

# Newsletter

September 15<sup>th</sup> 2017

*Link road, rail, sea!*

Council Of Intermodal Shipping Consultants

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The content of the C.I.S.Co. Newsletter is also published in the newspaper "Informare" accessible on the Internet site <http://www.informare.it>

## C.I.S.C.O. NEWS

### MAERSK JOINS BOXTECH CONTAINER DATABASE

Global container shipping company Maersk Line has uploaded the technical details of its entire container fleet to BoxTech, the fast-growing database provided by the Bureau International des Containers (BIC).

Following the upload, the BoxTech database now holds details of more than 7.5 million shipping containers, approximately 30% of the global container fleet.

Launched in July 2016, the non-profit BoxTech Technical Characteristics Database has helped hundreds of shippers, forwarders, terminals, and other parties to digitalize more of their operations.

With more than 1000 total users, the database is utilized to obtain container weights and sizes and will soon offer additional functionality such as status and recovery alerts.



The easily integrated and automated system enables a seamless flow of container information between different parties throughout the supply chain, increasing efficiency and reducing manual tasks.

Maersk Line is one of the latest companies to benefit, following the upload of their entire worldwide container fleet.

"We strive to simplify and create transparency across our customers' entire supply chains.

This digital platform provides our customers ease in complying with industry regulation.

In turn, access to precise data on the weight of the loaded container will support our drive towards increased fleet safety," says Ingrid Uppelschoten-Snelderwaard, Head of Equipment at Maersk Line.

Douglas Owen, Secretary General of the BIC commented "We're delighted that Maersk Line has uploaded their fleet in support of BoxTech and we are confident that their customers and trading partners will be equally pleased.

The enhanced visibility and automated data access improves safety and security, and also means efficiency gains and cost savings right through the supply chain."

Signing up to BoxTech is quick and simple and the initial file of container fleet technical details is uploaded easily using a CSV template.

Subsequent data uploads can then be automated via APIs, saving time and increasing digitalization.

APIs can also be put in place for conducting database queries, allowing seamless integration of necessary container details directly into systems.

The database is continually developing and evolving to best meet the data needs of the shipping industry.



"With 2 of the top 3 global carriers, and 2 of the top 4 leasing companies now having loaded their fleets in BoxTech, shippers are beginning to experience just how beneficial such a database can be," adds Douglas Owen.

"More fleets are being added all the time, and the closer we get to the entire global fleet, the more the industry benefits from BoxTech".

To sign up to the BoxTech Technical Characteristics Database, or for more information, visit [www.bic-boxtech.org](http://www.bic-boxtech.org).

The BIC will also be discussing the latest BoxTech developments at the meeting of the International Maritime Organization Sub-Committee on Carriage of Cargoes and Containers (IMO CCC) from 11th – 15th September, and with visitors at the JOC Container Trade Europe conference from 18th – 20th September in Hamburg, Germany.

The BIC supports the international container industry with multiple registration databases and operates the BoxTech Technical Characteristics Database for the industry on a non-profit basis.

For more information about the BIC, visit [www.bic-code.org](http://www.bic-code.org).

*(from: [hellenicshippingnews.com/bic-code.org](http://hellenicshippingnews.com/bic-code.org), September 14<sup>th</sup> 2017)*

## PORTS AND TERMINALS

### **USPA VOLUMES OF CARGO HANDLING FOR THE SIX MONTHS OF 2017 HAVE INCREASED BY 5%**

In January-June 2017, cargo handling in the seaports of Ukraine has amounted to 66.3 million tons, which is 5% higher than the figures for the same period in 2016.

This is evidenced by operational data of the USPA (Ukrainian Sea Ports Authority).

Transshipment of export cargoes at seaports of Ukraine has amounted to 50.9 million tons (an increase of 5.4% compared to similar indicators in 2016), import — 9.4 million tons (an increase of 17.6% from the data for 2016).

The structure of exports has traditionally shown an increase in transshipment of agro-sector products.

This is grain — 19.6 million tons (+ 20%) and vegetable oils — 2.9 million tons (+ 33.8%).

Transshipment indicators of products of the MMC of Ukraine were reduced; thus, the transshipment of metal products has amounted to 7 million tons (-15%), ore cargoes — 11.6 million tons (-8.6%).

The largest increase in the structure of imports is shown by coal, transshipment of which has amounted to 2.6 million tons (+ 41.5%).

This is a perspective and strategic direction, because it is connected with ensuring the energy independence of the country.

In addition, we can note the positive dynamics of the growth of import oil products, which is the result of the achieved intergovernmental agreements with Iran and Azerbaijan.

Transshipment of transit cargo has amounted to 5.3 million tons, which is 1.9% more than the previous year and is about 8% of the total volume of cargo handling.

Almost twice the rates of transshipment of coal transit has increased, due to the attraction of cargo traffic to the Yuzhny seaport.

The transfer of other cargo nomenclature remains at the level of 2016.

The cabotage transit has amounted to 0.6 million tons, which is 61.4% less in comparison with the same period in 2016.

The main reason for reducing the level of this indicator is redirection of ore cargoes to the railway in connection with the restoration of the works at the site «Kamish-Zorya — Volnovaha».

The following ports have shown the largest volumes of cargo handling: Yuzhny



port – 22.1 million tons (+ 7.3% compared to the same period last year), Odessa – 12.3 million tons (+ 5.6%), Nikolaev – 11.4 million tons (+ 6.3%).

The largest increase was recorded in the stevedore seaport «Olvia», it has amounted to 35.2% with a total volume of 3.4 million tons.

Growth of transshipment is noted for almost all types of cargo.

The total volume of bulk cargo handling has increased by 11.4%, amounting to 5.7 million tons.

The total volume of dry cargo was 47.6 tons, which is 8.1% higher than last year's figures for the same period.

Transshipment of containers has amounted to 300 thousand TEU, which is 6.2% more than in the previous year.

Export containers handled 132.9 thousand TEU (+ 4.4%), import – 149.2 thousand TEU (+ 4.9%), transit – 17.8 thousand TEU (+ 38.9%), in cabotage – 0.8 thousand TEU (-17.6%).

During the reporting period, the seaports of Ukraine have processed 5.672 ships, which is 455 units or 7.4% less than in the same period in 2016.

«We state the steady growth of volumes of cargo handling in seaports since the beginning of 2017.

Many factors contribute to this, in particular, the increase of grain exports, and coal imports.

However, we plan to improve the transshipment rates by launching new investment projects, development and construction of new port facilities, dredging and reviewing of port dues.

We expect that these measures will contribute to even greater growth dynamics», — said Raivis Veckagans the head of the USPA.

The information regarding the full overview of cargo turnover for this period in the context of the nomenclature of cargoes, ports, etc. can be found via the link: <http://www.uspa.gov.ua/en/performance>.

*(from: uspa.gov.ua, August 18<sup>th</sup> 2017)*



## MARITIME TRANSPORT

### CONTAINER SHIPPING: SOLID DEMAND GROWTH REDUCES SPOT RATE VOLATILITY

#### *Demand*

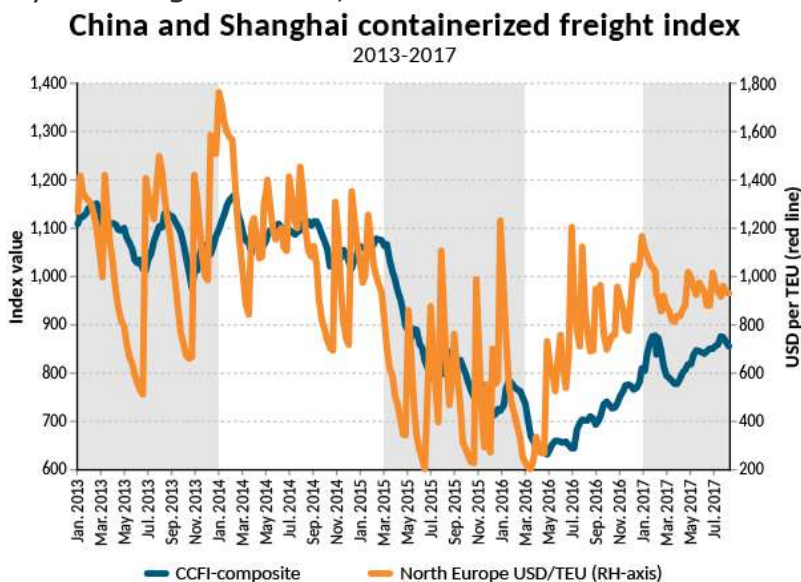
As freight rates are coming back from the abyss, their actual rise seems to be magnified beyond their actual performance.

Some container spot freight rates are up more than 100% from the very low levels of last year, but may still be at a loss-making level now and so spot rates are not the best indicator for market profitability.

The broad-scoped China Containerized Freight Index (CCFI) offers a solid and alternative indication.

The CCFI composite hit an all-time low at 632.36 on 29 April 2016.

By 11 August 2017, it was back at 856.5 and now comparing year-to-date growth, the CCFI is up by 20.7% versus the same period last year.



By contrast, the spot rates from Shanghai into Northern Europe are up 64% year-to-date, year-on-year.

The spot rates for containers bound for the US have gone up by 45-50% over the same period.

It's not only freight rates which have risen this year.

Charter rates left the doldrums and went up sharply in the first four months of 2017, only to slide back down, but during June/July most of the slide had been regained.

The extreme volatility of previous years has been reduced for spot rates on the Shanghai-Northern Europe trade lane.

A sign of improving demand and better market conditions since Q4-2016.

The improved freight rates come on the back of strong demand growth during the first half of 2017.

Combined with steady fleet growth of 1.8% the fundamental balance has improved noticeably.

Global container shipping demand grew by 5% in H1 2017, over the same period last year (source: CTS).

On both the key long front haul trades out of the Far East into Europe and North America, demand grew rapidly by 5.2% and 10.0% respectively (source: CTS).

BIMCO's own data on inbound loaded containers to the US West Coast went up by 5.4% and to the East Coast by 10.6%.

The fastest growing import ports on the East Coast were Houston (+26%) and Savannah (+13%).

While the main port – Port of New York and New Jersey (PANYNJ) grew by only 5.5%, due to very weak imports in February and March.

Growth on the head haul trades is vital, as it pushes utilisation higher where it's most needed, avoiding blank sailings and filling the ships to a larger extent than in recent years.

Head haul trades deliver the higher freight rates, whereas back hauls merely reduce the costs of repositioning the ship.

Moving forward, PANYNJ, should benefit from the early completion of the Bayonne Bridge navigational clearance project.

With the new air draft of 215 feet (65.5m), ships up to 18,000 TEU will now be able to reach the terminal 'behind' the bridge (9,800 TEU was the maximum before the elevation).

This will prompt carriers to optimise their networks once again, as most US East Coast ports have upgraded their terminals in recent years to accommodate the Ultra Large Containerships.

2017 is following the trend seen in 2011-2012 and 2014-2015, of US importers increasingly directing cargo towards the US East Coast ports.

As of 7 August, 182 ships (474,000 TEU) were idled (source: Alphaliner).

As the idle fleet hasn't changed much over the previous three months, demand growth has lifted rates instead of reactivating the unemployed ships.

This is one of the reasons for the improved conditions – the careful handling of supply.

## Supply

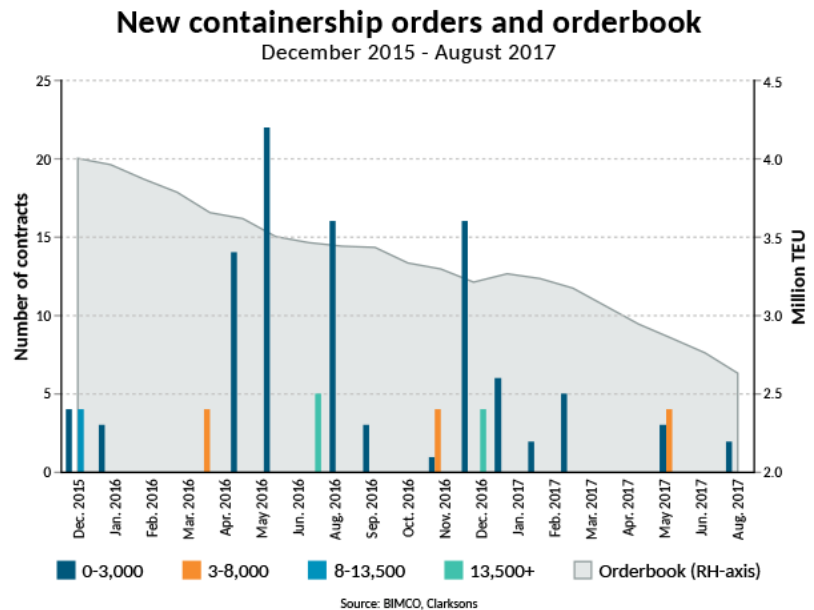
The significant slowdown in demolition comes as no surprise.

The magnitude, however is still striking.

Remember that a lot of container shipping companies are still losing money daily.

But the simple fact that rates have climbed and managed to stay up, means owners shy away from scrapping their ships.

June saw only seven small units sold for demolition (9,639 TEU in total), in comparison to the all-time high level in January where 99,899 TEU (29 units) left the fleet.



This is a drop of 90%.

BIMCO forecast a full year demolition of 450,000 TEU, out of which 306,824 TEU had already been demolished by mid-August.

This is in line with our forecast that sees the second half of the year with continued fleet growth, low demolition activity and a slower demand growth than was seen in the first half.

The final four and a half months will see more Ultra Large Container capacity being launched.

The scheduled order book shows 31 units with a capacity higher than 10,000 TEU, out of which 11 are larger than 20,000 TEU.

BIMCO estimates that up to 25 of these ships will be delivered.

Fortunately, we still see almost no new orders being placed.

Less than 400,000 TEU, have been contracted since December 2015.

This is extraordinary.

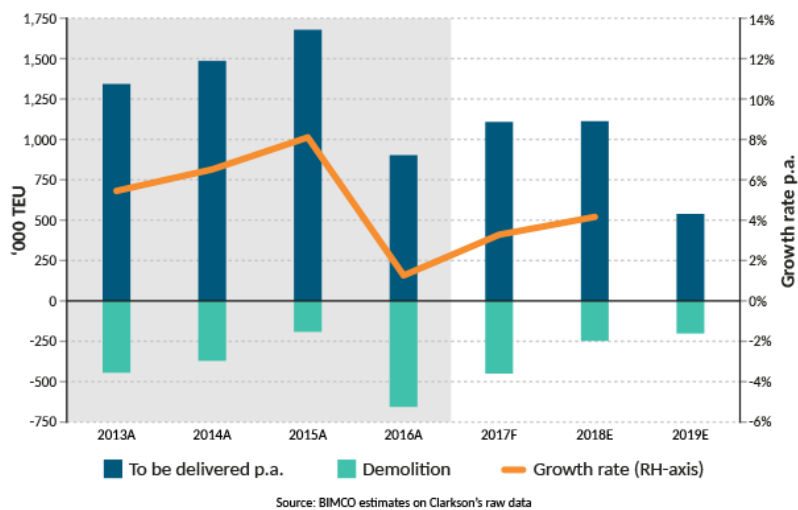
In comparison, July 2015 alone, saw orders for 435,268 TEU placed (50 contracts).

In the same period, the orderbook has come down from 4m TEU to 2.6m TEU.

The lowest TEU-level since 2003.

BIMCO expects that this low level will be difficult to maintain, as optimism in the market combined with hungry shipyards and shipping companies being eager to be top dog is a toxic cocktail.

One year ago, the container shipping fleet surpassed the 20m TEU mark, only to increase demolition and bring it back below this figure.



Now we are back above the 20m TEU mark again, this time for good.

The fleet now holds capacity of 20,356,656 TEU.

Year-to-date, the fleet has grown by 1.8% and BIMCO forecasts that the rate will hit 3.3% for the full year.

665,850 TEU of the new capacity is now active and some 450,000 TEU will be delivered during the remainder of the year.

41 ships with an average size of 14,223 TEU constitute 88% of additional tonnage, ranging from 9,400 TEU to 21,413 TEU.

The latter is the OOCL Hong Kong, which will be joined by four sisters from Samsung HI later this year.

Deliveries scheduled for 2018 are equally biased toward the larger sizes, as the upscaling of network capacity and hunt for lower unit costs continues.

Currently 77 ships with a capacity of 9,400 TEU and an average size of 15,578 TEU will amount to 82% of the new influx.

However, it is anticipated that postponements and delays are likely to impact this schedule.

## Outlook

Since BIMCO's last report in mid-April, the consolidation amongst carriers has continued.

First, the three Japanese conglomerates merged their container lines into ONE (Ocean Network Express), then there was COSCO's takeover of OOCL and in August we saw the formation of the Korea Shipping Partnership (KSP).

Whereas ONE is a merger of business units, at least according to the US Federal Maritime Commission, that had to give a final decision – rejection or approval – to the US Department of Justice; KSP is not.

At least not yet.

It remains to be seen whether KSP can reap the benefits from the partnership which is needed to counter the pressure from harsh competition on its main intra-Asian trade lanes.

BIMCO sees 2015/2016 as the real low point of the present crisis and 2017 is a step in the right direction for the industry.

Demand growth will most likely outstrip supply growth for the second year in a row.

The last time we saw that, was in 2010-2011.

*(from: [hellenicshippingnews.com/bimco.org](http://hellenicshippingnews.com/bimco.org), August 30<sup>th</sup> 2017)*

## RAIL TRANSPORT

### CONTAINER STOP PORT OF ROTTERDAM DUE TO RAILWAY DISRUPTION GERMANY

The Rail Service Center (RSC) of the port of Rotterdam has issued a submission stop of containers with north-Italian cities Busto Arsizio and Novara as a destination.

This is a direct consequence of the disruption on the Karlsruhe-Basel railway line, which will last until the 7th of October.

Alternative routes are only partially available, resulting in backlogs at the terminal.



The RSC rarely issues a submission stop and considers the situation one of the biggest disruptions experienced so far.

On the 12th of August, water and soil penetrated part of the new Rastatt tunnel in Germany.

As a result, the ground subsided and the railway tracks above the tunnel warped.

The consequences for the rail freight sector have been immense.

The Karlsruhe-Basel railway line is part of the important north-south corridor connecting the ports of Rotterdam, Hamburg and Antwerp with Switzerland and Italy.

Alternative routes are only becoming accessible gradually and are subjected to limited availability.

#### *Submission stop*

A customer service representative who wished to remain anonymous confirmed on Monday that the RSC had issued a submission stop on Friday the 25th of August, at 16.30.

"We had looked into the possibility several times and decided to temporarily stop the submission of new cargo with this destination, as the terminal is overloaded", he said.

"It is currently not clear for how long the submission stop will be in place, we are considering the situation on a day-to-day basis.

This week things are starting to move, as more train operators find suitable alternatives.

But it is really up to the operators whether they find a suitable route to take out their cargo."

### *Rare measure*

According to people involved in the rail freight industry, a submission stop is a rare measure for the RSC.

"I cannot recall that a submission stop has been issued during my career.

The RSC is reluctant in taking such measures, as it can damage their reputation.

Moreover, once things are starting to move, a submission stop can cause delays", said Mark Jansen, operational director at Hupac during a webinar about the railway disruptions on Friday, organized by News Agency Transport (Nieuwsblad Transport).

"There must be a really good reason to take such step", confirmed the customer representative at the RSC.

"I think this is the biggest disruption within the rail freight sector I have witnessed so far."

The biggest challenge for the RSC in facing the disruption on the north-south axis is the storage of semi-trailers, an important unit for the rail freight industry in this direction.

"Semi-trailers cannot be stored on top of each other, and it is especially this unit that is important for the market", he explained.

### *Financial damage*

Due to the submission stop the terminal faces losses of millions of Euros.

"We transport around 4,500 units per week, but we are missing out on maybe twenty per cent right now.

Each transfer that we miss is a bill.

I cannot speak of our losses in numbers just yet, but there is serious money involved”, the terminal employee revealed.

Currently, the RSC is among several parties seeking compensation for the losses, a process which is due to take time as the options are not yet fully clear.

Hans-Willem Vroon of RailGood, a Dutch railway lobbyist recommended parties to make up their loss claims and discover these options.

### *Compensation*

Deutsche Bahn commented that several short-term measures for railway undertakings are already offered, but did not elaborate on the payment of damage claims.

“Diversions are governed by what is known as the “cheapest train-path” principle, i.e. the railway undertakings pay for the train path which would have been cheapest, even if the diversion that is used is more expensive”, the railway company said.

Furthermore, no cancellation fees are charged by the company, customers who wish to switch train paths do not pay for the change and no charges are levied if customers have to use service facilities (stations etc.) on a diversion route or one of the six diesel tender engines for the Tübingen-Horb freight diversion route.

*(from: railfreight.com, August 29<sup>th</sup> 2017)*



## ROAD TRANSPORT

### PLATOONING TRIALS FOR UK

Road tests led by TRL are expected to take place during 2018.

The Department for Transport (DfT) and Highways England have commissioned TRL (Transport Research Laboratories) to lead the first real-world operational trial of platooning vehicles on UK roads.

The £8.1M trial will see TRL lead a consortium of partners including DAF Trucks, the UK market leader in HGV sales, Ricardo, which worked with TRL to deliver the HGV Platooning feasibility study for the DfT in 2014, and logistics giant DHL.

DAF and Ricardo were part of the EcoTwin consortium that performed platooning trials in the Netherlands last year.

The UK on-road trials will form part of regular DHL logistical operations and are expected to take place in 2018, "following the successful completion of a rigorous programme of driving simulations, driver training and test track trials over the coming months," says TRL.



The ultimate aim of platooning is to allow one driver to perform two or three drivers' work, producing major cost savings and addressing the long-distance driver shortage problem.

However, drivers will be needed when the trucks enter or exit the motorway, so a whole new infrastructure would need to be developed, as well as hundreds of miles of "smart" motorways.

Many commentators in the UK take the view that the trials are pointless, because Britain's highways are so congested.

However, platooning could take place in night time hours when the roads are much quieter.

In the short-term, close formation makes for:

- better use of road space, as the following truck(s) can be safely run much closer to the lead truck
- less "blocking" by HGVs – all motorists are familiar with HGVs running seemingly parallel across two or even three lanes as they overtake at 1-2 mph faster than the slower truck(s). This is a major cause of tailbacks
- "drafting" by the lead truck saves fuel consumption by the following trucks. TRL did not respond to worldcargonews.com's request for an estimate of fuel savings.

In the US, platooning is being researched as a way to gain fuel savings due to reduced aerodynamic drag.

According to NITL, New Mexico officials are working with platooning developer Peloton Technology (this is a neat name! In a cycle peloton, second and third wheel can go at the same speed as first wheel for 20-25% less effort, crosswinds permitting!).

In Texas, the Department of Transportation is working with the the Texas A&M Transportation Institute (TTI) to explore regulations related to truck platooning, as well as the many technical concerns around large freight vehicles closely trailing each other.

"So we're defining kind of acceptable corridors for platooning," said Mike Lukuc, a researcher in connected and automated transportation at TTI.

"Now what the Texas Department of Transportation does with those [corridors] we don't know.

As a practical matter, truck-platooning will probably work best on relatively flat, divided, multi-lane highways in rural areas," Lukuc is quoted by NITL.

*(from: worldcargonews.com, August 30<sup>th</sup> 2017)*

## INTERMODAL TRANSPORT

### RZD LOGISTICS INTERMODAL TRAFFIC GROWS IN FIRST HALF

Amidst continuing rises in China-Europe intermodal rail freight traffic, RZD Logistics and its sister company Far East Land Bridge reported a 1.8% year-on-year increase in overall intermodal traffic in the first six months of 2017.

In total, the operator transported 63,200 TEUs, including 55,900 TEU transit shipments between China and Europe.

This equates to 30.5 million tonnes of freight, an increase of 5% year-on-year.

The company also reported a 37% increase in revenues to Roubles 15.1bn (\$US 257.5m) in the first six months of 2017, and an operational profit of Roubles 1.375bn, an increase of 33%.

RZD Logistics was founded in 2010 as part of the development of the logistics business of Russian Railways (RZD).

It has 33 branch offices in Russia and now operates rail freight services on the



three China - Russia - Europe corridors: at Dostyk for traffic passing through Kazakhstan; Naunshki for the route through Mongolia; and Zabaikalsk for direct China - Russia trains.

RZD Logistics reports that the most popular routes during the first half of the year were: Brest - Zabaikalsk; Chongqing -

Duisburg; Chengdu - Lodz; Suzhou - Warsaw; Duisburg - Chongqing; and Changsha - Warsaw.

The company also reports substantial improvements in less-than-container load (LCL) and less-than-truck-load (LTL) traffic.

Volumes increased by 85% year-on-year to reach 140,000 tonnes in the first half of 2017.

In addition the number of processed orders also grew by 15% to 13,000.

*(from: railjournal.com, August 30<sup>th</sup> 2017)*

## TRANSPORT & ENVIRONMENT

### MAKING HEADWAY INTO ALTERNATIVE FUELS

The successful outcome of an innovative project depends very much on the parties involved and in the case of the LPGreen design concept, Kostas Vlachos, COO of Consolidated Marine Management (CMM), believes the mix is perfect.

“The LPGreen project could not have happened at a better time.

With 2020 fast approaching, the shipping industry will have to make the right decisions in regard to the proper option and avoid spending a lot of money unnecessarily to meet the new regulations coming over the horizon.

This concept of LPG carriers offering the efficient option of burning LPG is new.

Nothing like it has been developed in the past,” says Vlachos.

He should know.

Athens-based gas carrier owner and operator CMM, a company of Latsco Shipping, is one of the four industry leaders partnering to develop the LPGreen concept design.

By contributing the expertise of a ship operator, CMM is key to the project.

#### *Rapid progress*

Apart from CMM, the partners to the LPGreen concept design project include the shipyard Hyundai Heavy Industries (HHI), the cargo handling systems manufacturer Wärtsilä Oil & Gas (WAR), and DNV-GL as the classification society.

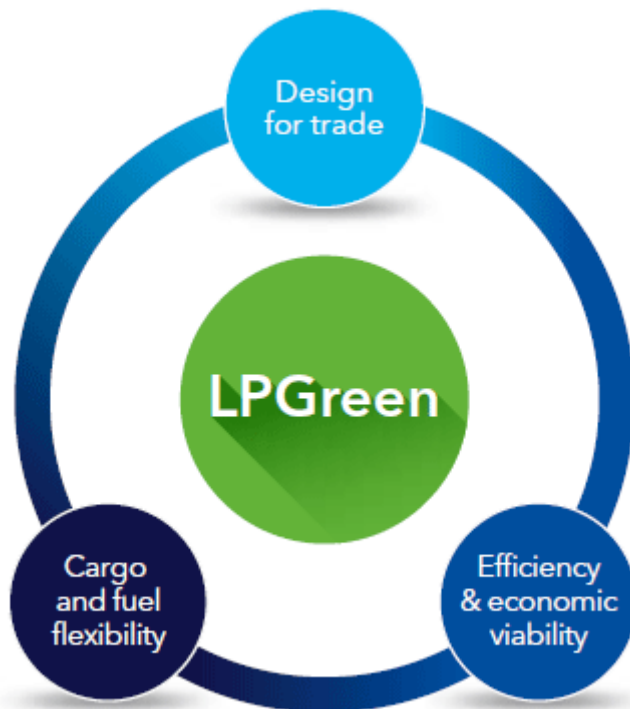
Seeking to develop a safer and more energy-efficient, environmentally friendly and competitive vessel for the transport of LPG products, the project utilizes the latest advances in machinery technology, ship design and operational experience.

Within the bounds of existing shipbuilding methods it pursues the clear target of arriving at an LPG carrier concept design that can be ordered and built immediately.

Vlachos, a former chairman of Intertanko's powerful Hellenic Mediterranean Panel, is a member of Intertanko's executive council, its safety and technical committee (ISTEC) and its chemical committee.

He says the idea for the concept of using LPG as a fuel was first voiced several years ago.

The project took shape in November 2015 when the partners formally agreed to cooperate, with the actual project work launched in May 2016.



The LPGreen project pursues five main objectives: use LPG as a fuel; develop a highly fuel-efficient vessel; increase load rates to spend less time at terminals; and, most importantly, give utmost attention to both safety and an ergonomic arrangement of machinery to improve the safety of the ship personnel as well as ship operability.

Almost a year into the project, the partners agree the results to date have been good.

The goal is ambitious, and with the highly valuable contributions of HHI and cargo handling system provider Wärtsilä Oil & Gas, the primary targets have been achieved: the new design will enable savings of five per cent to nine per cent in total consumption for all stages of operation (loading, discharging as well as sailing in laden condition and under ballast, including chilling and maintaining pressure), compared with the reference design, a conventional VLGC built by HHI.

CMM and HHI have been enjoying a strong working relationship since HHI began building gas carriers for the Greek operator at the South Korean yard in 2002.

CMM embarked upon this project with a focus on finding a practical, energy-efficient design that is both competitive and safe, "with the safety aspect at the top of the list," says Vlachos.

"Any concept which is not safe is of no use to anyone," he argues.

### *Safety tops the list*

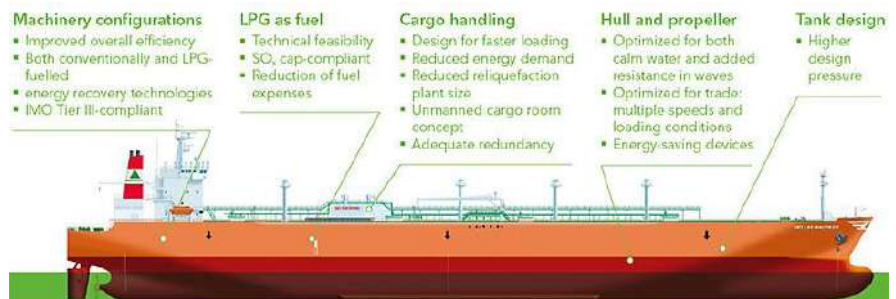
George Dimopoulos, Principal Specialist for R&D and Advisory, DNV-GL South East Europe & Middle East Region, who manages the LPGreen project, says CMM's operational experience provided invaluable insight into the design aspects.

"CMM collaborated very actively and closely with DNV-GL on most of the safety aspects, a very important concern for the entire project," he stresses.

"About half of the project's roughly 130 new ideas and vessel features involve safety criteria."

Intensifying environmental pressure is driving energy efficiency improvements across the shipping industry.

As the LPGreen concept matures, it will allow LPG-fuelled LPG carriers to become a reality, says Vlachos.



The results obtained so far are encouraging:

"We have a steady baseline," he says, "since the vessel the project is based on is CMM's own 54,400 dwt, 84,000 cbm VLGC Hellas Gladiator built in 2016.

She is a modern and very efficient ship so all results of our project are true achievements."

Summarizing the project status, George Dimopoulos says the design concept is technically feasible, competitive and practicable.

"Comparisons with the reference ship demonstrate that the concept improves overall efficiency by up to nine per cent, reduces energy demand for the cargo handling system by up to six per cent, potentially cuts loading times by up to 35 per cent, and reduces fuel costs through the use of LPG fuel by up to 30 per cent," he points out.

Being able to draw on the extensive experience and competence of DNV-GL in the LPG shipping sector as well as the classification society's advanced analytical tools has enabled this consortium of international industry leaders to create an innovative ship concept with tangible improvements for the project partners.

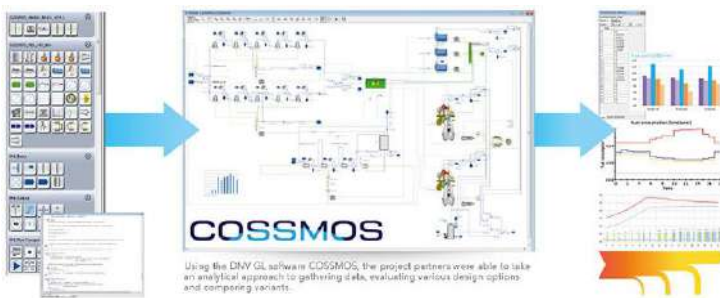
The project has utilized the latest advances in machinery technology, ship design and operational experience within the bounds of existing shipbuilding methods.

The contribution of the DNV-GL computer modelling tool COSSMOS has been greatly appreciated: "COSSMOS allowed the project to take an analytical approach to data gathering and evaluation.

Various options were compared, and the whole project proceeded in a highly professional, focused way towards the main goal: a design concept for a more energy-efficient VLGC operating on LPG," says Vlachos.

He believes this is the first time the complete cargo, auxiliary and propulsion machinery was modelled, simulated and optimized for a full operating profile, and the COSSMOS application made this possible.

"The role of this and other advanced technologies in identifying the best solutions for the industry is finding more wide-spread recognition," he points out.



"There is no doubt today's computational methods speed up the development process considerably, enabling us to examine the numbers and reach

conclusions faster."

### *Promoting the concept*

Vlachos also notes that LPGreen is an international project in which Greek shipping has taken a leading role, working closely with other leaders across geographies and coordinated by the Piraeus office of DNV-GL.

CMM's COO says shipowners and their customers should be made aware of the concept as the industry is considering using LNG as a ship fuel.

"But on an LPG carrier, that is not the best option," he emphasizes.

"I believe LPG ships burning LNG are not the right idea to pursue, since LPG is already available on board LPG carriers and adding a second gas fuel (LNG) will add to the overall complexity.

Rather, the market should discuss the LPGreen concept, and by the market I mean all the players, from owners, charterers, clients, to shipbuilders, equipment makers and bodies such as Bimco, SIGTOO and Intertanko.

They all should promote the idea of burning LPG rather than natural gas and formulate the proper clauses in charter parties for that purpose, because this involves a complex set of regulations.



In fact, the concept is a legal matter that should be addressed as soon as possible.

Until now nothing has been done on this front, and time is moving fast.”

This is a good time to promote a new design concept as ship newbuilding prices are reasonable, Vlachos points out.

Until all parameters are clear and all questions answered, CMM will hold off on ordering a new ship, however.

“We have always wanted to lead the way but have to wait and see what happens in the coming months, but I expect market pressure to speed up acceptance of the LPGreen concept design,” he says.

The far-reaching deviations from traditional designs will make the LPGreen concept attractive, he believes, not only in terms of the type of fuel burned by the main engine but also the changes affecting the cargo reliquefaction plant.

Meanwhile, Wärtsilä is proposing a new configuration with only two redundant cargo compressors instead of the typical three.

Further efforts are needed to make charterers aware of the innovative features of the LPGreen design regarding bunker capacity as well as loading and discharging procedures, Vlachos adds.

“Charterers in particular have to be brought up to speed about the development since increased capacity and reduced time spent in terminals is of great interest to them, along with the significant reduction in fuel consumption during all stages of operation.

Besides, it is simply necessary to have the charterers on board.”

The LPGreen concept offers great benefits to VLGC owners and operators.

“Now it is up to us to convince the Asian market to follow.

The concept is a revolution compared to the classical designs.

It secures a lot of energy savings and safety advantages.

It opens the road into the future, and that is what we at CMM have chosen as our mission.”

The decisive factor that has made this truly innovative and practicable concept possible is close collaboration of representatives of all key industry segments — builders, vendors and class.

“All the partners in this project have given their best, offering their knowledge and experience from their respective sectors,” Vlachos emphasizes.

*(from: hellenicshippingnews.com, September 12<sup>th</sup> 2017)*

## LAW & REGULATION

### **EU UNVEILS ITS VISION FOR A NEW, AUTONOMOUS ERA IN SHIPPING HISTORY**

Violeta Bulc, the European Commissioner for Transport, this week outlined the clearest vision yet that the EU has for the development of autonomous shipping in the bloc, and warned executives and workers alike that job roles would fundamentally change as a result.

At a seminar on autonomous shipping at the European Parliament in Brussels, Ms Bulc described the creation of autonomous vessels as one part of a wider platform of “a fully integrated multimodal network”, which would see the end of an era in which transport systems have developed in mode-by-mode silos with their true cost to society and the environment often hidden.

“A fully integrated transport system will be highly automated and therefore safer and more efficient.

Users, the infrastructure and the cargo will be connected to each other.

Data will allow us to manage capacity better, be it a road, a container or a parking lot.

In such a system, an autonomous vessel will arrive in port and, thanks to the internet of things, the cargo itself will be aware where it needs to be and by when.

Trains will no longer leave ports half-empty and the cargo will arrive at its destination on time and in perfect condition, having produced much less CO<sub>2</sub>, air pollution, noise and accidents than would be the case today,” she said.

She admitted, however, that this was a “perfect scenario”, and called for patience from regulators in reducing the environmental cost of transport.

“But one thing is certain,” she added, “the day of thinking in vertical silos is gone.

When it comes to transport, we have got to think in terms of eco-system.”

She recognised this would lead to huge changes to workforce, adding that certain jobs “that we have not even thought about yet” were set to be created, and predicted it could mean the end of traditional seafaring roles.

“People working in the sector will be impacted.

I don’t foresee job losses, but I do foresee job changes.

The transition will require new, innovative skills, making the sector more attractive for the younger generation.

In future, the sector will offer a wider variety of opportunities.

There will be different business models that the future autonomous shipping industry will have to create.

In this new model, there will be a shift from on-board to on-shore employment,” she explained.



Cyber-security was another huge challenge, she said – a large number of companies in the sector having already been hit by cyber-attacks – and the potential for widespread damage enormous.

She said: “20% of shipping companies have admitted having suffered cyber-security incidents/attacks, but the number of cases could be much higher in reality – companies don’t want to publicly admit it.

Delays due to cyber-attacks are one thing, but deliberate crashes are quite another.”

She claimed that the EU would look to move the development of the technology up its agenda, particularly with China so ambitious in the sector, and hinted that regulators would need adopt a relatively light touch in their approach to new shipping structures.

“We will have to think about how to regulate new ownership structures, where sharing of resources among operators becomes more and more common.

Ports will become truly integrated clusters for industry and transport.

But who will pay for the infrastructure, and how will these costs be recouped?

We see the challenges in relation to the so-called sharing economy with platforms such as Air BnB and Uber – this is likely to be an even bigger challenge into the future.

While we will have to regulate to some extent, we must also get the balance right so as to encourage innovation,” Ms Bulc concluded.

*(from: theloadstar.co.uk, September 8<sup>th</sup> 2017)*

## PROGRESS & TECHNOLOGY

### BLOCKCHAIN PILOT DECLARED A SUCCESS

In the wake of the recent malware attack on Maersk Line, Marine Transport International (MTI) is hopeful a successful pilot using blockchain technology to send a VGM record will spark interest in using blockchain across global shipping.

The project connected supplier, shipper, load point, customs and terminal on a shared blockchain ledger used to manage a VGM record.

“In the pilot, VGM information was captured at a load point by MTI’s SOLAS VGM application, recorded on the dedicated blockchain, and given a unique ID.

It was instantly confirmed back to the load point and validated for provenance (tying the data to the geographical location of the weighbridge).



Finally, a data message was submitted using the EDIFACT format over SFTP to the shipping portal INTTRA for further relaying to the shipping lines.

This was achieved instantly.

Conducted normally, the whole process would require significant uploading and reformatting of data, often manually, to achieve the same result,” UK-based MTI stated.

The results of the pilot have been verified and reported in a white paper by the University of Copenhagen and Blockchain Labs for Open Collaboration (BLOC).

Jody Cleworth, CEO of MTI, said: “The results of this successful pilot demonstrate the strengths of blockchain technology when deployed to link the various actors in the supply chain.

We are confident that firms throughout the logistics industry will see a broad spectrum of benefits stemming from blockchain deployment”.

“The blockchain has proven to be an excellent way of connecting the different parties involved in any supply chain environment due to the transparency and security-by-design of the technology,” Cleworth added.

MTI is hoping the recent cyber attack that impacted Maersk Line will drive interest in blockchain in the shipping industry.

“A blockchain-enabled supply chain is highly resilient to cyber-attack – a copy of the essential shipping data is stored on each node on a decentralised network, meaning that even if one node is compromised, the data is safe nevertheless,” said Cleworth.

The company is also focusing on cost savings generated by blockchain, which it envisages “are as high as 90%”.

Karim Jabbar, co-author of the paper, from the Department of Computer Science at the University of Copenhagen, added: “This pilot demonstrates the great potential for distributed ledger technologies to be used in improving supply chain processes.

The Container Streams system is unique in the fact that it does not require the complete replacement of existing systems - instead, MTI’s solution allows complete interoperability with existing legacy infrastructure.

The logistics industry as whole can expect better visibility, connectivity and cost savings as a result of distributed ledger adoption.”

Deanna MacDonald, CEO of Blockchain Labs for Open Collaboration said: “We have documented the first phase of this use case, its implications for the maritime industry and the resulting development of a turn-key application ecosystem for global supply chain logistics.

However, the future potential of this ecosystem platform will rest upon collaboration from the different actors in these supply chains in order to clearly identify the problems and co-create applications that solve for the collective challenges they are facing today.”

*(from: worldcargonews.com, August 31<sup>st</sup> 2017)*

## STUDIES & RESEARCH

### CONTAINER SHIPS LOWERED EMISSIONS BY 2.4% DURING 2016

BSR's Clean Cargo Working Group (CCWG) announces the release of its 2016 Global Maritime Trade Lane Emissions Factors report, based on emissions reported by more than 3,200 ships from 22 of the world's leading ocean container carriers that represent 87 percent of the global ocean container shipping industry by volume.

The data show that the industry improved performance of greenhouse gas emissions by 2.4 percent (per TEU-km) from 2015 to 2016, a lower rate of improvement than in previous years.

This highlights that performance continues to improve but demonstrates the



critical importance of collaboration and collective action to enable shipping to contribute to global emissions reductions targets.

This was also the first year that 100 percent of carriers included in the emissions factors were verified using the CCWG

procedure and guidance for verifying CO<sub>2</sub> and SO<sub>x</sub> data.

The Clean Cargo Working Group has also reached a major milestone of 50 corporate members.

The group now includes 22 container carriers and 28 of this industry's largest customers—both global brands and freight forwarders.

APL Logistics, CEVA Logistics, EFL, Expeditors International, LF Logistics, Panalpina Management Ltd., Philips Lighting, and SAT Albatros all joined in 2017.

The list of all group members can be found here: <https://www.bsr.org/en/collaboration/groups/clean-cargo-working-group>.



“Partnerships along the value chain are key to truly conducting business sustainably.

In joining CCWG, we join a group of peers dedicated to accelerating sustainability in the container shipping industry,” said Nicola Kimm, Head of Sustainability, Environment, Health & Safety at Philips Lighting, one of the new shippers to join in 2017.

“Furthermore, we gain access to reliable and accurate data on individual carrier performance, enabling us to make better informed procurement decisions and drive down carbon emissions of our logistics.”

The group continues to foster environmental performance innovations for the sector, such as a pilot by members Electrolux and Hamburg Sud to reduce pollution in ports.

CCWG has also kicked off a materiality assessment to prioritize the most critical social, ethical, and environmental impacts industrywide that will help CCWG to set a vision for 2030 and a three-year agenda.

“CCWG provides so much more than relevant, credible data; they are also the forum to work collaboratively with our supply chain and other buyers to make progress toward the Electrolux ‘For the Better’ sustainability framework,” said Tomas Dahlman, Director, Global Energy Strategies for Electrolux.

“The group works on several innovative initiatives that enable us and the shipping industry to work more sustainably.”

BSR is a global nonprofit organization that works with its network of more than 250 member companies and other partners to build a just and sustainable world.

From its offices in Asia, Europe, and North America, BSR develops sustainable business strategies and solutions through consulting, research, and cross-sector collaboration.

*(from: hellenicshippingnews.com, September 7<sup>th</sup> 2017)*

**REEFER****SCHENKER BEEFS-UP SERVICES IN CHINA AS DEMAND FOR FRESH FOOD SOARS**

DB Schenker is ramping up its cold chain operations in China, as fresh food demand soars across the country.

Earlier this month the multinational 3PL signed a partnership deal with Sichuan JiuYe, a B2B food trading company based in Chengdu, western China.

Schenker's north and central China chief executive Thomas Sørensen said the agreement was a milestone in developing the company's perishable business, and followed the successful handling of the trader's fresh fruit shipments by air freight out of Sichuan to Moscow, Singapore and Hong Kong.

"We took care of the goods' appropriate packaging according to the standards of the importing countries, the on-carriage to the airport by truck and the transport by air freight to the final destinations," he told The Coolstar.

"Currently, we are preparing air charter import shipments of fresh cherries for the food trader from Australia and New Zealand."

Schenker is developing its integrated logistics solutions in China, which currently comprise domestic trucking; contract logistics for temperature-controlled warehousing; air and rail exports to Russia and Eastern Europe; and imports from Australia, North America and Europe.

There are several commodities driving China's record cold chain growth, according to Mr Sørensen.

For example, China's fresh fruit import volumes have grown 20% year-on-year since 2014 and meat imports reached record levels last year, with Australia, Brazil and Uruguay the leading suppliers.

"Soon the US could catch up as the import ban on US beef, imposed in 2013 due to BSE outbreaks, was recently lifted," Mr Sørensen added.

He said dairy product imports was another strong trend, with demand for milk powder continuing to rise due to China's second-child policy last year.

China is also the world's largest exporter of fish and seafood products, due to its extensive processing and re-export segments, he noted.

Imported raw seafood is processed in China and re-exported to countries including US, Japan, Korea, and Europe.

With fresh cargo demand booming, the requirement for reefer containers is skyrocketing, as shippers look to utilise multimodal transport to lower costs and shorten transit times.

"The demand for reefers to transport temperature-controlled goods is growing remarkably and is expected to boost the container fleet market over the next few years.

They are also increasingly used to store goods temporarily when there is a lack of warehouse facilities at a destination," Mr Sørensen explained.

Indeed, he said, the biggest challenge for China's perishable logistics industry is the lack of cold storage capacity, refrigerated trucks and retail refrigeration space, resulting in food contamination, waste and spoilage.



Finding appropriately skilled labour is another hurdle logistics providers face.

"It is difficult to find qualified professionals who are familiar with the cold chain operation procedures in China as well as with respective international trading rules," Mr Sørensen noted.

Meanwhile, refrigerated rail freight between China and Europe is becoming increasingly popular.

As a pioneer of the so-called New Silk Road rail routes traversing Eurasia, Schenker said some 40,000 containers moved by train between Asia and Europe last year and volumes could increase to 100,000 containers by 2020.

"Rail freight is particularly convenient for the transport of perishables as the use of reefer containers is common.

In addition, our rail routes run along the new Silk Road from China to Europe, Russia and the CIS countries – China’s focus countries for perishable trade,” said Mr Sørensen.

*(from: theloadstar.co.uk, August 25<sup>th</sup> 2017)*

## ON THE CALENDAR

- 18/09/2017 – 20/09/2017     Hamburg     JOC Container Trade Europe
- 28/09/2017 – 29/09/2017     Tallinn     Baltic Sea Ports & Shipping 2017
- 03/10/2017 – 04/10/2017     Las Palmas     ICHCA Conference
- 05/10/2017 – 06/10/2017     Las Palmas     ICHCA ISP Technical Panel & CARC Meeting
- 26/10/2017 – 27/10/2017     Barcelona     5th MED Ports 2017
- 29/11/2017 – 30/11/2017     Abidjan     18th Intermodal Africa 2017
- 24/01/2018 – 25/01/2018     Mauritius     12th Indian Ocean Ports and Logistics 2018
- 07/03/2018 – 09/03/2018     Padova     Green Logistics Expo
- 28/03/2018 - 29/03/2018     Beira     19th Intermodal Africa 2018
- 18/04/2018 - 19/04/2018     Livorno     6th MED Ports 2018
- 30/05/2018 - 31/05/2018     Varna     7th Black Sea Ports and Shipping 2018
- 04/07/2018 – 05/07/2018     Johor     16th ASEAN Ports & Shipping 2018
- 26/09/2018 – 27/09/2018     Riga     2nd Baltic Sea Ports & Shipping 2018
- 24/10/2018 – 25/10/2018     Aqaba     15th Trans Middle East 2018
- 28/11/2017 – 29/11/2018     Accra     20th Intermodal Africa 2018
- 30/01/2019 – 31/01/2019     Kuwait City     16th Trans Middle East 2019
- 20/02/2019 – 21/02/2019     Manila     10th Philippine Ports and Shipping 2019
- 20/03/2019 – 21/03/2019     Mombasa     21st Intermodal Africa 2019

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