



Newsletter

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Link road, rail, sea!

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PORTS AND TERMINALS

CONTINUING CONTAINER GROWTH PUSHES THROUGHPUT AT PORT OF ROTTERDAM TO A NEW HIGH

At 469.0 million tonnes, the port of Rotterdam's total throughput volume ended up slightly higher in 2018 than in 2017, which was itself a record year (467.4 million tonnes).

Container transshipment was the engine of growth again, with a 4.5% increase in tonnage.

Measured in TEUs, the standard unit for containers, the increase was 5.7% and the annual total was 14.5 million TEUs – also a record.

This strengthens the position of Europe's largest container port in this strategically important market segment.

Significant underlying shifts were observable in the goods segments.

Whereas container transshipment continued to grow at a healthy pace, that of crude oil, mineral oil products and agribulk fell.

Throughput of LNG (+163.6%) and biomass (+31.6%) saw a further spectacular rises last year.

For the Port of Rotterdam, 2018 was marked by a high level of investment.

Gross investments rose 91% to € 408.1 million (2017: € 213.8 million), the highest amount since the construction of Maasvlakte 2.

By far the largest part of this amount was used to further improve the logistical accessibility of the port of Rotterdam, for example by constructing the Container Exchange Route on the Maasvlakte, the Princess Amalia Viaduct and relocating the port railway via the Theemsweg route.

Also, the Port Authority's internationalisation strategy was given a significant boost in 2018 by the acquisition of a minority stake in the Brazilian port of Pecém.

At least as important as this economic contribution is the social contribution that the Port Authority makes to the improvement of the living environment.

We contribute to safety in the port, both through physical infrastructure such as security cameras and in terms of resilience against cyberattacks.

The Port of Rotterdam Authority is committed to drastically reducing CO2 emissions in order to help achieve the ambitious national climate target.

We want to play a pioneering role and make the port an inspiring example of human capital, so that the Rotterdam port and industrial area will still be making a substantial contribution to Dutch prosperity and employment in 2050.



One important employment initiative introduced recently is the Leer Werk Akkoord.

This joint scheme involving the Port Authority, the municipality, educational institutions and the

business sector offers real jobs for the long-term unemployed in the Rotterdam-Rijnmond region.

An attractive business climate is essential if the port of Rotterdam is to continue contributing to prosperity and well-being in the Netherlands in the future.

Liquid bulk

With the exception of LNG, liquid bulk recorded lower throughput volumes in all subcategories last year.

The throughput of crude oil decreased slightly, due in part to somewhat lower refining margins.

Even so, remarkably, throughput exceeded 100 million tonnes for the fourth year in a row.

The throughput of mineral oil products fell mainly as a result of less fuel oil coming into and leaving the port.

The huge increase in LNG throughput (+163.6%) was mainly caused by transshipments of LNG, originating from the Yamal field (Northern Russia), from ice-class LNG tankers to 'normal' LNG tankers, which then transported the cargo onwards to Asia and elsewhere.

Dry bulk

Despite the market being under considerable pressure, the dry bulk segment showed only a slight downturn in throughput (-3%).

In the coal subcategory, the consolidation strategy that is being used appears to be working well for Rotterdam: throughput rose by 2.3%.

Thermal coal remained at the same level as the previous year.

The throughput of coke coal rose thanks to success in attracting cargo packages for Germany.

Iron ore throughput fell in 2018, among other reasons due to the renovation of a blast furnace and because of stagnating demand from the steel industry.

The fall in agribulk throughput in Rotterdam was partly caused by the shift of cargo packages to Amsterdam.

Containers

Container transshipment saw a further strong increase in 2018, as a result of which market share was gained in the Hamburg-Le Havre range.

A key factor in the increase in 2018 was the growth in numbers of transshipment and full import containers.

Container exports developed less strongly, partly due to Chinese import restrictions on waste flows.

The shortsea segment suffered from slowdowns in the British and Russian economies.

Roll on/roll off and other breakbulk

In RoRo transshipment too, which ended the year slightly up, the British RoRo trade showed less growth, probably due to the effects of Brexit uncertainty on the British economy.

The transshipment of other breakbulk cargo was around the same as the volume in 2017.

Port Authority's financial results

The Port of Rotterdam Authority recorded turnover of € 707.2 million in 2018 (2017: € 712.1 million).

On the income side, both port dues and lease revenue fell.

The net result excluding taxes amounted to € 254.1 million (2017: € 247.3 million) mainly as a result of lower interest charges.

Site lease charges, the largest revenue item, decreased by 0.9% to € 373.7 million.

This decrease reflects a one-off gain in 2017 due to a price revision with retroactive effect.

Income from the port dues paid by ships when they visit the port fell 0.5% to € 302.4 million, due to an increase in the discounts granted.

Other income came to €31.1 million (2017: € 30.9 million).

Operating expenses rose 2.6% to € 267.8 million, mainly due to the increase in activities relating to the two strategic priorities: Energy Transition and Digitisation.

In line with existing agreements, the Port Authority proposes that a € 96.5 million dividend (+38%) be paid to the shareholders – the municipality of Rotterdam (70.83%) and the State (29.17%) – for 2018: € 68.3 million to the municipality and € 28.2 million to the State.

Outlook

The Port Authority expects throughput volume to increase slightly in 2019, with container sector growth being lower than the exceptional levels seen in previous years.

The Port Authority is implementing a 'both-and' strategy: strengthening the existing port industrial complex and at the same time embracing new initiatives in the fields of energy transition and digitisation.

Partly because of this, we also expect high investment levels in the years ahead.

The port's future earning capacity is characterised by robust growth opportunities, according to recent research by Erasmus University.

However, the port industrial complex will need to evolve.

The research also points to the tremendous significance of the Port of Rotterdam for the growth of the Dutch economy.

For example, the port accounts for 6.2% of gross domestic product and creates employment for 385,000 people.

Both of these core findings underline the relevance of Mainport Rotterdam.

For a detailed picture of throughput 2018, see:

<https://www.portofrotterdam.com/sites/default/files/throughput-port-rotterdam-2018.pdf>.

(from: portofrotterdam.com, February 14th 2019)

MARITIME TRANSPORT

MAERSK REVENUES RISE DESPITE SLOW DEMAND GROWTH

Underlying profit at Maersk's continuing operations slipped to \$220m in 2018, down from \$356m in 2017, as container market growth slowed to 3.7%, below the 4% forecast by the company at the beginning of last year.

"Supply growth remained high at the beginning of the year, reflecting the many new vessels entering the market as well as the low levels of idling and the scrapping of older vessels, which led to declining freight rates in the first two quarters of 2018," Maersk said.

"Market fundamentals stabilised in the second half of 2018, as effective supply growth tapered off and freight rates began to increase, and industry profits picked up in the third quarter from subdued levels in the first half of 2018," the company added.

"Profits were negatively impacted by the increase in bunker costs, and which were not fully compensated for by increase in freight rates."

Maersk warned that the moderation in container demand growth in 2018 mirrored the slowdown in global macroeconomics and global export orders.

"The main risk to global container demand relates to a further cyclical slowing of the global economy," Maersk said.

"Emerging markets are particularly vulnerable to fluctuations in the US dollar and to economic developments in the US via their financial leverage.

Moreover, a further escalation of the international trade tensions carries a significant risk to global trade."

The world's largest container line reported that revenues rose to \$39bn for the year.

Its ocean segment saw revenues rise 29% to \$28.4bn on the back of increased volumes from its Hamburg Süd acquisition and a 1.9% increase in average freight rates to \$1,816 per feu.

Without the Hamburg Süd contribution, revenues would have been up just 5.8% to \$22.7bn.

“Although we had a challenging start to 2018, looking at our financial performance, we increased earnings despite significantly higher bunker fuel prices and lower than expected container volume growth in the second half of 2018,” said chief executive Søren Skou.

“However, profitability needs to improve.”

Net profit including discontinued operations came in a \$3.2bn, reversing a loss of \$1.2bn in 2017.

This was boosted by the closing of the Maersk Oil sale in 2018 and impairments applied to Maersk Drilling in 2017.

But Mr Skou said that the company had been able to reduce costs through its new structure.

“During 2017 and 2018, we realised more than \$300m in savings by harvesting synergies across business segments mainly driven by closer collaboration between our Ocean segment and gateway terminals, further optimisation of our terminals and improved planning and utilisation of manufacturing capacity,” he said.



The acquisition of Hamburg Süd and consolidation of the two lines had delivered network and the operational synergies, he added.

“Aside from the benefits to the network, the acquisition has also enabled further utilisation of the terminals and benefits from joint procurement.

Since the acquisition, we have realised \$420m in synergies from Hamburg Süd and the expectation of synergies was therefore revised to a minimum of \$500m by the end of 2019, from previously \$350-400m.”

Separately, Maersk announced it had begun the demerger and separate listing process for Maersk Drilling, which it announced last August.

Shares in Maersk Drilling Holding and its subsidiaries, as well as certain other assets and liabilities will be contributed to a new company with the legal name The Drilling Company of 1972 and the shares will be admitted for trading and official listing on the Nasdaq Copenhagen exchange.

Maersk said it would seek shareholder approval for the demerger at its annual general meeting on April 2, with the publication of demerger documents due on March 4.

“Subject to such approval of the demerger, the shares in Maersk Drilling will be distributed to AP Moller-Maersk shareholders, who in addition to their shareholding in AP Moller-Maersk will become shareholders in Maersk Drilling,” Maersk said.

(from: lloydsloadinglist.com, February 22nd 2019)

RAIL TRANSPORT

CER SETS NEW FIVE-YEAR RAIL DEVELOPMENT POLICY

The Community of European Railway and Infrastructure Companies (CER) agreed a new policy containing five commitments to develop rail transport in the next five years at its bi-annual general assembly in Brussels on February 21.

CER will use the policy to engage with the new European Commissioners and members of the European Parliament that will take office later this year.

The five commitments for 2019-2024 are:

- continuing the digital transformation of processes and services
- stressing our customer orientation
- offering carbon-free rail operation in Europe by 2050
- looking for possible sources of funding beyond public funding which CER is still necessary, and
- looking beyond continental rail traffic to further strengthen Eurasian transport by implementing high-frequency rail connections between Europe and Asia.

Recommendations

The CER has also set out a list of recommendations for European transport policy.

It wants rail to form the backbone of a sustainable European transport and economy, with a stable regulatory environment in the rail sector which redresses the current regulatory imbalances between transport modes.

The CER also wants measures which help to realise rail's true potential.

These include:

- promotion of digitalisation, research and innovation

- adequate funding for technological upgrades of infrastructure and rolling stock
- a complete internalisation of negative externalities for all modes of transport
- measures to benefit from the opportunities offered by trans-continental freight flows
- redressing the intermodal financial playing field, and
- improvements to consumer protection and of working conditions.

“What is achieved during the next five years in terms of EU policy and related actions will be crucial for our ability to break the negative trend of climate change,” says Mr Crister Fritzson CER chair and CEO of SJ.

“The railway sector is prepared to make the necessary commitments, but we clearly need help also from policy and decision makers in getting the right framework conditions and incentives in place for the transport sector as a whole.”



We are proud of this agenda, which sets firm sector commitments and sets out the political framework we need,” says Mr Libor Lochman, executive director of CER.

“Together with the European institutions we have done a lot, but any reflection on the next EU policy agenda has to consider the impact of new available technologies, the needs of our citizens and, together, the fact that we cannot give up in the fight against climate change.

Rail can be the EU’s silver bullet when it comes to greening mobility.”

(from: railjournal.com, February 22nd 2019)

ROAD TRANSPORT

EU LAWMAKERS REACH 'LEGALLY-BINDING' DEAL TO CUT TRUCK CO2

European Union lawmakers have agreed on the bloc's first-ever emissions reduction targets for heavy-duty vehicles and a sales benchmark for zero and low-emission trucks.

The deal reached between the European Parliament (EP) and the European Council earlier this week provides for a legally binding 30% CO2 reduction target for new lorries by 2030, with an intermediate target of 15% by 2025.

Manufacturers will also have to ensure that zero-and low-emission vehicles represent a 2% market share of the sales of new vehicles by 2025.

This provision aims to incentivise manufacturers to invest in cleaner alternatives to diesel trucks.

The European Commission will also have to propose new post-2030 targets, in line with the Paris Agreement, in 2022.

"The regulation now goes further than the original proposed by the European Commission and will help to reduce pollution on our roads and to improve air quality.

It is shameful that some governments still put the interests of their industry before the interests of the people.

In particular, Germany and some Central European Member States blocked more ambitious targets", said rapporteur, Bas Eickhout, MEP for the Netherlands and member of The Greens/European Free Alliance.

"Cleaner engines can create a cleaner climate and future-proof jobs.

It's time for EU Member States to pull the brake on their short-sighted support for the combustion engine and instead encourage the development of greener alternatives that, in the end, will also benefit the industry", he added.



The agreement will have to be formally approved first by the EP's Environment Committee and then by the European Parliament and the Council.

Heavy-duty vehicles are responsible for around a quarter of CO2 emissions from road transport in the EU.

Without further action, their emissions are expected to grow due to increasing road transport volumes, the EP underlined.

NGO Transport & Environment (T&E), which campaigns for cleaner transport in Europe, said that while the new legislation would spark climate action and fuel savings further action would be required over the next few years.

"The new truck CO2 standards are excellent news for truckers and the environment.

After 20 years of very little progress on fuel efficiency, truckmakers now need to start offering affordable, low-carbon trucks, enabling huge fuel savings for Europe's haulage industry.

But this is just a start and the standards will need to be made a lot more ambitious when they are reviewed in 2022", said Stef Cornelis, T&E's cleaner trucks officer.

(from: lloydsloadinglist.com, February 22nd 2019)

INTERMODAL TRANSPORT

HUPAC REPORTS 21% INTERMODAL TRAFFIC GROWTH

Intermodal operator today reported a strong growth year in 2018, partly due to recovery after the Rhine disruption in 2017 and its acquisition of ERS Railways.

The company said: "Last year, the Hupac Group carried around 926,000 road consignments by rail, thus increasing its volume by 21.4%.

This strong growth is partly attributable to one-off effects such as the recovery of traffic losses due to the Rhine disruption in 2017 and the acquisition of ERS Railways in June 2018."



The 21.4% growth corresponds to 163,000 consignments more than in the previous year.

The company said non-transalpine traffic showed the most dynamic development with an increase of just under 38%, noting: "The increase of 98,000 road consignments compared to the previous year is almost exclusively attributable to the volume of the operator ERS Railways, which was integrated into the Hupac Group in June 2018 and contributed to the overall result with about 92,000 road consignments."

It added: "ERS Railways, with its operational headquarters in Hamburg, specializes in maritime hinterland services and thus complements the portfolio of Hupac with its traditional focus on continental traffic.

ERS offers connections between the North Sea ports and numerous destinations in Germany as well as supplementary services such as port connection traffic, local delivery and customs procedures.

The expansion of the network to the western ports by exploiting synergies with Hupac Intermodal is in the development phase."

Bernhard Kunz, CEO of the Hupac Group, commented: "We have achieved important successes with ERS Railways; the entire Hupac Group benefits from this."

Transalpine traffic through Switzerland also developed positively, the company said, noting: "Compared to the previous year, Hupac Intermodal was able to shift 67,000 additional road consignments to eco-friendly railways, which corresponds to an increase of 14.4%.

Almost half of this is attributable to the recovery of volume losses due to the seven-week blockade of the Rhine valley route in August/September 2017."

Revised to exclude the effects of "the Rastatt effect", Hupac said volumes of transalpine traffic through Switzerland increased by about 8%.

"Growth was again driven by the semi-trailer segment," it added.

"These services are currently routed via the Simplon axis to the Novara terminal.

The opening of the 4-metre corridor via the Gotthard Base Tunnel and the connection of the Busto Arsizio-Gallarate terminal at the end of 2020 will create new opportunities for modal shift" Hupac added.

In 2019 Hupac "expects transport demand to stabilise as a result of the economic downturn".

Michail Stahlhut, director of Hupac Intermodal, commented: "Now is the time to focus on the quality of the services.

We must ensure a stable environment on which new growth can be built."

Hupac is one of Europe's leading intermodal network operators, offering around 120 trains each day with connections between the main European economic areas up to Russia and the Far East.

The Hupac Group comprises 18 companies based in Switzerland, Italy, Germany, Netherlands, Belgium, Poland, Russia and China.

(from: lloydsloadinglist.com, February 4th 2019)

TRANSPORT & ENVIRONMENT

SCRUBBER DEBATE HEATS UP AS EC CALLS ON IMO TO RESTRICT THEIR USE

The pro-scrubber Clean Shipping Alliance 2020 has strongly criticised the EC for urging the International Maritime Organization (IMO) to restrict the use of open-loop exhaust gas cleaning systems (scrubbers) in ports around the world.

But vessels fitted with scrubbers are in high demand and at least a third of newbuild vessels will have them, enabling the ships to continue to consume cheaper, higher-sulphur fuel.

Under its 0.5% sulphur cap on fuel used by ships from 1 January 2020, the IMO currently approves the use of both open-loop scrubbers, where wash water is discharged back into the ocean, and closed loop systems, where the water is retained for disposal at a suitable port facility.

The EC has submitted an "evaluation and harmonisation" proposal for consideration at the IMO's Marine Environment Protection Committee (MEPC 74), due to meet in London in May.

CSA 2020 executive director Ian Adams said: "This proposal is an attempt by the EC to push forward restrictions on scrubbers, which are accepted globally by the IMO, EU and others as acceptable means of improving air emissions quality in controlled areas."

"Within two weeks of a draft surfacing, the commission had taken the proposal to a one-day working party review and then submitted it to the IMO," he said.

"Clearly this was planned to avoid the open discussion and deliberation that a proposal with such far-reaching impact requires."

Mr Adams claimed the EC's proposal was "based mostly on speculation", and that there was an "absence of credible evidence" to support the restrictions on scrubbers.

"The EC initiative is needlessly creating baseless concerns at a time when there are already very real issues in the maritime industry regarding the future availability, suitability and cost of fuels and the effects on global trade and shipping that this will have," said Mr Adams.

According to a review by London-based shipbroker Clarksons, only around 4% of the world's maritime fleet is slated to have scrubbers installed by IMO 2020, however by tonnage this rises to some 10%.

Significantly though, Clarksons notes that 32%, almost a third of the vessel orderbook, will be fitted with scrubbers, given that it is more cost-effective to install the systems at the build stage rather than to retrofit, which could involve the vessel spending up to six weeks out of commission.

CSA 2020, which represents over 30 commercial and passenger shipping companies, said its members had invested to prepare their ships for IMO 2020 regulations, which "endorse the use of open and closed loop scrubbers in all waters".



"To see the commission take this step... is beyond disappointing," said Mr Adams.

Singapore is so far the most high-profile port to ban the use of open-loop scrubbers in its waters from 1 January 2020, but several other ports are also considering bans.

However, according to some experts, the ban will in practice have a minimal impact on the economics of scrubbers fitted on deepsea vessels, given that they already have to switch to low-sulphur tanks when trading in SECAs (sulphur emission control areas).

Notwithstanding the potential ban on open-loop scrubbers in ports, with the price difference between HFO and LSFO (low-sulphur fuel oil) predicted to be around \$200 per ton, the 'winners' from IMO 2020 in the liner sector could be carriers such as MSC and Evergreen that have a pro-scrubber strategy.

Moreover, brokers The Loadstar spoke to recently are already looking at a two-tier charter market from next January, with vessels fitted with scrubber technology expecting to command a significant daily hire premium.

(from: theloadstar.co.uk, February 20th 2019)

INDUSTRY

HOW SMART START-UPS ARE CHANGING MARITIME

The role of start-up organizations in driving the development of the maritime sector should not be understated, especially with regard to intelligent applications powered by the Internet of Things (IoT).

As highlighted by a recent competition to form the world's first digital shipping company, launched by IoT specialist Loginno, there is a demand for companies who can bring new solutions to the table.

The start-up space

Of the multitude of start-ups vying for opportunities within the space of IoT and Big Data, many are part of projects designed to leverage their potential for industry-shifting innovation.

These initiatives are often supported by major companies, and in February 2019 satellite communications provider Inmarsat revealed its partnership with two start-up programmes focused on IoT and the optimization of data.

The need for "fresh perspectives", as argued by Inmarsat's Senior Director of Digital Incubation Ali Grey, can be served best by new businesses currently breaking into the sector and shaking its very foundation.

IoT is widely viewed as a key pivot for the industry and target for those wishing to instigate serious change; ABI Research has predicted that IoT applications will be able to track over 500 million different assets by 2023, highlighting its potential.

Solutions for ports

If IoT is tipped to make waves across the global economy, what kind of impact is this movement likely to have on ports, and what role will be played by start-up organizations?

Maciej Kranz of Cisco Systems describes digitization, and especially IoT, as "powerful enablers that forward-thinking port operators are using in order to improve efficiencies": the benefits of implementing IoT applications to support cargo-handling processes are various.

One of the areas in which IoT can be leveraged most usefully is the management of port traffic, as the data collected from ships, containers and other vehicles entering and exiting ports can produce a holistic overview of cargo movement that provides a transparent and visible basis for optimization.

IoT is also a technology which complements other advanced systems used by port and terminal operators, functioning alongside automated equipment and TOS systems to allow more effective communication between machines and humans, or even machines and other machines.

Although major companies will often be enlisted to oversee the implementation of advanced technologies, which have to be integrated into port operations without causing serious disruption, start-ups will play an important part in delivering new solutions.



Speaking about the position occupied by start-ups at Smart Ports and Supply Chain Technologies 2018, former Managing Director of Port XL Mare Straetmans emphasized the necessity for collaboration between corporations and emerging businesses.

The future of IoT innovation

While start-ups are important components of the rapidly growing IoT ecosystem, development is also being driven by academic bodies and government groups exploring its applications for a broad range of industries, including container shipping.

Autonomous shipping, which is quickly transforming from a futuristic fantasy into a reality, is a good example of the technical platform provided by IoT solutions.

A joint-venture involving the Finnish Geospatial Research Institute and Aalto University is seeking to deploy IoT-powered sensor technology as means of ensuring the safe navigation of autonomous vessels, an innovation which is already being trialled.

However, educational bodies and public institutions are also choosing to collaborate with start-ups on groundbreaking projects like this, with solution provider Fleetrance contributing to this initiative by developing techniques for autonomous navigation.

It is evident then that the insight provided by these young, energetic and, above all else, innovative companies, as well as their ability to cut through the noise of the industry, is fostering an environment that is adapting to evolving demands and becoming increasingly modern.

It seems likely that success will follow.

(from: porttechnology.org, February 22nd 2019)

LAW & REGULATION

COMPLIANT FUEL OR SCRUBBERS? PICK THE RIGHT 2020 TRANSITION STRATEGY

Implementation of the IMO's 0.50% sulphur limit for fuel oil is presenting one of the most significant challenges to all stakeholders in the marine fuel oil market – from producer to user.

The transition period has started; decisions must be made, and implementation plans need to be drawn up.

Tim Wilson, Principal Specialist on fuels, lubes and exhaust emissions at Lloyd's Register, argues that while options at this stage are clear – compliant fuel oil or high-sulphur fuel oil (HSFO) in conjunction with exhaust-gas cleaning systems (scrubbers) – the right choice is less obvious and must be evaluated based on each ship's specific operation and risk criteria.

Here, Tim Wilson shares his advice for those shipowners and operators choosing compliant fuel and scrubbers.

"Whether choosing compliant fuel or scrubbers, planning is critical to meeting the Sulphur 2020 deadline successfully," he says.

"Approximately 50% of the world fleet have little or no experience operating in an Emission Control Area and having to switch to working with low sulphur fuel, nor have they experienced this type of change before.

Training and awareness is fundamental to get this change safely and effectively implemented."

For shipowners or operators choosing scrubbers, what are the key considerations you should be thinking about?

We are informed that around 100 scrubbers are being ordered per month and roughly 20 manufacturers, ranging in experience, are ready to install them.

However, the retrofit of a scrubber is not an easy undertaking and it is estimated that it takes at least one year to plan and implement.

Table 1, below, shows a list of activities and considerations shipowners or operators must take before going down this route.

Table 1 – Scrubbers: A lengthy road of planning ahead	
Process	Months
EGTS system selection	2
Selection of vendor and engineering consultant	2
On board survey: 3D scanning and project planning	3
Engineering analysis	3
Class approval	1
Shipyard selection and preparing retrofit selection	3-4
Production: shipping EGTS and pre-fabrication of piping	3-4 weeks
Installation and commissioning	3-4 weeks

It sets out the typical process, following a feasibility study, once a decision has been made to proceed to commissioning.

However, it is dependent on ship type and other influencing factors, and the table does not reflect the time needed to consider the feasibility of fitting a scrubber.

It is also important to take account of the time the vessel will need to be off hire during the installation, and the associated implications.

If a shipowner or operator has opted to install a scrubber, they will require a stringent and robust approach to selecting the right manufacturer and scrubber type, such as the structural assessments needed to undertake before choosing a system specific to each ship.

It is also worth noting that Singapore's Maritime and Port Authority (MPA) has recently announced a ban on the discharge of wash water associated with the wet, open-loop configuration of scrubbers, including the discharge from any closed-loop, bleed-off arrangements.

The ban will reportedly become effective from the onset of the IMO-mandated global sulphur limit on 1 January 2020.

Vessels fitted with open-loop systems will be required to use compliant fuels in Singapore port waters; ships fitted with hybrid systems must switch to the closed-loop mode of operation.

For shipowners or operators choosing to use compliant fuel, what are the key considerations you should be thinking about?

Outside Emission Control Area (ECA) operations, the sulphur limit will result in an increase in fuel formulations being offered and there is uncertainty about the degree of diversity of these formulations.

Therefore, shipowners and operators will need to consider what structural and procedural adjustments will need to be made on board.

Whether that is considering loading a light product compared to a heavy one – and/or making greater efforts to segregate and avoid fuels mingling – industry experts warn against mixing one bunker with another, as there is a high risk of destabilising the fuels.

In most situations, the crew cannot easily assess the degree of risk of this happening until the fuel is on board, making segregation of bunkers important.

The next step is managing the diversity of the viscosities of the fuels, and managing any incompatibility observed between the different bunkers on board: if the crews must mix, working out the ratios involved and any potential resultant properties is key.

In future, the fuel will still be diesel, but formulations will change, so a proactive fuel-change management plan for each ship is required – a “Plan, Do, Check, Act” approach.

Amending current fuel management practices as required will help the crew manage change.

Many ships will have this in place already, so it will be a case of scrutinising and adapting it to fit with the sulphur limit as 1 January 2020 approaches.

The plan requires focused and clear guidelines for each scenario the crew might face, and the formula should be communicated to the crew to raise awareness and build a relationship with the management.

By doing this, if there are concerns about – or updates to – the plan, every stakeholder will be made aware.

(from: hellenicshippingnews.com/bimco.org, February 26th 2019)

PROGRESS & TECHNOLOGY

ULTRASONIC SENSORS: MAPPING THE FUTURE

Robotics and Industry 4.0 are massive buzzwords in port operations, logistics and the wider supply chain.

Together with upcoming environmental regulations and data standardization, they form part of a series of challenges – and opportunities – for the maritime industry, ones that have the potential to make it safer, cleaner and more efficient.

Industry 4.0 is also referred to as the industrial revolution and is the popular name used to describe the drive towards automation and data exchange in manufacturing technologies, of which remote sensing is key.

That is where ultrasonic sensors come in, and their utilization has the potential to in the words of Deloitte, to “create new value across the supply chain” by “lowering production costs and providing critical insights into customer behaviour.”

An overview

In short, ultrasonic sensors are industrial devices that use sound waves above 20,000 Hertz (Hz), beyond the range of human hearing, to measure distance from a certain spot to a specified target object.

The smart sensor market, which includes ultrasonic sensors, is growing at approximately 19% every year, and could be worth as much as US \$60 billion by 2022.

As well as accelerating the drive towards automation and Industry 4.0, ultrasonic sensors can also be used across manufacturing and the wider supply chain for numerous different purposes.

They work in a variety of logistics applications, including heavy industry and port operations.

For shippers, they have a wide range of benefits, from navigation to fire and corrosion prevention.

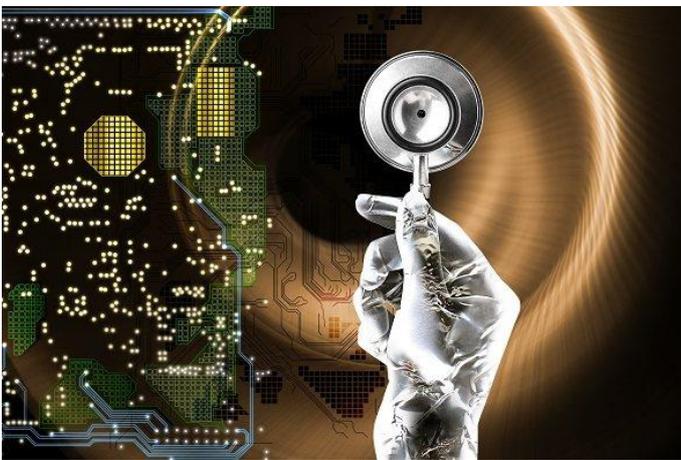
Ultrasonic wind sensors, for example, can help ships comply with international regulations on weather data collection, such as wind speed, which captains can then use to navigate around storms.

This is an example of how ultrasonic sensors can be utilized across commercial shipping, be it in the container, bulk or passenger segment.

Watertight technology

In the field of ship maintenance, it could also prevent steel corrosion and cracking.

'Non-invasive Monitoring of Ships for Corrosion Using Ultrasonic Guided Waves', a 2012 study by engineers A.G Haig, PJ Mudge and K Tuncbilek examined the viability of ultrasonic technologies for spotting the very earliest stages of corrosion.



The project looked at the use of long range, low frequency ultrasonic waves to provide a continuous monitoring capability of large areas of tank floors, where water and other contaminants collect and cause corrosion and consequently cause fuel spillages.

The results showed that considerable corrosion that was not necessarily visible to the naked-eye was detected, even with only a defect that measured 0.002% of the area examined.

Another study, this one exploring the concept of robotics in firefighting, also examines the potential of sensors to ease operational pressures and increase standards.

The 2013 study by the University Of Sumatera Utara Indonesia, used a fire extinguisher robot with ultrasonic sensors to detect hotspots, and specifically the ultraviolet rays they emit.

As they can be operated remotely, these robots and similar machines can be used to extinguish fires at ports and on ships.

A safer future?

Fire prevention, not just firefighting, is a key benefit of ultrasonic sensors, with some designed specifically to inspect the content of fire suppression system cylinders of CO₂ and a range of other extinguishing agents.

There is also the potential for them to be used in search and rescue operations.

Sonar sensors, a type of ultrasonic, are designed to be used underwater and can be a superior alternative to older technologies, such as radar.

They can also be utilized on drones, and this gives a wider field of view than normal and allows for vital data collection.

As actors in the marine industry and wider supply chain continue to innovate and accelerate the drive towards automation, it will have to take into account a multitude of factors, including health and safety and ship maintenance.

Ultrasonic sensors and related technology will be at the forefront.

(from: porttechnology.org, February 15th 2019)

STUDIES & RESEARCH

IMO 2020 COST RISES MAY LEAD TO FRONT-LOADING

Shippers could front-load cargo ahead of new low-sulphur IMO 2020 fuel rules due to be imposed on container lines on 1 January 2020, according to some analysts and forwarders, while others believe the costs of bringing shipments forward will outweigh the benefits.

Lines are expected to start introducing the new fuels – and higher bunker charges for shippers – in the fourth quarter of this year.

Hackett and Associates partner Daniel Hackett recently estimated price increases of between \$100-\$200 per teu from Asia to North America were likely, depending on how much of the extra cost container lines are able to pass on to beneficial cargo owners (BCOs).

Dominique von Orelli, the head of global ocean freight at DHL Global Forwarding, who recently called for more fuel Bunker Adjustment Factor (BAF) pricing transparency from lines, told Lloyd's Loading List that shippers could look to avoid extra fuel costs in the latter part of 2019 by shipping cargo early, where possible.

"Although speculative, it is well possible that there will be a surge in volumes prior to the IMO 2020 implementation," he told Lloyd's Loading List.

"Carriers must stay competitive, so it remains to be seen what impact the BAF is going to have on the base rate.

The all-in rate is what will drive the market at the end."

Cathy Morrow Roberson, founder and head analyst at Logistics Trends & Insights, also said front-loading was a viable supply chain strategy.

She also noted that any surge in cargo ahead of higher prices could prompt some modal shift as shippers looked to avoid the sort of supply chain bottlenecks at ports that built up in late 2018 in the US when shippers front-loaded cargo from China ahead of new tariffs.

"As with any possibility of increased shipping costs, regardless of mode, it's likely there will be front-loading," she said.

“Could air freight benefit if congestion built up on sea lanes?”

It’s likely there could be a slight shift away from ocean freight towards air freight or even rail, depending on origin and destination of freight movement.

But obviously the most important factor will be rates, and how much the higher costs of low-sulphur bunkers adds per TEU on each shipping lane.

Shippers are already under strain due to increasing transportation costs.

The rising costs are negatively impacting quarterly earnings and are translating to higher costs to the final customer.

It’s going to be even more important for shippers and their supply chain partners to work together ahead, during and after the implementation of IMO 2020 to achieve the most cost-effective solution whether its ocean, air, rail or some other means of transport.”



However, in the UK at least, it is unlikely shippers will front-load much cargo, according to James Hookham, deputy chief executive of the Freight Transport Association, not least because of the higher inventory costs they will incur as a result.

“It is unlikely there will be a pre-IMO 2020 surge of cargo, for three principle reasons,” he told Lloyd’s Loading List.

“Firstly, the savings would be small compared to the costs of storage and additional working capital.

Secondly, most shippers can negotiate better rates if they challenge the surcharges they are quoted.

And lastly, IMO studies have shown that the refining capacity to produce sufficient low sulphur marine fuels exists.

With oil prices unexpectedly drifting down in response to lower global trade prospects, any speculative spike in prices should be short lived.”

(from: lloydsloadinglist.com, February 20th 2019)

ON THE CALENDAR

- 19/03/2019 – 21/03/2019 Mombasa 21st Intermodal Africa 2019
- 14/05/2019 – 16/05/2019 Aktau 1st Caspian Ports and Shipping 2019
- 25/06/2019 – 27/06/2019 Casablanca 7th Mediterranean Ports and Shipping 2019
- 09/07/2019 – 11/07/2019 Constanta 8th Black Sea Ports and Shipping 2019
- 10/09/2019 – 12/09/2019 Phnom Penh 17th ASEAN Ports and Shipping 2019
- 22/10/2019 – 24/10/2019 Polonia 3rd Baltic Ports and Shipping 2019
- 26/11/2019 – 28/11/2019 Douala 22nd 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.