Despite strong initial opposition from Russia, delegates attending the Maritime Environment Protection Committee (MEPC) in London agreed to impose special environmental status on the vast majority of the Baltic Sea area. They also formally adopted new protective measures for the Canary Islands, Torres Strait and Galapagos Islands.

Crucially, the MEPC managed to nail down a revised guideline, spelling out the process by which countries can seek to impose special environmental status on sea areas in the future. Supporters hope the strengthened guidelines will put an end to those proposals they claim are politically, rather than environmentally, motivated.

Russian waters have been

exempted however. Tension with Moscow erupted last year after Baltic and European states put forward the controversial proposals for a Baltic Sea PSSA.

Although the application complied with the IMO's existing guidelines, many believed the proposal went beyond what the PSSA concept was designed for.

There was also a complex political dimension to the proposals, which were interpreted by Russia as an attempt by European states to impose control over territorial waters.

In line with this, several states, including Russia and Panama, have argued that, if the recent proliferation of PSSA applications is allowed to continue unchecked, it would lead to the 'special status' becoming a devalued designation.

For example, EU member states backed a proposal to designate much of western Europe's coastline a PSSA last year, which resulted in several official objections being

filed arguing that the PSSA concept is only relevant if applied in geographically limited sea areas.

The latest MEPC meeting, however, managed to defuse the situation with a complex and hard-won set of compromises that will effectively leave Russian waters immune to the PSSA designation and all its associated protective measures. The newly strengthened guidelines also appear to have staved off concerns about future problems occurring.

While the new guidelines will have no effect on those PSSA applications already being processed, the majority of delegations have welcomed the deal as a major breakthrough.

"This needed to happen. It has got PSSAs back on track to what they should be," explained one MEPC delegate close to the debate. "No-one was disputing that they were anything but a good concept, but the old system just wasn't working," he stated. **PH**

# Experience the progress



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# LIEBHERR

**The Group**



## LA EXCO meeting shapes up

Los Angeles is set to host this year's final IAPH executive committee meeting and joint 50<sup>th</sup> Anniversary celebration at the Marina Hotel between 4 and 7 October.

Though held in LA San Pedro, the meeting is being jointly sponsored by the Ports of LA and Long Beach, and President Kornegay's working home, the Port of Houston Authority.

Chairs and vice chairs from across the IAPH spectrum are invited to join the Exco sessions by submitting a notice of attendance to the Tokyo office. Each technical committee's coordinating vice president is requested to attend and hold their meetings on 5 October.

These meetings will inform one of the key items on the agenda – the reform of the technical committees. This reform is high on President Kornegay's list, to enable the wider IAPH membership to get more value from the work of the committees.

While making the keynote speech at the Japan Seminar in August, President Kornegay stated "this will be accomplished by reorganizing the IAPH's technical committee structure and strengthening membership services to better reflect the needs of today's evolving industry and membership needs."

Exactly 50 years ago on November 7, some 100 delegates from 38 ports and maritime organizations gathered in LA to inaugurate the IAPH. It was deemed the ideal location for the anniversary location.

Lloyd Menveg, one of the IAPH's founder Honorary Members has been invited for the ceremony. He chaired the first IAPH Conference in Los Angeles, later took office as the 3rd President of the Association serving from 1959 through 1961. Today, Menveg remains vigorous at the age of 82.

Also on the agenda, the executive committee is to discuss 2005 financial predictions and the 2006 mid-term board meeting. **PH**



President Kornegay chairs the IAPH's Japan Seminar

## President Kornegay visits Japan Seminar

Thomas Kornegay made his first official visit to Japan as the new president of the IAPH in early August, to address the assembled throng with a keynote speech at the 18<sup>th</sup> IAPH Japan Seminar.

The Japan Seminar is held annually under the auspices of the Japanese Foundation for the IAPH, to promote the association's activities among ports and maritime industries in Japan.

This year's session, held on 1 August, was attended by 100 delegates, who saw eight speakers report back on the 24<sup>th</sup> World Ports Conference in Shanghai.

Speaking on the 'Challenges of the Port Community and the IAPH', Kornegay announced "I am

devoting my energy to improving the ability of the IAPH to provide more technical resources to our membership. This will be accomplished by reorganizing the Technical Committee structure and strengthening membership services to better reflect the needs of today's evolving industry and membership."

He continued; "by enhancing the technical committees, broadening the membership resources and getting each member more deeply involved in the IAPH, the organization will continue to flourish and provide richer resources that we can all utilize for the next 50 plus years."

The president also presented examples of port congestion, port

security and environmental initiatives from his hometown of Houston. In closing, he urged members to look forward to the 25<sup>th</sup> World Ports Conference, which is to be held at his port in Houston, in April 2007.

While in-country, president Kornegay also took the opportunity to meet with the IAPH Secretariat and Fer van de Laar, who was in town visiting from the Europe Office to discuss several key issues.

These included the forthcoming executive committee meeting and Golden Jubilee ceremony in Los Angeles and debated the new formation of the technical committees. **PH**

## IAPH donates US\$25,000 to children's fund

As part of the IAPH 50th celebrations, the association has donated US\$25,000 to Save the Children, following a suggestion from President Struijs suggested at the 3rd Mid-Term Board Meeting.

Funds of US\$20,000 were raised from the Registration Fee of the World Ports Conference and the balance was made up from the IAPH's general

account. Donations will now be made every conference year for the next 10 years.

At each Conference, the selected project will be reported to IAPH members, and a new programme recommended by the Secretariat. This year the donation will be used to educate children in Afghanistan. **PH** Please visit [www.savethechildren.net](http://www.savethechildren.net)

## IAPH to carry out communications and media audit

The Communication and Networking Committee is to carry out a full-scale audit of the main forms of communication with its membership, namely the emailed Online Newsletter, the IAPH website and, finally, the relaunched *Ports and Harbors* magazine in your hands.

This information came to light out of the latest communications committee meeting, which was held during the World Ports Conference in Shanghai.

It is hoped that this study will enable the Association to make the most of the existing formats and to focus them more tightly and represent the membership more closely, providing better value.

In terms of the existing Online Newsletter, the committee believes that it should be maintained as a key tool to share information on the “life of the association”. However, it was proposed that the emails could be enriched with information from the wider maritime world, particularly with updates on the IMO’s activity as relating to the ports world.

This could also include updates from other ‘friendly’ associations in a similar manner to the Maritime Updates section of *P&H* hardcopy magazine.

A major change could see a version of the Online

Newsletter extended to non-members, if one of the committee’s suggestions is upheld. The proposal raises the possibility of building the core of this newsletter around press releases sent out by members of the IAPH.

To help with the design of this project, the secretary general requests members send in their thoughts and possibly examples of their favourite email newsletters from other organisations. Members can also expect a questionnaire asking for feedback on this in a future Online Newsletter.

More urgently perhaps, the committee chair Jose Perrot has noted an urgent requirement to update the IAPH website as the always-accessible heart of the association’s communications focus.

Accordingly, the committee has come up with a number of suggestions to overhaul the site on top of the need to streamline its design. Firstly, as the main reference point for members, the committee asserts that the website should be the repository of everything that the IAPH produces, with all guidelines, proceedings, committee reports and so forth all accessible by members online.

Value could also be added to the website by expanding the currently under-used IAPH World Port

Photo gallery and keeping it regularly updated.

Additionally, the committee suggested creating a new ‘Issues and positions’ area, whereby visitors can quickly check the IAPH’s position on various pertinent issues.

With the rejuvenated *P&H* off the ground, the committee believes it is the perfect time to garner the membership’s opinions on the new-look journal, not just from a design perspective, but also revisiting the angle and coverage that the magazine is providing.

The committee intends to distribute a questionnaire to gauge the membership’s impressions of the magazine in the early part of next year. One of the key aims of this is to tailor the magazine more closely to the needs of members and, as such, it is vital that the membership becomes more closely associated with, and involved in the magazine. Any feedback and suggestions are, as always, gratefully received to the addresses on Pg 3.

Finally, the committee debated a new proposal of an Annual Report suggested by Dr Satoshi Inoue. The committee believes that “if the IAPH wishes to be positioned as the world port organisation, it should issue – on a biennial basis – a document on the state of the industry.” **PH**

## CLP pleads for support on refuge issue

The Committee on Legal Protection (CLP) has noted its disappointment at the IMO’s failure to settle the places of refuge debate and urges the IAPH membership to keep lobbying their individual national governments to seek a successful conclusion to the issue.

This call came during the CLP’s last major meeting, held during the World Ports Conference in Shanghai to provide an update and report back on developments in the group’s field.

Chairman Frans van Zoelen was lamenting the IMO’s apparent intransigence in the face of the IAPH and CMI’s joint proposal on places of refuge. Believing this was due to the IMO’s fear of derailing the ratification of the nascent Bunkers and HNS Conventions.

As such, the CLP hopes that the individual IAPH members will press their governments to ratify the two conventions as quickly as possible, thereby highlighting the remaining loopholes that a

separate Places of Refuge regime control could fill.

During the Shanghai meeting, the CLP also received a roundup case study report on the Ballast Water Convention from Cleopatra Shiceka of the National Ports Authority of South Africa. As one of the participating countries of the IMO’s ground-breaking Globalast research programme, South Africa has built up a wealth of experience in both the scale of the ballast water problem and also the issues surrounding the formal Ballast Water Convention.

Shiceka had already presented her report to South African ports and it was equally well-received by the CLP, which noted that the South African experience can be harnessed to the betterment of the wider IAPH membership. In particular Nicole Nesse from the Port of Douala in Cameroon believes that the report would be of great value to the IAPH’s West African member ports.

Amongst other issues, *Ports and*



**Selendang Ayu breaks up**

*Harbors* will be revisiting the issues of Ballast Water control in the November issue.

Looking introspectively, the CLP also took the opportunity to debate a name change and is seeking approval to drop the current, passive Committee on Legal Protection in favour of the

more active, and wide-range, Legal Committee to more accurately reflect the burgeoning work of the group.

The next CLP meeting will take place at the Los Angeles EXCO meeting in October, where the name change will no doubt be discussed again. **PH**



# New chair steers trade facilitation focus



**New chairman of the TFC, Santiago Milá**

The Trade Facilitation Committee (TFC) lost its chairman between its previous meeting and the most recent – held at the World Ports Conference in Shanghai – when Emile Arbós left his post at the Port of Barcelona.

However, as part of his legacy, Arbós left Santiago Milá as his nominated successor and this was endorsed and formalised at the meeting in Shanghai.

To go with this change at the helm, the committee is also now considering a name change, looking to become the Trade Facilitation and IT Committee, to reflect its growing involvement with the IT field.

In fact, it was IT and systems processes that accounted for the bulk of the committee's business in Shanghai. In particular, the IT field even figured largely with the

committee's core trade facilitation work with other organisations, most notably the World Customs Organisation (WCO) and the UN's Centre for Trade Facilitation and Electronic Business (CEFACT).

In essence, the TFC has been closely involved with the WCO's Unique Consignment Reference number (UCR) programme and in Shanghai, the committee enjoyed a detailed presentation on the

UK's participation in trials of the project. At the basest level, the UCR simplifies cargo transit for audit-based controls.

As such, the TFC noted its clear willingness to join in with these trials programmes. However, in order to ensure that the IAPH can play a fully active and balanced part, the committee also requested the WCO's assistance in providing ports with a level playing field of system and reference number commonality.

As regards CEFACT, Milá reported back on his close involvement with the organisation's UNeDocs programme. The main aim of which is to provide electronic alternatives to key paper documents in the international supply chain. As such, it is proposed as the basis for a new, global standard of digital trade documentation.

This is considered crucial for the implementation of Single Window access and paperless trade. In support, the TFC received a presentation on the Japanese experience of Single Window Systems from Etsuo Tominaga and Kenji Itoh of JASPRO.

*The full minutes of all of the committee meetings summarised on these IAPH Info pages can be found online at the IAPH website [www.iaphworldports.org](http://www.iaphworldports.org) and P&H urges you to follow up any points for more information and clarification* **PH**

## IT writers shine through in TFC essay prize

The IAPH's Trade Facilitation Committee (TFC) took the opportunity of the World Ports Shanghai meeting to judge the IAPH IT essay contest with input from Lu Haihu, head of the Shanghai International Port Group and host of the World Ports Conference.

Dr Satoshi Inoue and TFC chair Santiago Milá both lamented the small field of entries for the competition – down to only three from 14 two years ago – and blamed poor communication within ports as the main reason.

They also suggested that the generally poor

response "might indicate that there is a lack of interest in IT applications in ports, simply due to the already widespread use of IT in the world port industry, compared to when the IAPH IT Award was first launched over ten years ago."

In an effort to remedy the situation, the panel agreed that in future a personalised letter would be sent to the Chief Executives of member Port Authorities or directly targetting IT department with full details explaining the provenance of the award.

But none of this situation can take anything

away from the worthy winners, as all of the submissions were of a very high standard. Judging them was a tough decision as always, but the order was chosen as follows.

The Gold Award went to an entry from the Karachi Port Trust. A worthy Silver went the Penang Port Commission's entry on PPC Mobile Services, while third place went honourably to the Port Authority of Trinidad and Tobago, with their submission on A Booking Information and Ticketing System for an Inter-Island Ferry Service. **PH**



# Membership notes

The IAPH is pleased to introduce seven new members into the organisation

## Regular Member

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E-mail: secyship@nic.in Website: www.shipping.nic.in

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E-mail: info@kavehco.com Website: http://www.kavehco.com

Contact: Hossein Ahmadi, Chief Executive Officer

### Independent Administrative Institution Port and Airport Research Institute

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Telephone: +81-46-844-5040 Fax: +81-46-844-5072

E-mail: webmaster@ipc.pari.go.jp Website: http://www.pari.go.jp

Contact: Makoto Owada, President

### CyberLogitec

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Telephone: +82-2-3770-6010 Fax: +82-2-3770-6996

E-mail: jongkim@cyberlogitec.com

Website: http://www.cyberlogitec.com

Contact: Jong Tae Kim, Chief Executive Officer

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Telephone: +852-2854-3222 Fax: +852-2854-1538

E-mail: Frank.Paul@informa.com

Website: http://www.TFInforma.com

Contact: Frank Paul, Commercial Director, Asia Pacific

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Contact: Bob Nichol, Chief Executive Officer

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Telephone: +98-218-8844-611 Fax: +98-218-8315-777

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Website: http://www.pejamgulf.com

Contact: Ali Hamidi, Managing Director



## IAPH First VP speaks in Dalian

Datin Paduka OC Phang and Dr Satoshi Inoue represented the IAPH to make presentations to the summit forum for the Interaction of Port and Urban Economy in Dalian, China.

The IAPH's first vice president and secretary general spoke on 'Diversified Investment in Port Development' and 'Emerging Challenges of the World's Ports' respectively, to an audience some 200-strong.

Held between 13 and 14 July, the summit was sponsored by the Chinese Ministry of Communications, the China Council for the Promotion of International Trade, China Communications Transportation Association, China Ports Association and local governments.



**The Korean delegation in the Tokyo office. The lineup from left, Lee Seung Gil, Im Jong Moon, (Dr Inoue of the IAPH), Chung Yee Kee, Lee Sam He, Kil Yong Goo, Kim Byoung Hwan**

## Gwangyang visits Tokyo

A team from Gwangyang, the Republic of Korea's second-biggest port visited the IAPH secretariat in Tokyo on 30 June.

They discussed membership issues and made a presentation on their own port's development programme, which saw the completion of a new 12 berth development last October, along with the installation of new advanced equipment.

According to the delegation, Gwangyang port is now able to annually handle 2,830,000 TEU. In the first six months of this year, the port handled a total of 641,878 TEU, 20% of which were transshipment cargoes, mostly from Northern China.

There are six private container terminal operators at the port, including Hutchison, Korea Express, Hanjin, Global Enterprise, Dongbu Construction. Korea International Terminal also operates out of the port, with 63 shipping liners plying their trade every week since June. *More information about the port can be found at [www.portgy.com](http://www.portgy.com)*

# Meet your new EXCO

The IAPH's new officers and executive committee members introduce themselves and their intentions for their time steering the IAPH.



## Dr Geraldine Knatz

I am honoured to be asked to represent the IAPH Americas Region as a member of the association's Executive Committee.

My initial involvement with the IAPH began in 1997, when I became Chair of the Dredging Task Force and began representing that organization at the London Convention meetings at the IMO.

In that role, I have worked to include other environmental issues relevant to our members at the combined meetings of the Dredging Task Force and also at the Port Safety, Environment and Marine Operations Committees.

With today's interest in the 'greening' of our world

ports, the IAPH has an excellent opportunity to assume a leadership position.

However, the IAPH is in many ways a sleeping giant and has not used its collective strength to influence the maritime industry as much as it could.

My goal will be to help make the IAPH more visible in moving the maritime industry towards a more sustainable future. The time has come for bold action on the part of our industry and I look forward to being a part of the organization at this exciting time.

**Dr Geraldine Knatz,**  
**Managing Director, Port of Long Beach**

## Bara Sady

I would like to take advantage of the opportunity in this issue of *Ports & Harbors* to thank my IAPH colleagues for electing me as a Member of the Executive Committee.

I extend great thanks to my African colleagues for choosing me among so many deserving African port officials as their representative to the prestigious board of our association. I really am honoured.

I have the privilege and the honour to lead the Port of Dakar, which was founded in 1865. Though it is a state-owned corporation, it is privately operated. The throughput is growing and the container traffic is more than 350,000 TEU.

In the framework of port development, the Port of Dakar has recently set up a financing scheme based

on a debenture loan for two major projects, for a container terminal's expansion and the development of a logistic distribution park.

I believe that as a world port organisation, the IAPH is a good forum for exchanging experience and expertise between the world ports' managers. To fulfil its role of advising the port sector, more and more attention must be paid to the technical committees that form the frame of the association.

As a new EXCO member and at this high level of decision making, I commit myself to strengthen the relationships between all of the IAPH members.

**Bara Sady,**  
**Director, Port of Dakar**



## Long-Wen Lee

It's my great honour having this opportunity to represent the IAPH Asia Region as a member of the Executive Committee.

In 1979, I began my government career with the Department of Aviation and Navigation, Ministry of Transportation and Communications, (MOTC). Since then I have served as executive officer, director, and secretary general in a range of government and private offices.

In my previous post – before my current appointment as the Director General of Taichung Harbor Bureau – I had risen to the Director of

Department of Aviation and Navigation of MOTC.

I would like to share my experiences with the colleagues of IAPH, to make this wonderful organization more visible to the maritime industry and particularly to the ports of the Asian Region.

I care deeply about customer services, neighborhood friendship, IT management, the environment, and employee self-development, while also keeping a vigorous port in progress.

**Long-Wen Lee**  
**Director General, Taichung Harbour Bureau, China**





## Message from IAPH third vice president

### Bernard S Groseclose Jr

Joining the EXCO, it is with great respect that I will serve as 3<sup>rd</sup> Vice President of the IAPH.

I am particularly honoured to work alongside such a fine group of professionals, including the association's incoming president Tom Kornegay, the officers, executive committee, directors, committees and so many others.

I also enter this role knowing that an excellent staff in Tokyo, led by Dr Satoshi Inoue, is in place to support and channel our efforts.

It is because of this unique collection of people and skills that the membership should all have a great deal of confidence in the IAPH's future.

The world's ports have a massive responsibility, and we know that trade is the key to promoting world peace and the welfare of our neighbours. By more closely cooperating on our collective challenges, we can meet our responsibilities to our ports and our world.

Fifty years ago, delegates from ports and organisations from across the globe gathered in Los Angeles to create what has become our Association.

As we return to the IAPH's birthplace in October, we should take time to celebrate our collective accomplishments, while also rededicating our efforts to tackling the issues that face our industry.

**Bernard Groseclose Jr**  
President & CEO of South Carolina State Ports Authority

## Dates for your diary

A selection of forthcoming maritime courses and conferences

### September

- 19-22:** Annual Meeting on Project Finance for Latin America, Rio de Janeiro, Brazil  
<http://www.ibcprojectfinance.com.br>
- 21-22:** The 3rd Asean Ports and Shipping Exhibition & Conference, Surabaya, Indonesia  
<http://www.transportevents.com>
- 26-29:** The 8th Russian Shipping, Ports & Offshore Energy Exhibition – St. Petersburg, Russia.  
<http://www.setcorp.ru/exb>
- 27-29:** WaterfrontExpo 2005 – at the Riga Congress Centre, Riga, Latvia  
<http://www.waterfrontexpo.com>
- 27-29:** International Construction and Utility Equipment Exposition, Louisville, USA  
<http://www.icuee.com>

### October

- 5-7:** IAPH EXCO Meeting / IAPH Golden Jubilee Celebration, Los Angeles USA  
<http://www.iaphla-exco.com/>
- 5-6:** Seatrade London International Maritime Convention – ExCeL, London.  
<http://www.seatrade-london.com>
- 5-8:** INMEX India – Mumbai, India  
<http://www.inmexindia.com>
- 10-14:** ITMMA Public Private Partnership in Ports  
<http://itmma.ua.ac.be>
- 25-26:** Port & Terminal Technology 2005 Conference & Exhibition, Hamburg, Germany  
<http://www.millenniumconferences.com>

### November

- 2-4:** CEDA Dredging Days, Rotterdam, Holland  
<http://www.dredging.org> and at [www.ahoy.nl](http://www.ahoy.nl)
- 22-23:** IMCA Annual Seminar, Abu Dhabi, UAE  
<http://www.imca-int.com/events>
- 24-25:** The 3rd Thai Ports and Shipping Conference, Bangkok, Thailand  
<http://www.transportevents.com>
- 29-1:** Terminal Operators' Conference Americas, New Orleans, USA.  
<http://www.toc-events.com>



# "A port's contribution to costs must be minimal"

José Estrada, chairman of the IAPH Combined Transport and Logistics Committee pushes Port Authorities to help cut friction costs and add value

In broad terms, modern ports are terminals integrated within the logistics chains passing through them.

A port must facilitate connectivity between sea and land, but also promote perfect integration between the various transport modes converging on the port. This means that ports need to have the necessary infrastructure available, well designed and tailored to the particular traffic involved, while at the same time being capable of providing all of the necessary services, in the shortest time, and at the least cost.

To put it another way, a port's contribution to the generalised cost of transport through it must be minimal. This is the intermodal function of ports.

But in their capacity as 'nodal points' and taking advantage of the fact that a 'mode change' takes place within them, modern ports have the ideal chance to become centres for distribution, production and transformation of goods.

This was evident from the end of the 1980s, as a process of implementing specialised centres to store, distribute and add post-industrial value began to take place in ports or their immediate environs. In Spain these centres are known by the acronym ZAL (Zonas de Actividades Logísticas), Distribution Centres or simply Distriparks.

In the present market conditions today's ports need to play a new, more advanced and proactive role in their integration.

Indeed, significant changes wrought by globalisation, industrial relocation and technology, particularly in ICT, have given rise to a new market environment directly affecting ports and logistics chains.

In turn, this has spurred growing vertical and horizontal integration of shipping firms, with mergers and alliances cutting the number of players involved to a smaller, but more powerful field. Additionally, the growing presence of global stevedores, outsourcing of logistics to production firms and the consequent boom of logistics operators has led to great sensitivity to cost

and quality of service. Inevitably, this has resulted in strong competition amongst logistics chains and between ports.

Ports must therefore become more competitive to capture greater customer loyalty from existing and new traffic or, perhaps more importantly, generate more added value.

In logistics particularly, Port Authorities have the opportunity to carry out a more proactive and advanced role, leading their port community's economic development beyond the strict creation of ZALs.

They can do this by articulating complete logistic chains, making it possible to achieve hinterland and foreland integration in a door-to-door transport policy. Or by creating port networks backed up in the hinterland by the construction and operation of dry ports and inland terminals, including the necessary logistics infrastructure.

In addition, they must assure all of the transport and logistic services required by the cargoes and vehicles involved and demanded by clients. Equally importantly, the Port Authorities must promote their connections between both dry and sea ports. This provides greater proximity to clients and knowledge of their requirements.

The hinterland strategy is complemented by the foreland strategy, promoting cooperation between ports and with any hinterland initiatives, fostering the creation of a genuine port network.

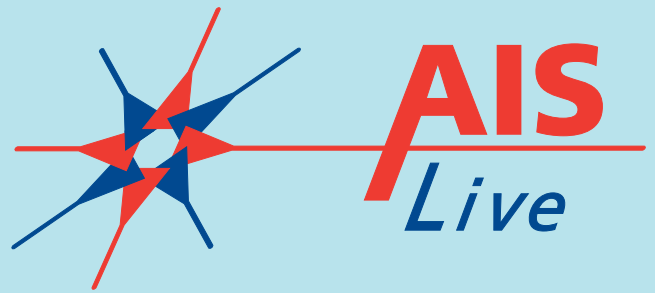
Port Authorities therefore currently have the chance to gain a competitive edge in the industry by extending their strategic scope beyond the boundaries of the actual port site and by driving the new logistics chains passing through them.

With this proactive role, Port Authorities will become a factor of progress and added value in their Port Community and in their port as a whole. **RH**

*Whiskey*

“In logistics, Port Authorities have the opportunity to carry out a more proactive and advanced role”





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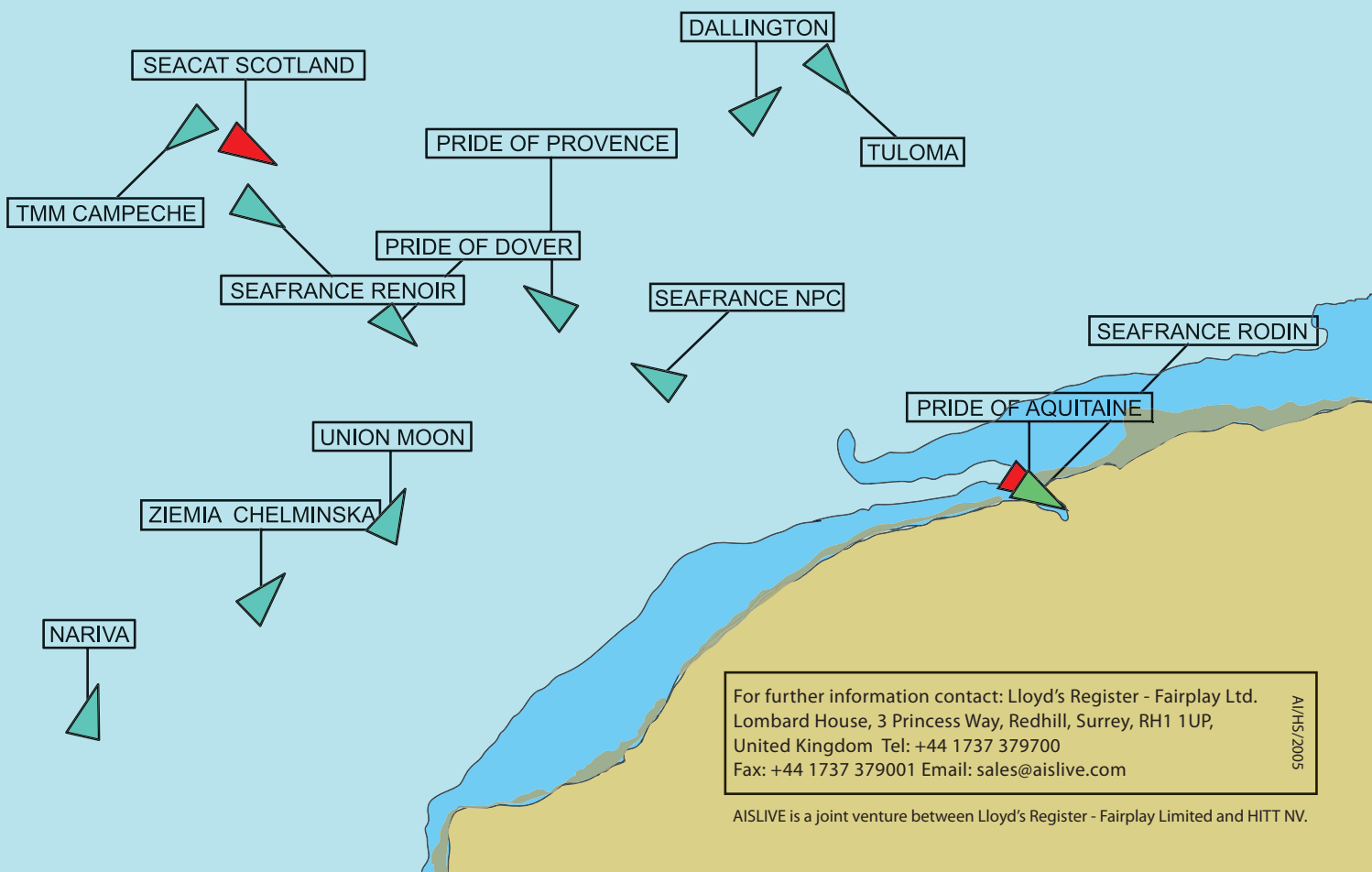
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