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**PORTS AND TERMINALS**

GIANT SHIPS IN WEST COAST PORTS' FUTURE ..... Page. 3

**MARITIME TRANSPORT**

ONLY STRONG CONTAINER SHIPPING COMPANIES WITH HEALTHY BALANCE SHEETS  
WILL BE ABLE TO FINANCE ULCV NEWBUILDINGS ..... " 7

**RAIL TRANSPORT**

FREIGHTLINER SOLD TO US RAIL GROUP ..... " 9

**ROAD TRANSPORT**

SLOTS BY APPOINTMENT ..... " 12

**INTERMODAL TRANSPORT**

TRANSPORTING GOODS FROM ASIA TO THE EU – WHAT ROLE FOR INTERMODALITY? ..... " 15

**INDUSTRY**

2014: THE BIG SECONDHAND SALES NEWS ..... " 17

**LAW & REGULATION**

SULPHUR DIRECTIVE PUSHES SHIPPING INTO STORMY WATERS ..... " 20

**PROGRESS & TECHNOLOGY**

CONTAINER SHIPS CONTINUE TO GROW EVER LARGER  
AS SHIPPING LINES SPECULATE ON FREIGHT DEMAND ..... " 23

**STUDIES & RESEARCH**

CONTAINER SHIP DISASTER ACCELERATES STRESS FAILURE INVESTIGATION  
AS FREIGHT VESSELS CONTINUE TO GROW ..... " 25

**REEFER**

AIR FREIGHT MUST TAKE PERISHABLES MORE SERIOUSLY  
AND INVEST IN 'SMART' CONTAINERS ..... Page 27

**ON THE CALENDAR** ..... " 30

**March 15<sup>th</sup> 2015**

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## PORTS AND TERMINALS

### GIANT SHIPS IN WEST COAST PORTS' FUTURE

With a bitter battle over a dockworkers' contract tentatively resolved, West Coast ports and their terminal operators are back dealing with an even bigger challenge — the mega-ship.

Bulked up like weightlifters on steroids, the new container vessels have set off a competitive scramble by the ports, which are dredging new channels, buying equipment and planning vast additions to warehouse space to accommodate the mega-ships, with the price tag for improvements running into billions of dollars.

"There are monsters out there, and unless we learn how to deal with these



monsters, we're going to lose business and tremendously affect the economies of the ports and the regions around them," said Jock O'Connell, international trade adviser for Beacon Economics.

Staying competitive with ports elsewhere is crucial for this region's economy.

The West Coast ports handled 43.5 percent of U.S. containerized imports in 2013, down from 50 percent in 2002, according to the Pacific Maritime Association.

The good news is that the recovering economy has increased the flow of goods across the Pacific as retail sales bounce back in the U.S.

For ocean carriers, building bigger ships is a matter of economics: the larger vessels are, the lower the cost of moving a container.

The trend began as the industry recovered from the recession, which had hammered revenue and profits.

Experts say the message from the shipping lines to the ports is this: get ready for us or we'll find a port that is.

West Coast ports returned their attention to mega-ships after a nine-month labor dispute that bogged down the flow of cargo, sending some shippers to ports on the Gulf and East Coast and forcing some importers to air express shipments.

Although they're working through a two- to four-month backlog of cargo, the ports are wooing importers to return.

The West Coast is still the fastest route to the inland U.S., and Los Angeles boasts a big local market of 13 million people.

To prepare for the big ships, berths at the Port of Oakland have been dredged to a depth of 50 feet.

Cranes have been raised by terminal operators to reach over taller, wider loads.

Railroads that operate out of the port have increased their capacity to deliver imported products across the U.S.



A \$1 billion project for new warehouses and a facility to ready imported goods for domestic shipment is planned on port property and the old Oakland Army Base.

The new warehouses will be a selling point the port can use to convince shippers to unload more of their cargo in Oakland rather than Long Beach and Los Angeles, said Chris Lytle, the port's executive director.

"We think it's a great advantage for shippers," he said.

The ports of Los Angeles and Long Beach are each spending \$1 million or more a day on ambitious plans to get ready for all but the biggest of the mega-ships.

Long Beach plans to spend \$4 billion over 10 years on improvements.

"The challenge for Los Angeles and Long Beach and the terminals around the country is adjusting to this new reality, these larger ships," said Phillip Sanfield, spokesman for the Port of Los Angeles.

The terminals were built to handle smaller ships, he said.

Although the port has dredged deeper channels and raised its cranes, "the logistics of the terminals are a work in progress."



In the past, shipments at the port might peak a couple times a year, said Noel Hacegaba, chief commercial officer at the Port of Long Beach.

"Now, it's happening every time one of these big vessels arrives."

Also, he said, unloading cargo has become more

complex as alliances of ocean carriers pool their loads on a single mega-ship.

The port has 4,000 vessel calls a year, with about two mega-ships a week, a frequency that is expected to increase in the coming years.

"The emergence of the big ships, the mega-vessels, comes down to simple economics," said Hacegaba.

"Ocean carriers will continue to invest in larger and larger ships in years ahead to reduce cost per container and to reduce costs to customers.

It's good for them and their customers, but the terminals and the ports where these big vessels call have to make drastic changes to be able to accommodate the surge in volume."

Container ships have grown from those capable of carrying 8,500 20-foot-long containers in the early 2000s to one on the drawing boards today expected to haul almost 24,000 containers.

Anything exceeding 10,000 containers is considered a mega-ship.

Regardless of the vessel's size, shippers want them unloaded quickly, so they can return to Asia for more cargo.

And they just keep growing in the number of containers they can carry.

The 1,191-foot-long MSC Sola, which berthed at the Port of Oakland this week, was one of the largest when it was built in 2008.

It is just 14 feet short of the maximum length the port's berths can handle.

Able to carry 11,660 containers, MSC Sola has since been outstripped by newer vessels, including the recently launched 1,300-foot MSC Oscar.

The Oscar can carry 19,224 20-foot-long containers, and will, like the largest of the mega-ships, ply the route from Asia to Europe trade via the Suez Canal.

But as vessels grow ever larger, the Oscar conceivably could be diverted to the Asia-Pacific routes served by California ports, O'Connell said.

"It's not going to be tomorrow," said O'Connell, adding half-seriously, "but in the fullness of time, which in the maritime industry seems to be about a year and a half."

*(from: hellenicshippingnews.com, March 3<sup>rd</sup> 2015)*

## MARITIME TRANSPORT

### **ONLY STRONG CONTAINER SHIPPING COMPANIES WITH HEALTHY BALANCE SHEETS WILL BE ABLE TO FINANCE ULCV NEWBUILDINGS**

Financing of Ultra Large Container Vessels (ULCVs) newbuilding orders will likely become a pressing issue in the months to come for many lines, as many of them have already piled a considerable amount of debt, exiting a prolonged period of losses.

According to the latest weekly report from Drewry Maritime Equity Research, many of these newbuilding investments will become difficult to finance.

Of course the third quarter of 2014 was the best in terms of profitability of the past couple of years.

“However, while the financial health of the industry is improving there is still a long way to go.

Record losses in the past five years and constrained operating cash flows have seen the industry pile on excessive debt, not only to finance their order books but also to raise expensive short-term capital to finance their working capital needs.

Meanwhile, the operating cash flow has remained extremely weak since the onset of the global financial crisis, barring 2010 when the carriers enjoyed the fruits of an unprecedented demand surge, led by restocking”, Drewry said in its weekly Container Insight.

According to the researchers, an additional factor which puts lines in a tough spot, is the ballooning debt, together with the extended period of negative cash flows.

It doesn't take much to figure out that this combination is a recipe for disaster.

As such, the pressure is on to take active steps towards improving their balance sheets.

No wonder NOL had to sell its profitable APL Logistics subsidiary, not to mention other companies selling stakes in other non-core assets, in order to raise capital.



Drewry Maritime Equity Research pointed out that it doesn't help that the container industry's capital structure is skewed towards debt, with equity financing remaining the exception, rather than the norm.

"Depressed stock prices made raising equity capital a non-starter and an expensive proposition, bank debt availability remained with a selected few strong players and the rest have turned to short-term debt financing and expensive bond markets", said DMER.

As such the researcher takes the following view to conclude its analysis of the market.

"Even as the industry is struggling to balance the need to repair the balance sheet and fund future investment requirements, we do acknowledge that there has been a marginal improvement in the industry's financial health over the past two years.

Still, not all are out of woods and we at DMER expect only strong players with healthy balance sheets both in carrier industry and non-operating owners are able to finance the bulk of the ULCV orders and the remaining will simply have to rely on long-term charters", it concluded.

*(from: hellenicshippingnews.com, March 3<sup>rd</sup> 2015)*



## RAIL TRANSPORT

### FREIGHTLINER SOLD TO US RAIL GROUP

US rail group Genesee & Wyoming (G&W) has entered into an agreement to acquire UK and European rail freight operator Freightliner Group from Arcapita, which has been its majority shareholder since 2008.

Freightliner and G&W said the change of ownership "will not have any impact on the day to day operations of the group and its subsidiaries.

All existing arrangements for each of Freightliner's operating companies together for all staff will remain unaltered," the companies said.

They also insisted that the agreement would be mutually beneficial for both parties, and Freightliner Group would "continue to invest in new technologies and enhance international activities".

Freightliner Group includes Freightliner Ltd, the UK's largest transporter and inland terminal operator for the movement of deepsea maritime containers, along with operations across the mainland Europe and Australia.

Its operations include ERS Railways, which provides cross-border intermodal services connecting the northern European ports of Rotterdam, Bremerhaven, and Hamburg to key cities in Germany, Poland, Italy and beyond.

Freightliner Poland and Germany provides bulk rail freight services including coal, aggregates and other bulk commodities within Poland and Germany and cross border, while Freightliner Australia transports coal and containerised agricultural products for customers in New South Wales and is an accredited rail service provider in Western Australia, South Australia and Queensland.



Freightliner Middle East is involved in developing rail services to support this rapidly growing region, and recently signed a contract to support the development of rail freight services in Saudi Arabia.

Alongside its UK container haulage business, Freightliner Group's other UK operations include Freightliner Heavy Haul, a leading UK bulk rail freight company, and Freightliner Maintenance, which offers infrastructure services and maintenance solutions for rolling stock in the UK.

Russell Mears, CEO of Freightliner Group said: "Genesee & Wyoming brings additional investment firepower, extended international reach and rail infrastructure expertise to add to the existing strengths of the Freightliner Group.

Their commitment to safety and service quality in all activities also mirrors our own values."

Jack Hellmann, President and Chief Executive Officer of Genesee & Wyoming, commented: "The acquisition of Freightliner is an excellent strategic fit for G&W.

We are excited to be adding a world class intermodal and heavy haul franchise in the United Kingdom that will be the foundation of G&W's European Region.

Further, the overlap of our respective rail businesses in Australia and the Netherlands will unlock operating synergies and expand our presence in each of those markets."

He added: "We are pleased to be joined by a highly talented management team who have a long track record of success in building Freightliner over the past two decades.

Working together, we expect to build the existing business and also unlock a range of attractive rail investment opportunities worldwide."

For Freightliner's 2,500 employees, he said G&W looked forward to working together "to leverage the strength and skills of our global employee base, deploying best practices from both G&W and Freightliner.

For Freightliner's customers, we are committed to deliver the same locally focused and responsive rail service that is the hallmark of both Freightliner and G&W, and we are excited about the opportunity to expand our global customer relationships going forward."

Excluding the Freightliner transaction, G&W owns short line and regional freight railroads in the US, Australia, Canada, the Netherlands and Belgium.

In addition, G&W Australia operates the 2,000km Tarcoola to Darwin rail line, which links the Port of Darwin with the interstate rail network in South Australia.

G&W subsidiaries provide rail service at 37 ports in North America, Australia and Europe and perform contract coal loading and railcar switching for industrial customers.

*(from: lloydsloadinglist.com, February 27<sup>th</sup> 2015)*

## ROAD TRANSPORT

### SLOTS BY APPOINTMENT

Hamburger Hafen und Logistik AG (HHLA) has been improving truck handling at its Hamburg container terminals since 2011 with a range of measures.

In future, truck journeys to the terminals will be distributed evenly throughout the day.

This will improve the facilities' efficiency and reduce traffic bottlenecks on the public road network.

Dr. Stefan Behn, member of the HHLA Executive Board, comments on the measures' necessity: "The volume of containers in the Port of Hamburg is set to increase.

As a result, the number of containers transported by truck will also increase – although at a slower pace than for rail transport.

We want to ensure our high handling quality, so we are continuing to work on improving efficiency.

In addition, we want to distribute truck handling more evenly throughout the day in order to avoid peak loads."

HHLA has been implementing the "Fuhre 2.0" programme, which improves the truck handling at the terminals and consists of a range of individual measures, since 2011:

- Self-service terminals: In just 130 seconds, HGV drivers can check in their own containers.
- OCR in-gate: The optical character recognition gate automatically records the truck's number plate and container number, among others.
- Monitor check: Damage and hazardous goods stickers are recorded during the journey to the check-in gate.
- Pre-registration of containers via the TR 02 Version 14 programme: After pre-registration of containers by the dispatchers, the terminal transmits the reliable, actual status of the container in question.

The haulage company can thus avoid unnecessary journeys.

After these measures have all been implemented, HGV drivers will no longer have to exit their vehicles until the point that the containers are delivered, significantly speeding up truck handling.

Heinrich Goller, Managing Director of HHLA Container Terminals, describes the plans for the future: "Fuhre 2.0 will ensure consistent processing at our Hamburg container terminals.



We have already significantly accelerated truck handling at the facilities with the measures already in place.

As such, we have increased the terminals' efficiency and reduced

waiting times for HGVs.

We are now going to focus our efforts on ensuring a more even distribution of truck handling.

In future, we want to come to an agreement with haulage companies on time windows within which HGV drivers can be processed reliably and quickly.

In this way, we can process larger numbers of containers at traditionally quieter times of day.

This reduces peak loads at other times and creates planning security for haulage companies and the terminal."

To do this, pre-registration of transport information is required before vehicles can be handled at the terminal.

The TR 02 Version 14 interface is used for the pre-registration.

In advance, the dispatcher at the haulage company provides the data electronically for the container delivery or collection.

When the terminal gives the green light – i.e., when all the necessary data is available and the handling process can proceed smoothly – the truck can set off.

As a result of this early transfer of information, less data has to be checked during the handling process.

This also further accelerates the process and avoids unnecessary journeys.

Preparations for this measure are already underway.

The requirement to pre-register details is a prerequisite for another measure – the slot-booking process.

In future, the terminal and haulage company will agree on a time window in which a container can be delivered or collected.

Within this time window, the terminal will agree to handling, which will increase reliability for the haulage company by a huge degree.

At the same time, a differentiated priority model will give HGV drivers the flexibility they need.

By agreeing on appointments, the burden on truck handling will be distributed much more evenly throughout the day, reducing peak loads.

Previously, between five and 250 containers were processed per hour per terminal, depending on the time of day.

*(from: eurift.eu/hhla.de, February 27<sup>th</sup> 2015)*

## INTERMODAL TRANSPORT

### TRANSPORTING GOODS FROM ASIA TO THE EU – WHAT ROLE FOR INTERMODALITY?

On 24 February, the Community of European Railway and Infrastructure Companies (CER) and the Latvian Presidency of the EU jointly organised a political debate on the role of intermodality in the transport of goods from Asia to the EU.

The event was a good occasion to reflect upon current obstacles preventing rail



and rail-road combined transport from realising their full potential, and on possible policy measures to reinforce the competitiveness of the terrestrial Euro-Asian link against the currently dominant maritime route.

The debate focused on how the terrestrial route from Asia to Europe may constitute a viable alternative to the maritime routes (via the Suez Channel or via the Cape of Good Hope).

The terrestrial route can potentially cut transit time by up to two thirds compared to the maritime alternatives.

In addition, the use of rail-road combined transport can decrease energy consumption by this same proportion compared to maritime transport and significantly more compared to transporting goods by air and thus contribute to the EU environment targets and the Transport White Paper ambitions.

Deputy State Secretary of the Latvian Ministry of Transport Dins Merirands said: "While most of the traffic between Asia and Europe uses maritime routes, I believe that further development of inland transport routes would provide additional credible and competitive transport options.

I also truly believe that railway transport can be more competitive both in terms of time and cost when production areas are situated relatively far from



the ports, such as in China and India, and cargo is destined for southern or eastern European countries.

Therefore, it is important to stress that Euro-Asian rail transport, and its intermodal combination with maritime and road transport, has already proved that it is a feasible and competitive transport option."

CER Executive Director Libor Lochman added: "The projected increase of trade between Asia and Europe and the perspective of medium-term energy scarcity and rising energy prices urgently necessitate the development of a terrestrial alternative to maritime and air transport on the Euro-Asian axis.

Rail-road combined transport and rail transport have strong assets, such as speed, safety, sustainability and energy efficiency.

They are particularly suited to Euro-Asian traffic.

However, the development of the terrestrial route requires political commitment from the countries concerned along its whole stretch.

Within the European Union itself, CER calls on the European Commission to reinforce the East-West links by encouraging Central and Eastern European countries to invest in the necessary infrastructure."

*(from: europeanrailwayreview.com, February 25<sup>th</sup> 2015)*

## INDUSTRY

### 2014: THE BIG SECONDHAND SALES NEWS

A record volume of tonnage is reported to have changed hands last year and reported secondhand sales rose by 29% year-on-year to total 51.0m GT in 2014.

Activity at the larger end of the oil tanker sector was particularly strong and 2014 saw a firm increase in the volume of containership tonnage sold year-on-year.

This month we take a closer look at the detail behind global sales activity in 2014.

#### *Selling and buying big*

A total of 1,320 vessels of 51.0m GT were reported sold market in 2014, a record in terms of GT.

This was driven by strong interest in the oil tanker sector with a reported 309 tankers of 23.0m GT sold, 82% more tonnage y-o-y, and the sector accounted for the largest share of sales in GT terms (45%) for the first time on record.

In the general cargo sector, the volume of tonnage sold rose 48% y-o-y in 2014 and 275 units of 6.5m GT were reported to have changed hands.

Containerships accounted for 93% of the general cargo units reported sold in 2014 in terms of GT.

Meanwhile, reported bulker sales fell 7% y-o-y to 16.9m GT in 2014 (411 ships) though the sector still accounted for 33% of total sales in terms of GT.

#### *The big sell on vessels*

Whilst the number of units that changed hands fell 8% y-o-y in 2014, greater interest in the larger size segments saw the average size of ships sold rise 37% y-o-y to around 39,000 GT – the highest ever level.

In the tanker sector, a record 79 VLCCs of 12.7m GT were reported sold in 2014 (around a third of which were en-bloc deals) as well as 59 Aframaxes of 3.5m GT and 37 Suezmax tankers of 3.0m GT (up 118% y-o-y in terms of GT).

Further, 60 Capesize units of 5.4m GT and 12 boxships above 8,000 TEU of 1.1m GT were reported sold in 2014.



Increased sales of these larger units led to a big rise in the volume of GT sold.

#### *The big buyers in 2014*

In recent years, Greek owners have typically accounted for the largest proportion of

secondhand purchases and their share stood at 24% in 2014 (11.8m GT).

Chinese owners are reported to have bought the second largest volume of tonnage in 2014, 5.7m GT, with over half (56%) of units purchased from domestic owners.

Elsewhere, US owners saw sales activity rise 139% y-o-y in 2014 to 4.0m GT, with oil tankers accounting for 50% of the GT.

#### *The big sellers in 2014*

Japanese owners remained net sellers in 2014 with 7.0m GT reported sold.

Bulkers accounted for 51% of Japanese sales in terms of GT and 41% of units were reported sold to Greeks.

German owners sold a reported 6.1m GT in 2014, up 36% y-o-y, and they accounted for 56% of total boxship sales (5.9m GT).

Meanwhile, Chinese owners also sold a record 5.1m GT in 2014, a y-o-y rise of 58%.

So, secondhand sales activity was strong in 2014 and the reported value of sales totalled \$26.1bn, up 26% y-o-y.

There was interest in the larger sizes and the average size of ship sold reached a record level.

Greek and Japanese owners were the 'top' buyers and sellers respectively whilst Chinese owners' activity broke previous highs.

There has been 3.0m GT reported sold in 2015 so far, but 2014's total will be a challenging target.

*(from: [hellenicshippingnews.com/clarkson](http://hellenicshippingnews.com/clarkson), February 23<sup>rd</sup> 2015)*

## LAW & REGULATION

### SULPHUR DIRECTIVE PUSHES SHIPPING INTO STORMY WATERS

The European Union's Sulphur Directive limits sulphur emissions from commercial shipping to 0.1%, in a zone that extends from the English Channel to the Baltic Sea.

Enforcing the regulation is proving problematic for member states, EurActiv France reports.

Air quality in the English Channel, the Baltic Sea and the North Sea has received a boost.

On 1 January, this Sulphur Emissions Control Area (SECA), along with two zones in North America, tightened its restrictions on the sulphur content of fuel used by commercial ships from 1% to 0.1%, in line with the 2013 Sulphur Directive.



Sulphur content in ship fuel is hardly regulated in other areas, including the Mediterranean, where it can be as high as 4%.

A global limit will be set at 0.5% from 2020; a challenge for the industry, but an essential measure for the environment.

Sulphur emissions cause acid rain, which is harmful to plant

life, and can also lead to major respiratory problems.

The sulphur emitted by the maritime industry is responsible for around 50,000 deaths per year in Europe.

#### *Filtering exhaust gasses or switching fuels*

There are very few options available for limiting sulphur emissions.

Ships must either filter their exhaust gasses, switch to a sulphur-free fuel or convert their fuel supply to gas.

But the industry is struggling to come up with a standard.

The installation of exhaust gas filters is technically very difficult, and only 100 to 150 ships in the world are currently fitted with these exhaust "scrubber" systems, from a total fleet of 50,000 commercial ships.

The Swedish ferry company Stena Line, which transports passengers between the Netherlands and the United Kingdom, plans to make this modification to its ships by 2016.

The option of using low-sulphur fuels, like marine diesel or methanol, is not currently an economically viable alternative to exhaust filtration.

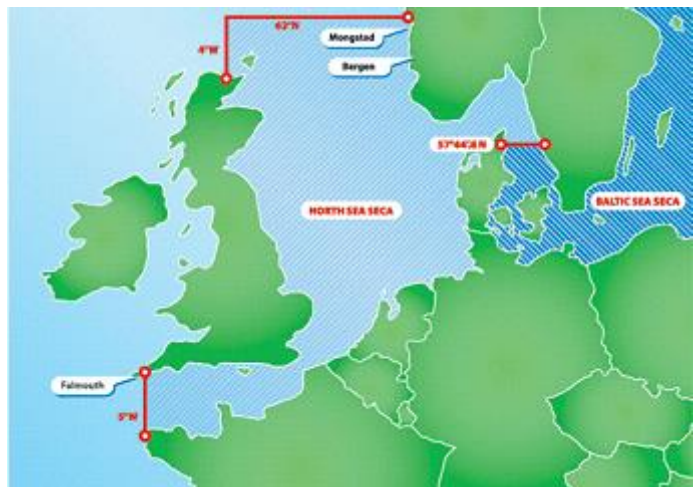
These highly refined fuels cost 30-40% more than those traditionally used by commercial ships; a cost that hits short distance shipping routes particularly hard.

Long-distance freight ships from Asia or Africa are expected to switch to a low-sulphur fuel when they enter the Channel.

This means they should carry multiple fuel reserves, which is not always the case.

The collapse of the price of oil from \$100 to \$50 in the last six months has helped soften the blow for shipping companies.

Bill Hemmings, from the NGO Transport and Environment said "Reduced-sulphur fuel is now the same price as regular fuel was six months ago, so the cost overrun is smaller".



The industry is still fearful that this directive will cut its market share, as cheaper fuel also benefits the road transport sector, whose environmental impact per kilometer is considerably worse.

*A very theoretical regulation*

The enforcement of this legislation poses a further problem.

The EU's separate national authorities are responsible for ensuring that ships comply with the new environmental regulations, but only around one in every 1,000 ships are checked, and fines are not an effective deterrent.

The fine for non-compliance in Poland and the Baltic countries is only €800.

"A 20,000 ton cargo ship saves around €10,000 a day by using non-regulation fuel.

It has to spend eight days in the SECA zone in order to deliver a cargo to Poland," said Sjoerd Hupkes Wijnstra, head of environmental affairs at Spliethoff ocean transport group.

For a ship's captain, the choice between an additional cost of €80,000 and a potential fine of €800 is an easy one.

From 2016, according to the Sulphur Directive, one in ten ships that pass through European ports will have their fuel checked.

On top of the new regulations on sulphur emissions, the influx of new ships also poses a threat to the sector's profitability.

### *2020 sulphur and CO2 targets*

The restriction of sulphur emissions is the main environmental constraint to be imposed on the industry.

By 2020, sulphur emissions will be subject to a 0.5% limit worldwide.

Developing countries, which depend heavily on marine transport to feed their growing economies, are following the matter closely and trying to have the date pushed back to 2025.

Limits for CO2 emissions are still being finalised, and ship owners will be included in the next round of global climate negotiations, according to the provisional text for the Paris Climate Conference.

Until now, commitments on emissions reduction for commercial shipping have been made exclusively by the International Maritime Organisation, but the European Council has decided that the EU will take charge of the question from 2018.

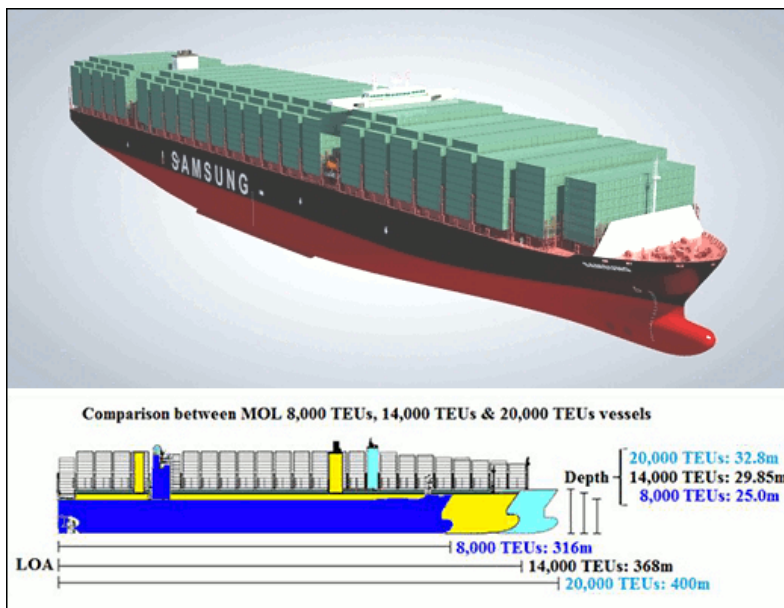
*(from: eurift.eu/euractiv.com, March 5<sup>th</sup> 2015)*

## PROGRESS & TECHNOLOGY

### CONTAINER SHIPS CONTINUE TO GROW EVER LARGER AS SHIPPING LINES SPECULATE ON FREIGHT DEMAND

Mitsui O.S.K. Lines (MOL) has signed a deal for the construction and chartering of six 20,150 TEU containerships, the largest ships in terms of capacity currently on order, an announcement that marginally overshadows that of Maersk Line's, which has announced that it will, for the first time since 2011, place an order for a new series of ships, expected to be between only 18,000 and 19,000 TEU, such is the size of the container shipping industry's new orders, that we can precede 18,000 TEU with 'only' and Maersk tend to use a different system from any other carrier to define carrying capacity.

MOL has ordered four of its new vessels from Korean shipbuilder, Samsung Heavy Industries in a deal worth approximately \$620 million, whilst the box freight line has also signed an MOU for an all Japanese affair, for the long-term chartering of the other two containerships with Shoei Kisen Kaisha, to be built at Imabari Shipbuilding.



Classification of the four largest newbuilds will be undertaken by Lloyds Register.

These six vessels, which will be launched and delivered in 2017, will serve the Asia-Europe service.

The 20,150 TEU series order is currently the largest in the world when it comes to capacity, surpassing a recent order announced by Imabari, for eleven 20,000 TEU vessels to be delivered to a still unnamed end user (now increasingly likely to be Evergreen with previous speculation having been MOL or the Taiwan based line).



Those 20,000 TEU vessels also now look unlikely to become the largest containerships to ply the trade routes, with the first vessel scheduled to be completed by 2018 the new MOL ships will likely take that title.

In common with every major carrier MOL's newbuild vessels will adopt various highly advanced energy-saving technologies, which will further reduce fuel consumption and cost, in comparison with the 14,000 TEU types that MOL currently operates.

The main engines have specifications which enable LNG use as fuel in the future remodelling.

All six vessels will measure 400 metres in length and nearly 59 metres wide – Samsung's will measure 58.8m and Imabari's 58.5m.

Over to Maersk Line when last week, CEO Soren Skou said that the company needed to increase capacity by over 425,000 containers from 2017 onwards for three years.

He added that a purchase order for the ships will most likely be signed in the second quarter of 2015, probably for more of the Triple- E series which started the whole upsizing revolution.

*(from: handyshippingguide.com, March 5<sup>th</sup> 2015)*

## STUDIES & RESEARCH

### CONTAINER SHIP DISASTER ACCELERATES STRESS FAILURE INVESTIGATION AS FREIGHT VESSELS CONTINUE TO GROW

Classification society ClassNK is to carry out a joint research project aimed at improving safety standards for ultra-large container ships, by working towards establishing safer brittle crack arrest design in the construction of the large vessels.

The increasing size of containerships has naturally led to the use of ever larger and thicker steel plates and the preventative measures for brittle fracture has become even more important, especially in areas where higher stress occurs such as the upper deck and hatch side coaming of the cargo holds.

Such thick steel plates are used in the construction of containerships in order



to satisfy the requirements for longitudinal hull girder strength, especially in light of the open deck design of these ships.

The open deck design means that longitudinal strength must be ensured with limited structural members.

The application of such extremely thick steel plates in hull structures, however, raises a few concerns as to the brittleness of the plates, and considering that a failure in the hull girder strength is believed to have led to the MOL Comfort disaster, these concerns are valid.

Used especially in the construction of strength deck structures, such as hatch side coamings, strength deck, sheer strakes, and longitudinal bulkheads in order to accommodate greater loads these plates can exceed 80 mm in thickness, with some plates reaching thicknesses of up to 100 mm, sizes previously uncommon in shipbuilding.

In order to improve the safety standards of large container vessels, IACS released its Unified Requirements for Use of Extremely Thick Steel Plates in January 2013, which outlined the necessary measures to be taken for the

prevention of brittle crack propagation in the block-to-block butt joints of the hatch side coaming and upper deck to prevent any large scale fracture of the hull girder.

One of the preventative measures IACS outlined is the use of brittle crack arrest steel, defined as steel with measured crack arrest properties.

However, the IACS requirements apply only to brittle crack arrest steel plates with a thickness of up to 80 mm and with the introduction of 20,000 TEU ultra-large container ships, the increased use of brittle crack arrest steel exceeding 80 mm in thickness is expected.

Where the thickness of these steel plates exceeds 80 mm, the crack arrest parameter must be specifically agreed with each classification society.

To ensure smooth adoption of thicker steel in the industry, ClassNK has embarked on a joint research project to develop technical standards in order to clarify the crack arrest parameter for steel plates exceeding 80 mm in thickness.

Through this joint research, ClassNK aims to establish clearer evaluation methods to form the proposal for unified IACS requirements for brittle crack arrest steel exceeding 80 mm for the benefit of the entire maritime industry.

The project will be carried out as part of the ClassNK Joint R&D for Industry Program in collaboration with the Japanese Welding Engineering Society (JWES), steel manufacturers, shipbuilders, and neutral research institutes, and is scheduled to be completed in mid-2016.

ClassNK has looked into this project before and its outcome was the development and the practical application of a new grade of higher tensile steel plate with a specified yield point of 47 kgf/mm<sup>2</sup>, known as YP47 steel plate.

The MOL Comfort and her six sister ships were the first series of ships to use this YP47 plate and following the Comfort's disastrous outcome and ClassNK's subsequent report, the other six vessels needed to have their hulls reinforced last year, to twice the standard required by ClassNK.

*(from: handyshippingguide.com, February 20<sup>th</sup> 2015)*

## REEFER

### AIR FREIGHT MUST TAKE PERISHABLES MORE SERIOUSLY AND INVEST IN 'SMART' CONTAINERS

The air freight industry is failing to take perishables seriously, delegates heard this week at Schiphol Cargo's Shipper Forum at Air Cargo Africa in Johannesburg .

In a session hosted by Amsterdam Airport that focused on the flower trade, it was suggested that sea freight was by far the best quality option for many flowers, as reefer containers provide a steady temperature which could not be guaranteed on an aircraft, unless in a more expensive temperature-controlled container.

Juhan Hulleman, head of quality for Jumbo supermarkets, a Dutch retailer with some 600 shops, revealed that to get 800 boxes of flowers that he could



guarantee would last a customer seven days, he needed to buy 1,400 boxes – implying that 42% of the shipped blooms wouldn't survive long enough.

Joren van der Hulst, managing director of

quality control company FlowerWatch, said: "The best performance for flowers is sea freight.

It can keep the flowers at 0.6 degrees for four weeks, and so has proven to be better than air freight."

However, containership reliability is very poor – in January, for example, it fell to a low of 48% on a basket of east-west trades and 45% on the transatlantic, while transpacific for the same month – admittedly affected by the west coast ports issue – was 36%. (Data for north-south is not currently available.)

The figures, which define late as arriving 24 hours after the schedule, do not take into account cancelled sailings, which can cause more severe delays to cargo.

"Delays would be disastrous," said Harry Van der Plas, CEO of TotalTouch, a perishables forwarder and handler based in Nairobi.

"If you have a contract with a retailer, they don't want surprises.

They hate delays," he said.

Mr Van der Plas also argued that the air freight industry should set itself apart from its sea freight rivals by changing the terminology.

"I don't think we take this business seriously," he said.

"We are all looking at reefer containers, but the key word here is 'fresh'.

We send vegetables to Holland by air – they are fresh.

But vegetables that have been sitting in a container for three weeks are not fresh.

The word 'fresh' distinguishes air from sea."

Mr van der Hulst explained that flowers were hugely affected by a range of problems, from early harvesting, to heat at the farm, or stacked pallets – which could have the effect of causing the temperature of the 'live' flowers to rise, much like compost.

The best way to preserve them, he said, was in a controlled container – although even then flowers could turn to compost if the residual temperature on packing was too high or the flowers packed incorrectly.

David Ambridge, general manager of handler Bangkok Flight Services, pointed out this was perfectly possible in air freight.

"We play at this game.

In sea freight they put the shipment in a reefer and send it round the world.

We drive it two miles down the road and re-pack it.

Airlines can't keep their aircraft at 0.5 degrees and we can't keep our warehouses at 0.5 degrees.

The only way for us to move fresh produce is in temperature-controlled containers."

The discussion inevitably turned to price.

While many delegates noted that 'you get what you pay for', Glyn Hughes, chief of IATA Cargo, pointed out that despite massive investment by some airlines in their pharma product, shippers in many cases instead sent pharmaceuticals as general cargo, which came with inevitable problems.

But if shippers were losing more than 40% of their product, as was the case with Jumbo, then the price for them would ultimately come down as the quality of transport improved.

"You don't have to buy temperature-controlled containers," added Mr Ambridge.

"You can lease them – and the more you use it, the less it will cost you."

One delegate noted that with volumes of pharmaceutical traffic coming into Africa, there could be a two-way use flow of containers.

Mr Ambridge concluded: "Airlines that are serious about this should invest.

As an industry we have been accepting the status quo for decades – and we are simply not very good."

*(from: theloadstar.co.uk, February 27<sup>th</sup> 2015)*

## ON THE CALENDAR

### 2015

- 18 Mar Port Finance & Investments Amsterdam, the Netherlands
- 19 Mar Ports & the Environment Seminar Amsterdam, Netherlands
- 24-26 Mar Intermodal Asia 2015 Shanghai, China
- 25-26 Mar 2nd Port & Logistics Development Forum Shanghai, China
- 25-26 Mar 3rd MED Ports 2015 Casablanca, Morocco
- 29-31 Mar International Maritime Transport and Logistics Conference – MARLOG 4 Alexandria, Egypt
- 21-22 Apr TOC Asia Singapore
- 21-22 Apr Port & Terminal Technology Conference & Exhibition Miami, USA
- 21-22 Apr 7th International Conference & Exhibition on Port & Terminal Technology Miami, Florida, USA
- 21-23 Apr Sea Asia Singapore
- 21-24Apr 9th International Chemical and Oil Pollution Conference and Exhibition (ICOPCE 2015) Singapore
- 28-29 Apr Inland Waterways & Shipping Conference Rotterdam, the Netherlands
- 6-7 May 11th Trans Middle East 2015 Doha, Qatar
- 21-22 May ESPO Conference 2015 Athens, Greece
- 28-29 May 4th Black Sea Ports & Shipping 2015 Istanbul, Turkey
- 6-9 Jun 3rd International Marine Exhibition of Iran Tehran, Iran
- 7-9 Jun CMI Colloquium Istanbul, Turkey
- 9-11 Jun TOC Europe in Rotterdam Rotterdam, Netherlands
- 24-25 Jun 13th ASEAN Ports and Shipping 2015 Jakarta, Indonesia
- 24-27 Jun ECONSHIP 2015 Chios, Greece

- 7-11 Sep PIANC-SMART RIVERS 2015 Buenos Aires, Argentina
- 17-18 Sep 10th Southern Asia Ports, Logistics & Shipping 2015 Mumbai, India
- 22-25 Sep NEVA 2015 St. Petersburg, Russia
- 26-28 Oct 6th Global Free Trade & Special Economic Zones Summit Dubai, UAE
- 29-30 Oct 13th Intermodal Africa 2015 Lusaka, Zambia
- 25-26 Nov 14th Intermodal Africa 2015 Lagos, Nigeria
- 8-9 Dec TOC Middle East in Dubai Dubai, UAE

The Secretariat of C.I.S.Co. is able to communicate detailed information on the programs of all the events and how to participate.