

# Port News

## RUSSIA

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## IMO Secretary-General Kitack Lim: «RUSSIA HAS ALWAYS BEEN ONE OF IMO MAJOR MEMBER STATES»

In his exclusive interview with IAA PortNews in Moscow, IMO Secretary-General Kitack Lim covered a wide range of IMO activities: fuel and environmental regulations, Polar Code, autonomous ships, cybersecurity, etc.

— **What is your first impression of your visit to Russia, of your meetings with Russian authorities?**

— First of all, Russia has always been one of IMO's major Member States. The Russian Federation joined IMO in 1958 and is represented at most IMO meetings. Today, based on my communications with the Minister of Transport Maxim Sokolov, Deputy Minister Victor Olersky, President and CEO of the Sovcomflot Sergey Frank, I can confirm that my first impression of Russian shipping sector exceeded my expectations. When it comes to the government authorities and the capability of shipping companies, their competence is clearly at the top level.

— **We know that your work of Tokyo MoU committee has started in Vladivostok was productive, we have our reporter on the ground and the working group has held its first session. Can we expect that Russia's voice will be heard at these very representative meetings in the framework, and of IMO?**

— Russia has always been participating very actively in the work of the Tokyo MoU and in the IMO and hopefully will

continue to strengthen communication with other Members in order to promote maritime safety environment protection values through consultation and cooperation. Therefore I believe that Russia's efforts will definitely contribute to the sustainable development of global shipping industry.

— **If we talk about some specifics, say, about low sulfur fuel requirement, date of amendments entry into force, about emissions trading — can our stance on these issues be represented?**

— The amendments to MARPOL Annex VI regarding the 0.5% global sulphur cap in oil fuel were adopted in 2016 and will enter into force in 2020. It is important to provide the shipping and oil industries with clarity and certainty in terms of application date of new requirement in order for them to be duly prepared. That is why I am on missions around the world to listen to the voice of industry and to emphasize our adherence to the decisions taken.

With regards to GHG emissions, it is important to establish a realistic strategy and carefully consider measures to be adopted.

The philosophy of the Paris Agreement on climate change has to be duly taken into account when developing new measures. The GHG reduction strategy that is now under development in the IMO will be based on detailed considerations of all technical issues by the intersessional working group. We have established very good communication amongst Member States and an efficient process to allow IMO to come up with the initial strategy in 2018. It is important to maintain a good level of communication and consultation among Member States so that everyone's voice will be heard.

— **How do you assess the role of Russia in this work?**

— Russia has been contributing substantially to the IMO regulatory process related to the prevention of air pollution from ships and energy efficiency. The Russian Federation has raised a number of technical issues, contributing to the detailed discussions on the topic. I believe that all IMO Members should also bear in mind the provisions and philosophy laid down in the Paris Agreement on climate change. Personally, I am quite optimistic about our future progress in the IMO on the development of the overall strategy for GHG reduction.

— **And again, concerning Russia, its shipping and shipbuilding companies. Is it possible to say that Russia has its own niche in the global shipbuilding, its own expertise and especially a niche in the Arctic?**

— Russian shipping and shipbuilding sectors are definitely a part of the global maritime industry. This afternoon, I've seen an impressive presentation by Sovcomflot about the strategies for ship management, training of seafarers, philosophy of shipping and I recommended them make that presentation at IMO. Russia has a lot of shipping and shipbuilding experience, particularly in the field of polar navigation and ice class ships. The experience of Russian shipping companies and shipbuilders will be important for global shipping community and helpful for IMO work to improve regulations and practices for navigation in polar waters,

— **Some days ago a COSCO's general cargo vessel called at St. Petersburg port after passing the Northern Sea Route. What is your opinion on transits along the NSR and do you believe in its future development for shipping?**

— According to research and statistics available, due to the melting ice, commercial and transit navigation in Arctic waters is expected to increase year by year. I believe that shipping lines and others will be looking to explore the benefits of shortened Arctic routes. So, the overall expectations for increased Arctic navigation look very positive. I expect that the Russian government will continue to make a substantial contribution to maritime safety, environmental protection and efficiency of shipping along the NSR.

— **What perspectives IMO envisages for further development of SOLAS Convention? In this respect are there any plans for further development and improvement of the Polar Code? Shipowners expect to get more transparent and clear text.**

— The SOLAS Convention is kept under review. In 2017, IMO adopted revised sub-division and stability rules, particular focusing on improvements to passenger ship safety.

IMO is currently reviewing the SOLAS chapter on radiocommunications, including the global maritime distress and safety system. IMO is also reviewing the chapter on life-saving appliances and arrangements and undertaking a scoping exercise starting in 2018 to look at regulations in relation to autonomous vessels.

— **What about development of the Polar Code?**

— IMO welcomes feedback from Member States on their experience in implementing the Polar Code. Whether ships should

be allowed to navigate through Arctic/Antarctic waters is not an issue for IMO; IMO's concern is whether the ships and people on board in polar waters are safe, and that the environment is properly protected.

Adoption of the Polar Code shows how IMO is responding to safety challenges and to the challenges of environmental stewardship. Polar Code provides additional requirements for ships operating in the Polar regions, above and beyond those already mentioned in other mandatory treaties addressing ships, such as SOLAS and MARPOL. These additional requirements cover the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the inhospitable waters surrounding the two poles. For the next phase, IMO will look at the potential application of the Polar Code to other ships not yet covered by IMO regulations such as fishing vessels, private yachts, very small cargo vessels.

— **Referring to the new projects for cybersecurity and autonomous ships, are there any plans, of the IMO to act as regulator for those?**

— Increased automation and digitalization means additional cyber risks need to be managed. IMO has issued guidelines on cyber risk management. The maritime sector needs to identify, analyze, assess and communicate cyber related risks. They need to have systems in place to avoid or mitigate the risk.

IMO has agreed that the International Safety Management Code, which requires ship companies/operators to ensure the safe management of the ship, should fully include cyber risk management in safety management procedures.

The overall goal is to support safe and secure shipping, which is operationally resilient to cyber risks.

No one can ignore the rapidly emerging prospect of autonomous vessels. Starting in 2018, IMO will begin a scoping exercise to look at how the safe, secure and environmentally sound operation of Maritime Autonomous Surface Ships might be introduced in IMO instruments. When we consider various levels of automation we need to always keep in mind the human element.

— **Whether it is considered that ship-port interface has been sufficiently regulated in terms of vessels safety in ports, possibility for vessels to be connected to the port facilities for environment purposes?**

— IMO addresses the stay and departure of ships in several ways — loading/unloading of cargo; security; formalities; port reception facilities; and so on. The Facilitation Convention aims to simplify formalities, documentary requirements and procedures associated with the arrival, stay and departure of ships engaged on international voyages. A new annex entering into force in 2018 includes mandatory requirements for the electronic exchange of information on cargo, crew and passengers.

IMO is promoting the "single window" concept — to enable all the information required by public authorities in connection with the arrival, stay and departure of ships, persons and cargo, to be submitted via a single portal without duplication.

IMO's maritime security regulations cover the security of designated ports involved in international trade. They must have an approved port facility security plan, complying with the International Ship and Port Facility Security (ISPS) Code.

IMO regulations require cargoes to be securely stowed when they are loaded, so this includes everything from lashing of containers to the safe loading and unloading of bulk carriers.

In 2016 a new regulation came into force, requiring the gross mass of individual containers to be verified. This has been aimed at ensuring the stacking and stowing of containers is safe, beginning the quayside.

*Interviewed by Nadezhda Malysheva.  
(c) Photo PortNews*

# Russian Ministry of Transport: On port infrastructure development and financial mechanisms for port projects implementation



## RF Transport Minister Maxim Sokolov

— The tasks of the industry on strengthening the position of our country in the global market of transport and logistic services as well as using its transit potential cannot be faced without port infrastructure development.

Throughput of seaports continued growing and reached a record high result of 790 million tonnes. Over the 6-years period transshipment grew by 1.5 times, while the capacity of production facilities in the ports exceeded 1 billion tonnes.

In the reporting period, production facilities of the ports grew by 22 million tonnes, mostly with implementation of projects at Sabetta and Primorsk ports. In December 2017, the first batch of liquefied natural gas and gas condensate was loaded on the Christophe de Margerie tanker at the Yamal LNG terminal.

Cargo traffic in the Northern Sea Route waters has surged 3 times in the recent five years to almost 10 million tonnes (9.9 million tonnes). Our further steps towards the development of this route will be pointed at an ambitious task set by the President and focused on the development of the Northern Sea Route as a global transport corridor.

The capacity of Sabetta, Vysotsk, Vostochny, Kaliningrad, Taman, Murmansk ports will continue growing. In three years (2018–2020), the capacity of port facilities will grow by over 130 million tonnes.

Comprehensive development of transport hubs in our sea basins is a necessary element of transport corridor's functioning. For example, the launching of Murmansk Transport Hub will let shift cargoes, primarily coal, to the Russian ports with consignors' expenses to decrease 1.5 times as compared with the ports of the Baltic states.

## Deputy Transport Minister of Russia, head of Rosmorrechflot Victor Olersky

— In 2017, allocations of the federal budget for implementation of investment projects on the development of port infrastructure totaled about RUB22 billion.

In the nearest years, only three investment projects will be implemented with the federal budget financing: construction of a coal terminal in the Muchke Bay (Khabarovsk Territory), construction of a terminal for cruise and passenger ships in Pionersky and construction of shore infrastructure facilities at the seaport of Gelendzhik.

Construction of the terminal for cruise and passenger ships in Pionersky began in 2017. For the first time, state contract was signed under special terms specified by the Government with an investor undertaking to build facilities in the framework of the project at his own expense.

A mechanism of concession agreements is getting relevant amid limited budget financing of activities on construction and reconstruction of seaports' infrastructure facilities. In November 2017, a proposal was submitted to RF Government



on signing of a concession agreement under the project on construction of a coal terminal on the western coast of the Kola Bay as part of comprehensive development of Murmansk Transport Hub. Rosmorrechflot, as an authorized body, is currently in negotiations with the concession agreement initiator.

A private concession initiative related to Vostochny-Nakhodka transport hub facilities was submitted to the Government in March 2018.

Yet another source of investments in port infrastructure will appear with introduction of port investment due as required by the mentioned amendments into the Federal Law on Seaports. Investment due is an obligatory amount targeted at modernization of seaports infrastructure and imposed only on foreign going ships.

It should be noted that today, despite annual expansion of port facilities, there is a deficit of competitive terminals dedicated for transportation of dry bulk cargo (coal, ore, mineral fertilizers) and grain.

In 2018, we set ourselves a task to expand the capacity of Russian seaports by 28 million tonnes, particularly with the commissioning of the port Sabetta's Phase 2 (6 million tonnes per year), reconstruction of facilities at Murmansk port's second cargo district (2 million tonnes per year) and development of port facilities at the ports of Novorossiysk, Azov and Taman (6.5 million tonnes) as well as the ports of the Baltic basin (3.5 million tonnes).



## YEVGENY PRIMAKOV — THE 20<sup>th</sup> VESSEL OF SOVCOMFLOT'S FAR EAST BASIN FLEET

The naming and flag-raising ceremony for the Yevgeny Primakov, a new multifunctional icebreaking standby vessel (IBSBV) built for PAO Sovcomflot ("SCF Group"), was held in Saint-Petersburg, Russia.

The Yevgeny Primakov is a state-of-the-art multifunctional icebreaking standby vessel ordered by PAO Sovcomflot. It is intended to supply oil platforms under the Sakhalin-2 project (Sea of Okhotsk). The vessel is named after an outstanding statesman Yevgeny Primakov whose decisions made as Prime Minister of the Russian Federation contributed a lot to sustainable development of PAO Sovcomflot. Those speaking at the ceremony emphasized a great historical role of Yevgeny Primakov whose name was given to the vessel.

In terms of technical characteristics, the Yevgeny Primakov is one of the best ships in its class. It was designed for operation in challenging ice and navigation conditions of the Far East Basin (Sea of Okhotsk).

The ship's design and equipment lets it efficiently ensure safe operation of offshore oil & gas platforms including

those operating in ice conditions: prevent forming of ice reefs and heavy ice floes, break off the ice, etc.

The ship will also provide round-the-year stand-by duty, rapid response to emergency situations and, if necessary, perform underwater engineering and repair works.

The ship's propulsion system (two Azipod units with aggregate capacity of 13 MW) ensures high maneuverability and icebreaking capability. The vessel can break through 1.5-meter thick ice covered with 20 cm of snow. Relatively small IBSBV Yevgeny Primakov features a high passenger capacity: 70 berths (except for crew accommodation). In case of emergency, the ship can accommodate up to 150 persons.

When designing and building the ship, the experience of Sovcomflot accumulated during its operation under Sakhalin-1 and Sakhalin-2 projects was taking into consideration.

IBSBV Yevgeny Primakov will sail under the flag of the Russian Federation with

Saint-Petersburg as the port of registration. The crew numbers 26 Russian seafarers.

IBSBV Yevgeny Primakov is yet another vessel in a series of multifunctional icebreaking supply and standby vessels built under a long-term agreement between Sovcomflot and Sakhalin Energy, the Sakhalin-2 project operator. First three vessels in the series, Gennady Nevelskoy (lead ship), Stepan Makarov and Fedor Ushakov joined the fleet of Sovcomflot in 2017. They are being successfully operated near Sakhalin.

All the vessels of the series were built by Arctech Helsinki Shipyard, a subsidiary of United Shipbuilding Corporation.

IBSBV Yevgeny Primakov is the 20th vessel of Sovcomflot's Far East Basin fleet. As of today it numbers 10 tankers (including 8 oil carrying shuttle tankers and 2 LNG carriers) and 10 supply and standby vessels. As of today, Sovcomflot is one of the global leaders in terms of the number of icebreaking supply vessels.

*Photo by Boris Borisenko, PortNews IAA*

# FINANCES' DOWNWARD PRESSURE

Amid the global freight market's stagnation lasting for several years, its tanker segment showed a severe plunge in 2017. In February-March the largest global shipping companies posted considerable losses of the past year. The situation is expected to improve in 2018–19 though long-term forecasts are vague due to instability of the global oil market.

In 2017, average freight rates were 35–55% less, year-on-year, in the segment of oil tankers and 15% less, year-on-year, in the segment of MR product tankers, Clarksons data shows. The year of 2016 also demonstrated the decrease of freight rates.

In the segment of Aframax tankers, the most popular among Russian exporters, average spot time-charter rates fell by 39.5% to \$13.873. In November-December, the profit in the segment fell to its lowest from August, making \$11.732 per day. Annual time-charter rates in the Aframax segment fell by 28% to \$15.490.

Amid this background, global tanker companies post their losses of 2017.

Consolidated GAAP net loss attributable to shareholders of Teekay — \$151.7 million. Net loss of Teekay Tankers in 2017 was \$58 million vs a profit of \$67.8 million in 2016.

Teekay Tankers' income from vessel operations fell from \$96.7 million in 2016 to \$1.4 million, that of Teekay Corp. — from \$384.3 million in 2016 to \$6.7 million in 2017.

Scorpio Tankers posted the loss of \$158.2 million. In Quarter IV the company's loss totaled \$41.5 million.

Net income of Euronav decreased from \$204 million in 2016 to \$1.2 million in 2017 with tanker segment showing a loss of \$28.6 million versus \$169.6 million of income in the previous year.

Tsakos Energy Navigation posted net income of \$7.612 million, down 7 times year-on-year.

Amid the fall of freight rates many players saw a decrease of EBITDA. Teekay Tankers' EBITDA in QIV'2017 dropped by 45.6%, year-on-year, to \$30.1 million.

Nordic American Tankers posted EBITDA of \$10.4 million, down 64%; Euronav — \$49.2 million, down 60%.

Cosco expects chartering losses of the three VLCCs at 53,475 per day and one more VLCC — at \$37,600 per day.

## FACTS AND HOPES

It should be noted that stagnation in the market of VLCCs has been seen for a decade. Very large crude carrier rates on the AG/Japan route were \$200,000 per day in 2009. Since that time they have plunged 20 times with a short rise seen in late 2016 to \$100,000 per day.

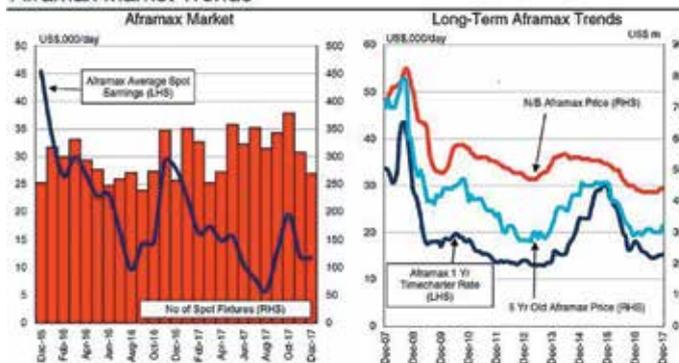
Average rates for LR product tankers in 2009 were up to \$55,000 per day. Now they have dropped 10 times to some \$5,000 per day. Average rates for MR product tankers is correlates with that.

The fall of oil prices, the policy of OPEC and excess tanker tonnage also affect the market. According to Kevin Mackay, Teekay Tankers' Chief Executive Officer, "While crude tanker spot rates increased in the fourth quarter of 2017, they did not experience the typical winter seasonal spike primarily due to lower OPEC oil production, supply outages and a lack of winter weather delays... We have seen further weakness in the crude tanker market driven by many of these same factors, combined with higher bunker fuel costs».

Kevin Mackay expects elevated levels of tanker scrapping will positively contribute to a significant slowdown in tanker fleet growth which, when coupled with stronger oil market fundamentals, should lead to a recovery in tanker rates.

The year of 2017 saw a high fleet growth. According to Teekay, the global tanker fleet grew by 26.6 million deadweight tonnes (mdwt), or 4.8 percent in 2017, following 31.4 mdwt, or 6.0 percent growth in 2016. In addition, numerous vessels that were being used as floating storage returned to the trading fleet in 2017.

Aframax Market Trends



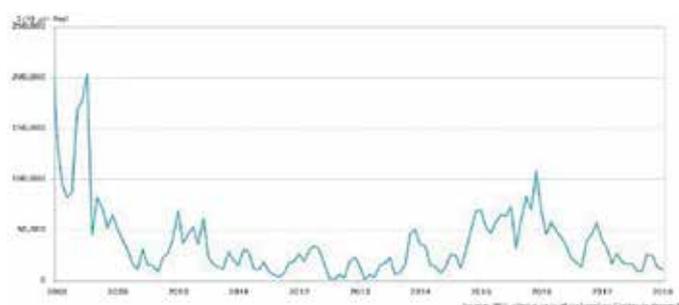
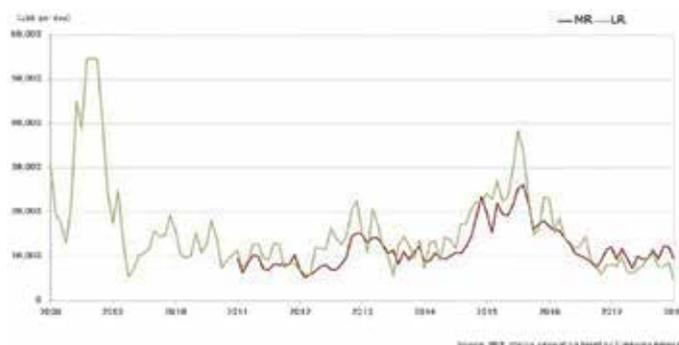
At the same time OPEC implemented 1.2 million barrels per day (mb/d) of supply cuts in 2017.

All those factors led to a reduction in cargoes from the Middle East, which in turn forced more Very Large Crude Carrier (VLCC) tankers to compete with Suezmax tankers for Atlantic cargoes, thus putting pressure on mid-size tanker rates.

On the other hand, an unprecedented increase in U.S. crude exports gave some support to crude tanker demand; however, it was not enough to fully offset the negative impact of OPEC supply cuts.

The market players expect the tanker fleet growth to moderate due to a combination of lower deliveries and higher scrapping in 2018. Tanker scrapping for the global fleet totaled 11.5 mdwt in 2017, the highest level of tanker scrapping since 2012, and has remained firm with 1.6 mdwt scrapped in January 2018. The level of newbuild tanker deliveries is expected to reduce during 2018, particularly during the second half of the year, and is set to fall further in 2019 as the orderbook rolls off. Amid low rates, high bunker prices and unstable oil market the market players are not likely to resume any ambitious programmes on fleet retrofit.

Oversupply will obviously regulate the market but its further development depends, first of all on the global oil market situation which is difficult to forecast amid growing production in the USA and trade wars.



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# PORT OF UST-LUGA TO INCREASE ITS ANNUAL CAPACITY

Reconstruction and modernization of Multipurpose Terminal “Yug-2” (the port of Ust-Luga) scheduled for 2018–2020 is intended to increase the terminal’s annual capacity to 20 million tonnes.

**Y**evgeny Savkin, Director General of Commercial Sea Port of Ust-Luga JSC (operator of Yug-2 terminal), presented new possibilities of the terminal to the official delegation headed by Ramazan Abdulatipov, special representative of RF President for cooperation with the Caspian countries.

The project provides for construction of three new facilities for transshipment of coal (14 million tonnes per year), mineral fertilizers (3 million tonnes per year) and general cargo (3 million tonnes per year).

Infrastructure of the coal handling facility will comprise a station for

unloading of railcars including heating system and tandem-type railcar dumpers; a covered storage facility ensuring environment protection (of up to 1 million tonnes in capacity); a pier of about 500 meters long equipped with ship-loading machines.

For transshipment of mineral fertilizers, the project foresees the construction of an unloading station and a covered storage facility for 125,000 tonnes. The berth will be equipped with ship-loading machines.

General cargo will be transhipped from the railway transport to open storage

yards by two RMGs. Vessels will be loaded by rubber-tyred Liebherr LHM420 cranes.

Each of the three facilities will have their own railway yards.

The project also foresees reconstruction of the existing berths, construction of a pier and dredging works to ensure accommodation of vessels with a draft of up to 14.5 meters.

Commercial Sea Port of Ust-Luga OJSC is a stevedoring company operating Multipurpose Terminal YUG-2 and Auto-Railway Ferry Terminal. In 2017, the terminals handled 3.8 million tonnes of cargo.



# DEVELOPMENT PROSPECTS OF RUSSIA'S CASPIAN PORTS

Russian ports of the Caspian Basin have been long suffering from the falling freight turnover. Lifting of sanctions on Iran, debottlenecking of Russian IWW and revival of cruise shipbuilding bring hope for busier domestic ports in the Caspian Sea. Approved strategy for their development foresees the construction of a new deepwater port in Caspijsk.

**T**otal capacity of Russia's Caspian ports exceeds 20 mln tonnes per year. Between 2011 and 2016, their loading decreased by over 1.5% to 30% of capacity. In 2016, the ports of the Caspian Basin handled only 6 mln tonnes of cargo.

The decrease of throughput should be attributed to different factors, first of all, to the isolated location of the Caspian Sea. For Russia, the prospects of sea-borne trade in the region are mainly associated with Iran and with India via Iran since other countries in the region have and borders with Russia, well developed rail and highway links. For a long period Iran was under international sanctions and trade relations with that country were difficult. Transit flows faced difficulties caused by the depth of the Volga-Caspian Canal and other inland water ways. Those factors hindered investments into Caspian ports which are badly in need of modernization today. For example, the port of Makhachkala lost more than 70% of its throughput due to technical problems with oil cargo transshipment.

Another port of the Basin, Astrakhan, is located within the city limits, which hinders its development. It also requires icebreaker support in winter navigation season. The port considerably depends on the economy of Iran which is actively developing its own iron and steel industry, hence the fall in transshipment of Astrakhan's key cargo — ferrous metal.

The fall of the demand for ferrous metal had even more serious implications for port Olya as this cargo accounted for some 80% of the port's throughput. The port is currently sustained by grain transshipment. Since Olya is the only port in the Basin located beyond the city limits, there were plans to shift port facilities from Astrakhan to Olya but they remained ink on paper.

Strategy for the development of the Caspian Basin ports foresees the expansion of their annual throughput to over 14 mln tonnes including 7 mln tonnes of grain. For that purpose, the existing facilities are to undergo modernization, ferrous metal transshipment facilities are to be converted into grain transshipment facilities, two new ports are to be built as well as a deepwater

port. The deepwater terminal is supposed to handle grain and containers, its capacity is to make 3 mln tonnes of grain per year. Dredging is to be performed by yet-to-be-built Russian ships.

According to the Strategy authors, implementation of those tasks will be facilitated by the trade with Iran and by the development of transit by international corridor Sever-Yug (North-South) involving inland water ways of Russia. Construction of the Bagayevsky and Gorodetsy hydrosystems will, in their turn, give an impetus to the development of Russian IWWs.

Besides, there is a plan to develop cruise shipping in the Caspian Sea.

So, there are economic and political prerequisites for revival of the ports in the Caspian Basin which have been suffering for a long time from the fall of throughput. Successful implementation of the announced plans will let not only revive but create even stronger economic and political links with Iran, India and other countries in the region.

*Vitaly Chernov*

# DEEP SEA AREA OF THE PORT OF ARKHANGELSK AS A DRIVER OF THE ARCTIC AND THE NORTHERN SEA ROUTE DEVELOPMENT



The project of a deep sea port area in the Port of Arkhangelsk is being implemented at the initiative of the Government of the Arkhangelsk region and under the management of the Arctic Transport & Industrial Hub Arkhangelsk JSC (ATIHK Arkhangelsk). The project is carried out within the framework of the country's strategic task for regional development of the Russian Arctic zone. The project successful execution will strengthen Russia's role in the system of global transport corridors, and will contribute to the formation of effective logistics for the development of hard-to-reach offshore areas in the Barents, Pechora and Kara seas and onshore projects for the development of the Arctic coast of the Russian Federation.

**T**he project includes the construction of a modern transport and industrial hub with an annual capacity of nearly 37.9 million tonnes by 2035. Completion of dredging works will enable the deep sea area of the Arkhangelsk seaport to accommodate Panamax vessels with a maximum draft of 14.5 meters and up to 74,300 DWT. The current phase of the project includes the construction in the port territory of six terminals designed for handling mineral fertilizers, steel, bulk and timber cargoes, liquid bulk, gas condensate and break bulk cargo.

Work has been under way to develop stage-by-stage construction and commissioning of the terminal facilities. This will ensure smooth and phased execution of the project. Besides, the project developers conduct a study to how synchronize the terminal facilities phases commissioning and the project of development of adjacent infrastructure. In particular, assessment of the impact of the following infrastructure projects on freight

throughput at the deepwater area of the Port of Arkhangelsk nears completion: BELKOMUR, the Northern Latitudinal Railway and Murmansk Transport Hub. Preliminary analysis shows that the projects of Murmansk Transport Hub (MTU) and the deepwater area of the Port of Arkhangelsk have absolutely different sources and types of cargo. For example, MTU is focused on coal handling, while this commodity accounts for no more than 6% of the total cargo volumes of the deep-sea harbor of Arkhangelsk and BELKOMUR freight is largely comprised of exported mineral fertilizers delivered from the Bereznikovsk-Solikamsk rail junction in the Perm region.

The deep-sea port area will be based 52 km to the north of Arkhangelsk in the basin of the Dvina Gulf (near the village of Kuya, Primorsky Municipal District, Arkhangelsk Region). The site was chosen as this is the shortest access to allowable depths of the White Sea (the access navigation channel is 10 km), and

also features more favorable hydrometeorological conditions in comparison with the current port. This location of the future port area will allow maintaining the allowable depths and will ensure navigation during the winter navigation period with optimal operating costs. The construction of roads and railways will ensure easy access to the future deep sea area of the Port of Arkhangelsk.

ATIHK Arkhangelsk JSC has completed preliminary works on the project implementation, including:

- the signing in October 2016 of Joint Development Agreement (JDA) with Poly International Holding Co., Ltd., general partner and participant in the project of deep sea port area. Currently, the investor conducts a study the technical, organizational, legal and financial model of the project;
- obtaining approval from Rosmorrechflot in October 2017 of the Declaration of Investment Intent;
- confirmation of 45% of the future cargo volume supply under the project by 2025;
- completion of preliminary site investigation and determination of the proposed location for construction of the deep-water area;
- negotiations about participation in the project with large financial institutions and development companies;
- talks to attract potential partners (cargo owners, investors, transport companies);
- determination of the parameters of state involvement and finalization of the project documents package.

In accordance with the project schedule, as stipulated by the Declaration of Intent, it is planned to implement activities plan in the next two years aimed at preparing and signing of a concession agreement. If the project development remains on track, the first phase facilities will be launched in 2023 with commissioning of the second phase facilities by 2029.



**Lev Levit, Advisor to Arkhangelsk Region Governor on Arctic Development comments:**

— The Port of Arkhangelsk, the first Russian port for international trade and the cradle of shipbuilding of Russian state, had played an important strategic role of a stronghold during large-scale warfare. Arkhangelsk has always acquired special significance at the turning points of Russian history.

Modern industrialization of the Russian North and the Russian Arctic is also impossible without the port participation. Taking into account the development plans, the Port of Arkhangelsk will combine multipurpose and dedicated sites. In the nearest future, the port, while maintaining the status of the main «supplier» of northern projects and territories, will increase handling of volumes of break bulk, small and medium-tonnage bulk and steel cargoes. The construction of the deep-sea are will allow handling of dry bulk and liquid bulk goods and cargoes that require dedicated sites for transshipment.



**Viktor Ikonnikov, Deputy Governor of the Arkhangelsk Region for Strategic Planning and Investment Policy comments:**

— The volume of cargo throughput of ATIHK Arkhangelsk is estimated at 37.9 million tonnes. The cargo base is to be formed by shifting cargo flows from the ports of the Baltic States and Ukraine, thanks to freight to be transported by the future Northern Latitudinal Railway, and cargoes that will be transported through the Northern Sea Route.

Obviously, the «Belkomur» project offers new opportunities for the development of the deep-sea port thanks to the cargo to be transported along the future railway line. There is certainly a synergy effect from the synchronization of the launch of the port project with that of Belkomur, but not to such an extent as to cast doubt on the implementation of the deepwater port project. The matter is that we still have a reserve throughput capacity on the existing Northern Railway (SZD). The federal highway M8 is also not so busy and can also be utilized to deliver cargo to the port.





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# MULTITASK HARBOR SERVICES IN UST-LUGA

Expansion of the port infrastructure inevitably requires the harbor fleet build-up. In three recent years Baltic Sea Tug Agency (BSTA) operating in the largest in the North West Russian port has actually conquered the market segment: the fleet operator's tugboats currently serve more than 80% of merchant ships making calls at the Port of Ust-Luga. The Company's General Director Konstantin Goncharov told why the vessels owners trust their fleet to BSTA.

— **Mr. Goncharov, what is an impetus for development of Baltic Sea Tug Agency?**

— It's interesting to work in the port, the country's young port as well as our company, the port, which in a short time has turned into one of the key transport hubs in the Gulf of Finland and has become a competitive one among both Russian and European ports and continues its development. Of course, this sets the bar high for us as the service company, and gives an impetus to our further development.

— **How many vessels do you handle annually?**

— There are some 3600 ships calling at the port a year, primarily large-tonnage vessels, oil product tankers, coal bulk carriers, and 80% of these vessels use our services. What attracts them? The quality of our work, complete performance, our responsibility in performing each towing operation. We do not make idle promises but fulfill our obligations instead. In addition, we offer pricing flexibility and, in my opinion, the right attitude towards clients. For example we do not

refuse unprofitable towing service orders, realizing that such vessels are also a part of port as a living organism. In addition, in order to increase the efficiency of our services, we are ready to partner with others and engage our competitors in market to work together. I especially want to mention our partner Portoflot.

— **Last year your fleet comprise of six vessels was beefed up with new Damen ASD Tugs 3010 duo. Was the investment justified?**

— Undoubtedly, the new azimuthing stern-drive tugs feature state-of-the-art capabilities: powerful, fast, maneuverable which enable us to provide services at the highest level.

This year we plan to build at least one more tug and another auxiliary vessel that will allow us to expand into a multitask harbor services.

— **Could you give us a bit more details on that? What sort of services are you talking about and how much are they required today?**

— This is a new segment of business

we have discovered with our multitask ship «Martin». This is a tug that can operate as a carrier, a minesweeper, survey boat and handle anchors and, finally, as a supplier. This class of multi-task vessels are in great demand today, in the period when port facilities of various purposes are being designed and built, particularly to support inshore construction. These vessels are mobile, multifunctional and cost-effective. Previously, to perform hydraulic engineering works contractors had to deploy several types of equipment: floating cranes, barges, auxiliary vessels, etc. Now all these operations can be executed by just one multifunctional vessel. The Martin has already had a backlog of orders for her services. During this summer navigation, the tug is contracted to work in Dal'naya Bay and in another developing Russian harbor, the Port of Sabetta. Therefore, assessing the high needs of marine constructors in multipurpose marine equipment such as Multi Cats, the company plans to purchase yet another vessel of this class and further develop this highly effective and in-demand type of services.



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## Sergey Kukushkin: LARGE SHIPPING COMPANIES COME TO THE NSR

Considerable growth of cargo shipping in the Arctic has been driven last year by the Northern Sea Route, where new routes for the export of Russian hydrocarbons begin. Large foreign ship owners also use the lanes of the Northern Sea Route. That was the topic of IAA PortNews interview with Sergey Kukushkin, Acting Head of the NSR Administration.

— **Mr Kukushkin, could you tell us the results of 2017?**

— In 2017 cargo traffic on the Northern Sea Route totaled more than 8,000,000 tonnes and exceeded the annual result of 2016—7,265,655 tonnes. This is a 8.5% growth, and transit cargoes were not taken into account.

— **Was there any case of the NSR passage permit refusal? If so, what was the reason?**

— Permit-based procedure is established for navigation in the Northern Sea Route water area according to the NSR Navigation Rules approved by Russia's Ministry of Transport (Decree No 7 dated 17.01.2013). The number of permit rejections is very low as compared with the number of issued permits. Last year the NSR Administration has issued 642 permits and only two notices of refusal. It should be noted that after those vessel owners rectified fully the deficiencies and reapplied they obtained the permits for navigation in the NSR waters. The 2016 year saw three refusals with two cases of obtaining permits upon rectification of deficiencies.

— **What are the current and new projects generating the cargo base of the NSR?**

— Vessels of Norilsk Nickel that enter the Yenisei river have been traditionally making the bulk of the cargo flow. Crude oil produced at Gazprom Neft's Novoportovskoye field has been going westwards from the Gulf of Ob starting from the last year. Cargoes have been carried under the Northern Delivery programme as well as construction cargo.

The cargo base is expanding with the launching of new projects. In the nearest future, VostokCoal is going to launch the project on transportation of coal from the Malolemberovskoye field.

Successful pilot shipments of coal from the Yenisey Bay were performed in the winter navigation of 2016–2017. Eastward cargo shipments are expected for the Ministry of Defence and for construction of berthing facilities at the port of Pevek where FNPP Akademik Lomonosov is supposed to be placed.

The most ambitious Arctic project, Yamal LNG I was launched in late 2017 with first LNG shipments from the Port of Sabetta. The new port welcomes new Yamalmax tankers. Of course, with the assistance of icebreakers escorting them to Sabetta (in the Gulf of Ob).

— **The Polar Code has been in force for almost 1,5 year. Are there any comments or recommendations for ship owners in this respect?**

— I would remind that as from 1 January 2017 the requirements of the Polar Code regarding maritime safety became mandatory for new ships built on or after that date. The ships built before that date should be brought into compliance with the safety requirements by 2018. In this respect, RF Ministry of Transport amended the NSR Navigation Rules accordingly (Order No 5 dated 9 January 2017).

Now, to obtain a permit for navigation in the NSR waters, the documents required by the NSR Administration are to be supplemented with a Polar Ship Certificate. Having promptly informed the ship owners the NSR Administration continues explaining new requirements for the interested entities.

— **Last year has seen the first NSR transit from China to Europe made by a COSCO ship. What is your opinion about this operation? Are there applications from large shipping companies for passing the NSR?**

— Actually, the first ship to transit the Northern Sea Route was Yong Sheng of Cosco Shipping which sailed from the port of Taicang (China) to the port of Rotterdam (the Netherlands) back in 2013. The ship was escorted by nuclear-powered icebreaker 50 Let Pobedy. Having appreciated the advantages of the NSR, COSCO has been using this Arctic route almost every year since that time. And this use is gaining momentum which brings positive results in terms of NSR transit volumes.

Other large shipping companies come to the lanes of the Northern Sea Route. For example, Maersk has moved from something in mind to something in kind. During their visit to our office last November, Maersk representatives were thoroughly consulted through the rules of navigation in the Northern Sea Route waters as well as the permit obtaining procedure. The company is planning a pilot transit in the summer navigation period of 2018. It can be a container carrier of more than 3,000 TEUs in capacity.

In 2017 the NSR Administration was also visited by a representative of Oldendorff Carriers. It is one of the world's largest dry bulk shipping companies operating 600 vessels. I would emphasize that the company has an experience of passing the NSR. In summer 2016, two vessels of this company delivered 70,000 t of coal each from Canada to Finland. Besides, we are in active partnership with Sovcomflot, Gazprom Neft, Norilsk Nickel, Dynagas, Jan De Nul, Hansa Heavy Lift.

#### — Are there any improvements of the navigational support on the NSR?

— As of today, the package of marine charts covering the Northern Sea Route water area numbers 680 charts. However, sailing through the lanes with the best navigational conditions is limited by the depth of the Sannikov Strait (12.8 m minimum on the recommended lanes). To ensure passage of large capacity vessels with larger draft it was necessary to perform hydrographic survey and development of new deepwater lanes north of the Anjou islands as required by S-44 of the International Hydrographic Organization. Now, there is a deepwater lane available there for heavy draft ships.

Surveying works have been also performed last year at the Yenisey and Kolyma rivers as well as at the approaches to the Gulf of Ob in order to ensure safe navigation of vessels taking into consideration the traffic growth.

Modernization of the navigation infrastructure is underway in the water area of the Northern Sea Route. For example, aids to navigation were earlier powered by radioisotope thermoelectric generators (RTG), which was not good for environment. By the end of 2015, all RTGs were taken out of the islands and coasts of Russia's Arctic seas. As of today, aids to navigation are powered by energy produced by wind, sun and new generation batteries developed in compliance with the tough environmental requirements.

#### — What about the development of search and rescue centers along the NSR lanes?

— A Rescue and Coordination Center has been operating for several years at port Dikson with its branches located at Tiksi and Pevek. The Dikson Center is operating round the year with those at Tiksi and Pevek being seasonal sub-centers. All the locations are equipped with oil spill response facilities: skimmers, booms and motor boats. Similar equipment is available at the Vaygach and Krasin icebreakers.

Search and rescue fleet is being permanently upgraded with the construction of multi-functional rescue ships including ice class vessels. In particular, icebreaker Baltika fitted with emergency equipment is on a round-the-year duty at the Kamenny Cape terminal.

*Nadezhda Malysheva*



## THE FLAG OF RUSSIA WAS GIVEN A PRIORITY

At the end of 2017, a law was adopted in Russia that gives the Russian flagged vessels a priority to transport cargo transshipped on the Northern Sea Route, regardless of the place of its extraction. This law will contribute to the localization of Arctic shipbuilding in Russia and will allow the domestic enterprises to load the relevant orders.

**V**iktor Olersky, Deputy Minister of Transport of Russia, Head of Rosmorrechflot comments: «This law is a good signal for shipping sector and shipbuilding industry. Actually, it is not only about hoisting the Russian flag, but also about making sure that the state flag and the programme of local shipbuilding would work in conjunction with each other,» commented.

Traditionally, the St. Petersburg and Leningrad region based shipyards were specialists in the Arctic shipbuilding. However, the project of the shipbuilding complex Zvezda near Vladivostok is now of great importance. The new dedicated shipyard is being built by Rosneft for the development of large-tonnage and Arctic shipbuilding in Russia.



# FLEET HORIZONS

After a long period of stagnation Russia has at last embarked on wide-scale construction of civil vessels. However, the process of fleet renovation can be hindered by low content of serial construction and imbalance between different types of transport.

**M**ore than 1,000 ships and marine equipment units were built between 2010 and 2018 under the orders of state and private companies. 276 units were financed by the federal budget and about 100 units — by local budgets with the rest financed by non-budget sources.

In the reporting period, investments into construction of civil ships and marine equipment totaled RUB358 billion with the federal budget accounting for only 15% and local budgets for 2%. So, private investors,

Russian shipping companies, have injected RUB294 billion over the recent eight years.

Russia has also begun building passenger ships, mostly vessels of low passenger capacity. In this segment, the customers took delivery of 141 ships including boats. The federal budget financed the construction of almost a half of passenger ships — 69 units. Local budgets invested in construction of 11 ships.

A general conclusion is the following: in recent years Russia has managed to

start mass renovation of its civil fleet. Among the key challenges is a content of serial construction and availability of long and cheap money. State support measures including subsidies to cover loan and leasing interest rates as well as ship utilization grants and a programme of privileged leasing are supposed to help. Moreover, the segment of mixed river/sea shipping is competing with the railway transport with this competition able to hinder the development of shipbuilding.

*Vitaly Chernov*



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# 30 SEA/RIVER TANKERS FOR VOLGOTRANS

Shipping company Volgotrans (Samara, member of Russian Chamber of Shipping) has signed an agreement with United Shipbuilding Corporation (USC) for construction of more than 30 sea/river tankers of 6,000–7,500 DWT within three years, Aleksey Palgov, Deputy Director General of the company told IAA PortNews. The ships will be built to Russian

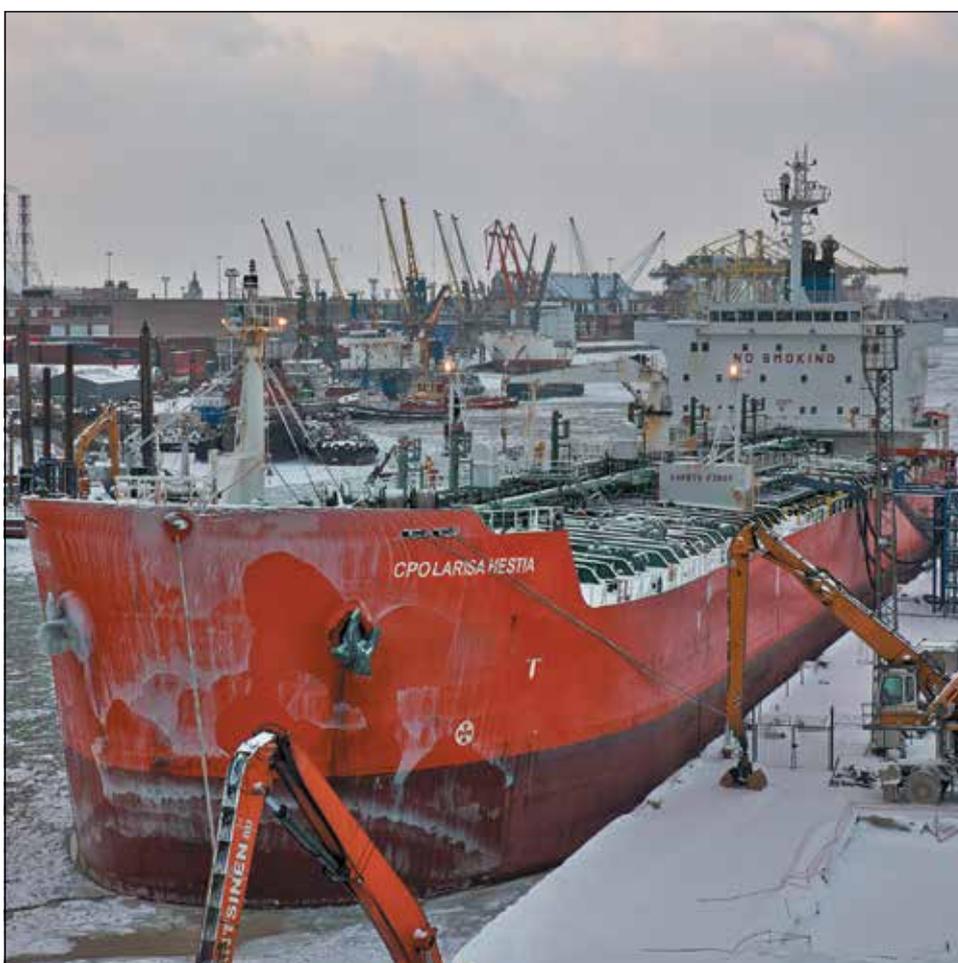
designs and will sail under the flag of Russia. The orders will be placed at both USC and non-USC shipyards. All state support measures will be used to finance the project: subsidized leasing, utilization grant and Government Decree No 383 on refunding of loan interest rates.

“The agreement was signed under Volgotrans’ programme on fleet upgrading

and state programme on civil shipbuilding development. That is the largest agreement on construction of commercial cargo ships signed in our segment over the recent decades”, said Aleksey Palgov.

It was the first recipient of the ship utilization grant.

The fleet of Volgotrans numbers 20 ships mostly chartered by Rosneft.



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# THE WORLD'S NORTHERNMOST FLOATING NUCLEAR-POWERED PLANT

On 28 April 2018, the world's first floating power unit, the Akademik Lomonosov, left the Baltiysky Zavod shipyard where it had been under construction from 2009.

“First, the FPU with no nuclear fuel will be towed from the territory of the Baltiysky Zavod shipyard (Saint-Petersburg) to the berth of FSUE Aomflot in the port of Murmansk. The second phase is schedule for summer 2019 — the fueled FPU with crewmembers onboard will be delivered from the port of Murmansk to the port of Pevek”, said Dmitry Alekseyenko, deputy head of Rosenergoatom Concern's Directorate for construction and operation of FNPP.

“The following activities are to be performed in the territory of FSUE Atomflot in Murmansk — our next challenge is to prepare the facility for taking nuclear fuel”, said Vitaly Trutnev, head of the Directorate for construction and operation of FNPP.

FBI Marine Rescue Service of Rosmorrechflot (Federal Marine and River Transport Agency) will provide a package of services on towing and maneuvering related to transportation of the Akademik Lomonosov FPU (floating power unit Project 20870) from Big Port St. Petersburg to the port of Murmansk

and its standard towing from Murmansk to the port of Pevek. The construction of coastal facilities and hydraulic engineering structures under FNPP project in Chukotka is expected to be completed in August 2019.

Nuclear reactor loading and its start-up is scheduled will be held in autumn 2018 in Murmansk. Then FPU will be delivered by the Northern Sea Route to the place of operation in Pevek where it will be connected to the coastal infrastructure.

When put into operation in 2019, the FNPP will be the world's northernmost nuclear-powered plant. It is to replace the technologically obsolete Bilibinskaya NPP and Chaunskaya TPP.

The floating power unit (FPU) of Project 20870 is to operate as a part of floating nuclear power plant. The station is equipped with KLT-40 C reactors generating up to 70 MW of electricity and 50 Gcal / h of heat energy in the nominal operating mode, which is enough to support the city with a population of more than 200 000 people. The floating power unit is intended for operation in

the Far North and in the Far East regions. The lead FPU, the Akademik Lomonosov FPU, is intended for the floating nuclear power plant in Pevek (the Chukotka Autonomous District). It is a unique project of the world's first mobile power unit of low capacity. The main purpose of the project is to supply power to large industrial enterprises, port cities as well as offshore gas and oil platforms.

FPU characteristics: LOA: 140 m, beam: 30 m, draft: 5.56 m, displacement — 21,500 tonnes, crew — 69.

The facility can easily be converted into a desalination plant producing up to 240,000 cbm/day of fresh water. The floating plant's design service life is 35 to 40 years. Reactor refueling is to be performed every 2.5–3 years.

The floating nuclear power plant is overdesigned to meet all the possible risks and ensure the reactors' invulnerability in case of tsunami and other disasters. Nuclear processes comply with all the requirements of International Atomic Energy Agency and present no risks for the environment.



# NORDIC ENGINEERING CHOSE THE RUSSIAN MARKET



New Russian design company Nordic Engineering JSC established by a large German shipbuilder, Nordic Yards Holding GmbH, has obtained from its parent company the most advanced technologies and entered the market of Russia. Today, this fully Russian engineering company has asserted itself with a unique project of a crab boat that can cost just \$10–12 mln, says Vitaly Gvozdev, Director General of Nordic Engineering JSC.

— **Mr. Gvozdev, could you, please, tell about your company.**

— Nordic Engineering left the structure of its major shareholder, Nordic Yards GmbH, in December 2016. As a Russian design company, we are only one year old and we hold the competence obtained earlier.

I would remind, for many years Nordic Yards Holding GmbH has been taking part in all German shipbuilding projects including those on construction of sophisticated rescue ships for a Russian customer. We have always acted as a consultant under Russian orders being, I could say, a guide to Russia. So now we are absolutely prepared for working and designing in Russia and we can do it for reasonable money. Besides, we are ready to provide a range of different services in the market of marine and river designs.

— **Why have you opted for a Russian market when Nordic Yards was reorganized?**

— Russia is a large market with high potential despite the crises developments worldwide. Russia is globally attractive for all leading shipbuilders and suppliers of equipment. In Russia, we see a wide support from the state and private business. Therefore, we think the future belongs to domestic shipbuilding in Russia. We cooperate with large state shipyards, members of the United Shipbuilding Corporation, and with private ones like Okskaya Shipyard JSC (UCL Holding). And we are ready to compete with foreign shipbuilders.

The shipbuilding market of CIS countries is also interesting for us and we are negotiating possible cooperation with companies in these countries.

Nordic Yards Holding GmbH has handed over to Nordic Engineering absolutely all competences, best practices and findings of engineering surveys related to construction of sophisticated offshore structures, vessels, rescue fleet, offshore platforms, passenger and shipping ships, etc. There are best practices including those in the field of optimal hull shape that are among the most significant aspects in designing of any Arctic class ship. We are going to apply all those technologies in domestic shipbuilding. I think we can present our work as localization of German principles and approaches in Russia engineering.

Nordic Engineering JSC is not only a design organisation. We offer our potential customers a number of other services including project support, post-warranty maintenance or even project modernization as well as selection of a shipyard and, if necessary, conditions of financing.

— **A successful debut in any market is guaranteed by an exclusive offer. What is the project you offer in the shipbuilding market of Russia?**

— As of today, all crab boats are old vessels that underwent conversion. After 3–5 years of operation following the modernization and repair more old vessels are acquired and the history repeats itself. For the first time in Russia we have

developed a dedicated crab boat design complying with all current requirements in the field of safe navigation. The ship is comfortable, ergonomic and easy to operate.

The vessel is intended for catching and freezing of crab. It is also equipped for processing and transportation of frozen goods and for transportation of live crab.

The length of the crab boat is about 60 metres, width — 11 metres, capacity — about 1,200 tonnes, endurance — up to 55 days.

Quite a small ship can carry 4,500–4,700 conical crab traps.

— **What is the cost of a crab boat built to the design of Nordic Engineering?**

— According to our preliminary estimations, such a ship can cost no more than \$10–12 mln.

I think most of Russian shipyards are able to build this crab boat. It should be noted that the competence of our personnel also allows for construction of this ship at foreign shipyards. Yet, I think it should be built in Russia. State support measures like “underkiel quotas” bill covering small and medium capacity vessels and “utilization grants” will allow for fast and economically viable construction.

I suppose that the first series of crab boats will number at least 5 units. The lead ship can be built within 18 months provided that the shipyard and subcontractors involved in supply of components operate as scheduled. The series can be completed within three years.

*Interviewed by Nadezhda Malysheva*



# LNG TO DRIVE ARCTIC SHIPPING DEVELOPMENT

Liquefied natural gas is becoming the key driver for the development of the Arctic and Arctic shipping, both in Russia and in the USA. With the Alaska LNG project the two countries obtain an opportunity to settle the issue of shipping in the Bering Strait, which is essential for the functioning of the Northern Sea Route and for LNG exports from Alaska.

**T**he USA is going to boost LNG production. For that purpose regasification terminals are being converted for gas liquefaction. On the one hand, that will create a competition with the Russian LNG, on the other hand — will settle the issue of shipping across the Bering Strait.

In the end of 2017, Alaska authorities approved the expansion of the Point Thomson project (LNG production, Point Thomson reservoir, Alaska's North Slope). According to analysts, annual LNG production under the project will reach about 20 mln tonnes by 2020-ies. Just like Russia's project Yamal LNG, the Alaska LNG project involves Chinese capital.

Liquefied gas is supposed to be transported to the Asia-Pacific region. For example, it will take about 7 days to deliver gas from the Point Thomson to Japan. The route will run across the Chukchee Sea and the Bering Strait, eastern gate of the Northern Sea Route and a border area between Russia and the USA.

The problem resides in the following fact: maritime boundary between the USA and Russia runs along the Bering Strait under a treaty on delimitation line

of maritime spaces signed by the United States and the USSR on 1 June 1990. The agreement has not yet been ratified by the Russian Parliament. Besides, the Bering Strait is recognized as waters open for international shipping and covered by the UN Convention on the Law of the Sea (1982) while the USA is not a party to UNCLOS1982.

Meanwhile, Russia also has its plans on LNG exports by eastern route. The year of 2017 saw the first commercial voyage of the Christophe de Margerie tanker (owned by Sovcomflot), which delivered a batch of LNG by the Northern Sea Route, from Norway to S. Korea. In order to develop the eastern route there is a plan to build the most powerful leader type icebreakers. Besides, Russia is interested in short-sea and transit cargo transportation along this route.

As long as the Bering Strait was not in intense use, there were no special problems. However, with the development of the Arctic shipping unsettled issues can hinder the development of both countries.

To settle the situation, the Russian Federation and the USA filed a joint note to the International Maritime Organization (IMO) in December 2017. The two

countries suggest designating in the Bering Strait and at the approaches two-way shipping lanes open for free passage of vessels flying the flag of any state. In particular, it is suggested to arrange the traffic of ships sailing in the Bering Strait and between the coasts of Russia and the USA in the Bering Sea so that to decrease the risk of collision by separating opposite-direction flows and to prevent/reduce the risk of pollution or other damage to marine environment.

The designation of two-way routes will ensure availability of free, internationally recognized corridors for vessels sailing across the Bering Strait in the interests of the Russian Federation despite any shifts in foreign policy of the USA.

“According to preliminary estimates, shipping lanes in the Bering Strait can obtain a legal status before the end of 2018”, Vitaly Klyuyev, Director of RF Transport Ministry's Department of State Policy for Maritime and River Transport, told IAA PortNews.

So, the growth of LNG production in the USA will contribute to cooperation of the two countries in the sphere of Arctic shipping despite sanctions.

*Vitaly Chernov*

# LIQUEFIED PROSPECTS

Russia, along with Qatar, Australia and the USA, will be among the world's largest suppliers of LNG. However, its competitiveness should be improved through logistics optimization while LNG as bunker fuel can be quite expensive due to dependence on foreign technologies and equipment.



Although the industry of liquefied natural gas is quite old, extending back more than half a century, the interest to it has been growing globally during the recent years. It was driven by rapid development of the Asian countries, primarily China, where gas consumption has surged, and by the efforts of gas suppliers located far from the sales markets (first of all, Qatar) on creation of LNG facilities. Another factor contributing to the development of LNG consumption in some Asian countries (Bangladesh, Pakistan, etc.) was the growing number of FSRUs which provided those countries with a possibility of fast entering/withdrawal from the LNG market.

According to the findings of the research performed by Skolkovo Energy Center, “How Russia should use a window of opportunities amid transformation of the global LNG market”, there are more than 20 FSRUs in the world today with some 40 projects at different phases of implementation. The key advantages of floating storage and regasification units are the following: it does not take long time to put them into operation (less than a year, on the average) and it is possible to convert LNG tankers into FSRUs. As for construction of an on-shore regasification terminal, it takes at least five years and requires investment of about \$1 billion.

Russia, which has been traditionally supplying gas under long-term contracts through a smooth-running system of pipelines, used to invest relatively small amounts into LNG infrastructure over the recent years. As of today, there are only two large-scale LNG facilities in Russia — it is a plant of the Sakhalin-2 project and the first phase of the Yamal-LNG project. If all the plans announced in Russia are implemented, annual gas liquefaction capacity of the country can reach 80–90 million tonnes by 2030 which is comparable to the volumes planned by the key rivals of Russia.

The weakness of Russia's LNG (especially when it comes to Arctic plants) is the expensive logistics and crucially high dependence on foreign technologies and components.

Currently, there are three major centers of LNG production being developed in Russia: Arctic (Yamal, Gydan), Baltic and the Far East. It is the Arctic where the most of production is expected: when fully operational, Yamal LNG project will produce 16.5 million tonnes of LNG per year, Arctic LNG-2—19.8 million tonnes per year. Arctic LNG-1 and Arctic LNG-3, if implemented, will add 39.6 million tonnes per year. So, LNG production in Russia's Arctic region can exceed 70 million tonnes per year.

Implementation of all projects announced in the Baltic region, with Baltic LNG being the largest one, can ensure production of 12–13 million tonnes of LNG per year.

In the Far East, there is a production facility built under the Sakhalin-2 project. If the plans on modernization and construction of the third phase are implemented, it will produce about 16 million tonnes of LNG per year. There is also a plan, in the long term, to build a Far East LNG plant for production of some 5 million tonnes per year. Vladivostok LNG project will add some 1.5 million tonnes

per year. So, the region will be able to produce up to 23 million tonnes of LNG per year.

One of the ways to raise the competitiveness of Russian LNG is to create a gas hub able to concentrate considerable volumes of gas for distribution among the sales markets.

NOVATEK has a plan to create an LNG reloading complex in Petropavlovsk-Kamchatsky with capacity of 20 million tonnes. The facility due to be ready by 2023 would transship LNG from Arctic tankers to the conventional ones. That would let decrease the expenses for LNG transportation from the Arctic but a considerable part of the route will anyway run along the NSR featuring a seasonality and entailing icebreaker support expenses. Similar transshipment point is supposed to appear in the port of Murmansk. If Russia builds a sufficient number of Leader-type icebreakers (it was earlier announced that Russia will need three icebreakers of this type) capable of round-the-year operation and leading large convoys of ships, the cost of transportation could be decreased.

## BUNKER PROSPECTS

The prospects of using LNG as a bunker fuel are primarily associated with the Baltic Basin as it is a part of the sulphur emission control area (SECA). Some LNG projects announced in the Baltic region (at the ports of Vysotsk and Saint-Petersburg) are small scale projects focused on bunkering. The key factor here is the price of LNG. To ensure competitiveness it should be somewhere between the price for heavy fuel oil and the price for diesel fuel.

Taking into consideration the data from open sources, the price of LNG (per tonne of oil equivalent) transported from Baltic LNG to Europe will be as high as about \$200. If regasification and transportation costs are excluded, the cost of production and liquefaction will make about \$163 pmt. With the current price of \$330 pmt for heavy fuel oil and \$607 pmt for diesel fuel sold in Saint-Petersburg this LNG price will ensure a competitive price of product offered to vessels. Yet, it should be note here that these calculations are correct for large scale production while the projects announced in the Baltic region are not large. Besides, they apply foreign technologies and equipment. Therefore, the price can prove to be much higher. This price can also be increased with the expenses of bunkering companies for construction of infrastructure and ships supplying LNG bunker.

The potential of further LNG price reduction in Russia is based on the development of Russian liquefaction technologies and localization of key equipment manufactures. It is also necessary to launch serial construction of LNG carriers and LNG bunker-supply ships in Russia. Construction of large capacity gas carriers is supposed to be arranged at the Zvezda shipbuilding center. As for LNG bunker-supply ships, Russia's Ministry of Industry and Trade is implementing its own project “Development of gas-fuelled fleet for navigation in coastal waters and inland water ways”. Implementation of the project (its publicly-funded part) is a part of the state programme “Development of shipbuilding and facilities for offshore fields, 2013–2030”.

If Russia does not develop its own technologies and does not produce basic equipment, LNG industry development in the country will bring no sense for the national economy since the revenue from LNG sales will be overlapped by expenses for purchase of foreign technologies and equipment.

*Vitaly Chernov*



# HARBOUR DREDGING IN VADO LIGURE

## DUTY CYCLE CRAWLER CRANE HS 8130 HD JOB REPORT

### SITUATION

As one of the major hubs for ferry services to Corsica and Sardinia, the Port of Vado Ligure in northern Italy is in the process of significantly extending its capacities. In order to be able to accommodate not only more, but also larger vessels the Port Authority has commenced on a project to deepen the waterways in the port area to between 11 and 14 m, as well as to add new piers in the bay area.

### SOLUTION

Dredging contractor Co.Ed.Mar from Chioggia (Italy) is using its self-propelled barge «Wise» to remove the sediments. It is equipped with a brand new Liebherr duty cycle crawler crane

type HS8130 HD with hydraulic clamshell bucket. Thanks to the optimum grab capacity of 6 m<sup>3</sup>, quicker movements and larger outreaches can be achieved during operation. Co.Ed.Mar attains cycle times of only 45 sec. when dredging material from the seabed and 25 sec. when unloading the vessel. This results in an average turnover of approx. 400 m<sup>3</sup> per hour (equal to the barge loading capacity).

### ADVANTAGES

A number of factors contributed to Co.Ed.Mar's decision to choose the Liebherr duty cycle crawler crane HS8130 HD. With a total weight of approx. 120 t including crawlers, the machine can be quickly and effortlessly positioned on or off the barge so providing the owner with a high level of flexibility and the option to use the machine in different areas. The duty cycle crawler crane is a real all-rounder and can not only be fitted with grabs of capacities up to 10 m<sup>3</sup> for dredging or material handling purposes, but also with a whole range of attachments for deep foundation and lifting applications.



Machine type	HS 8130 HD
Engine power	505 kW
Grab volume	6–10 m <sup>3</sup>
Boom length	26 m (+ additional 6 m extension)
Line pull	2 x 35 t
Weight	approx. 120 t incl. crawlers
Turnover	400 m <sup>3</sup> per hour (clamshell dredging with 6 m <sup>3</sup> hydraulic grab)



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 See how it works

# ON-LINE CHARTERING

In 2017, the market of freight forwarding services saw the launching of an electronic exchange system for cargo owners to save money and for ship owners to increase earnings by up to 10% per transaction due to no brokers involved.

Modern technologies let create unified electronic platforms for transaction participants to find attractive offers and carry out direct negotiations, quickly and without involving any agents. This principle of interaction is applied in different areas of economic activity. For example, it is used by taxi aggregators such as Uber etc. Now, similar system named Frank Freight is available in the freight market.

Conventional scheme of operation in the freight market looked as follows: cargo owners and ship owners were looking for vessels and cargo via freight brokers. As an intermediary, brokers used to undercharge freight telling ship owners about lack of demand for transportation and 'unexpected' appearance of cargo while costs were overrated amid said to be absence of free vessels and 'fortunate' coming across the only one.

To escape the scheme unbeneficial for both ship owners or cargo owners, a new website Frank Freight <https://frankfreight.com>, was developed and launched about six month ago. The portal is an electronic exchange system and a sort of a professional networking site. To use the service, ship owners, cargo owners or their representatives should log on the website. Registration is free of charge.

Ship owners add to the database information about vessels. It is verified by IMO number. When the procedure is completed

none other than a ship owner can offer services of a certain ship. Cargo owners, in their turn, add information about themselves and their cargo. Thus, the demand and supply are available for all participants in the system. Having found attractive offers they can start direct negotiations through the website just like through a social network site. Their negotiations will not be available for other users of the site.

For example, a consigner can be in negotiations with a number of ship owners to select the most favorable terms of transaction. The paperwork is standard as required by the laws of all countries.

The system has been successfully working and is especially popular in the Black Sea region. It lets cargo owners save money and ship owners increase their earnings by up to 10% per transaction due to no brokers involved. Obviously, the more registered users numbers the system the more opportunities open for the market players.

However, the services of freight brokers will be still in demand. They can be useful for companies not willing to do this work on their own or not ready to develop non-core activities. In this case, brokers can represent their interests in the system. Unlike their conventional activities, brokers' work through this system will be transparent and controllable as transaction parameters can be checked easily if you log on Frank Freight.

Vitaly Chernov



**Vitaly Klyuyev:**

## **«SEAFARERS TRAINING SYSTEM IN RUSSIA COMPLIES WITH INTERNATIONAL STANDARDS»**

The system of training and certification of seafarers in Russia has been brought into compliance with the international requirements. Major efforts of the Transport Ministry and other ad hoc agencies have lead up to that. In his interview with IAA PortNews, Vitaly Klyuyev, Director of RF Transport Ministry's Department of State Policy for Maritime and River Transport, tells about training of shipboard personnel and about changes in the system of industry-specific education.

— **Mr Klyuyev, could you, please, tell about the system of training seafarers in Russia and major activities of the Transport Ministry in this sphere? What is the most important thing you would emphasize today?**

— The most important thing is to recognize the simple fact: our industry-focused educational institutions should be not process- but result-oriented. Who are those we are training? We should train seafarers. What is a seafarer is described by the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW, with Manila amendments) and by the STCW Code, which supplements the Convention. They set forth the

requirements for seafarers of different specializations. Our task is to build a system for training seafarers so that they comply with international standards at any step of their carriers.

In this respect, Russian Ministry of Transport has been doing a comprehensive and consistent work starting from 2009 when Manila amendments appeared on the horizon. We have performed regulatory and organizational activities that have shaped the current system of seafarers training in the Russian Federation. This system has been recently praised by the Secretary- General of the International Maritime Organization (IMO) during his visit to Russia.

We have approved Regulations on Certification of Seafarers which specify requirements for each phase of their training: basic education, certification with/without qualification testing, navigation and practical training, upgrade training when being promoted and changing positions.

In compliance with the mentioned Convention we have also created a system for recognizing educational organizations' right to train seafarers. This recognition is also the competence of the Transport Ministry. All educational organizations wishing a Harbor Master award their graduates with diplomas should obtain a recognition from the Ministry of Transport.

Moreover, we have elaborated requirements for simulator training and a mechanism for certification of simulator centers entitled to perform conventional training. In this respect, simulator centers should comply with the STCW Convention requirements and be recognized by the Federal Marine and River Transport Agency (Rosmorrechflot).

At last, we are completing our work on the document that formalizes requirements on minimum safe manning. When this document is issued — and we hope this happens very soon — the complete package of documents on training of seafarers will be available in the Russian Federation.

Besides, each educational organization or simulator center should have an effective Quality Management System to control conventional training of seafarers (which is required by STCW Convention). QMS effectiveness is to be confirmed through certification.

In line with the STCW Convention we have created a dedicated information system for a centralized record of diplomas and qualifying certificates issued at all levels of education. Now, all data about of each seafarer training (diplomas, qualification testing, length of sea-going service) is entered into the information system.

Thus, the Russian Federation obtains a unified, comprehensive, structured and legally recognized system (a system indeed!) for training and upgrading seafarers starting from their entry to the educational institution and up to the end of their carrier.

— **Does anybody control everything you have told about?**

— The Convention foresees regular inspections (once in five years) by independent experts in all countries where training of seafarers is performed. IMO held such an inspection in Russia three years ago and acknowledged that the seafarers training system in the Russian Federation complies with the Convention. The next inspection will be held in two years.

In 2018, we are starting stress-testing of our system. Throughout the year we will be testing all elements of the training system: simulator centers, Diploma Departments of Harbor Master's Offices, educational institutions, Ministry of Transport, Federal Marine and River Transport Agency and Federal Agency for Transport Supervision — all the elements will fall under this inspection.

I will ask the Russian Maritime Register of Shipping to perform this inspection and I hope for their consent. We will use the findings to correct our

activities and will have an independent inspection in 2019.

— **You inspected many industry focused educational institutions last year. What are the results?**

— In some cases we issued recognition certificates for reduced periods: one year or two (normally they are issued for five years) and we continue this practice today. The main cause is non-compliance of training methods with the Convention requirements and with national legislation. For example, instructors at simulator centers can set tasks for trainee at their own sweet will. Instructors are different while the Convention demands a formalized approach. According to the Convention, before training starts a trainee should be informed about knowledge he is going to obtain during the process, and methods he is going to apply for obtaining that knowledge, as well as how that knowledge will be checked. In many cases, training was not systematic though it is required to meet the Convention.

— **Do graduates of industry-focused institutions stay in the profession and in Russia? Is there any statistics?**

— When asked if they stay in the profession I will say "Yes". We demand that educational organizations conduct analyses of further employment and we pay attention to that when inspecting the institutions. It was quite unexpected for us to find out that almost 90% and more graduates (depending on different higher education institutions) stay in the profession.

As for their stay in Russia, we should take into consideration that domestic shipping companies are quite staffed. Wages of crewmembers, especially those of foreign shipping vessels, are comparable to wages offered by foreign companies. But I do not see any tragedy if a graduate with a Russian diploma is employed by a foreign ship — apart of earning money that would be brought to the Russian economy (since the family is here) he will get a different qualification. I do not mean that such qualification is better as compared with that obtained in Russia but it is different in terms of maritime culture, communication, globalization, cargo flows. Thus, we have a wider range of specialists for a practical reality in Russia. Shipping, as it is, is an international sphere and attempts to close international markets for our graduates will not do any good.

— **Are there foreign students in our industry-focused educational institutions?**

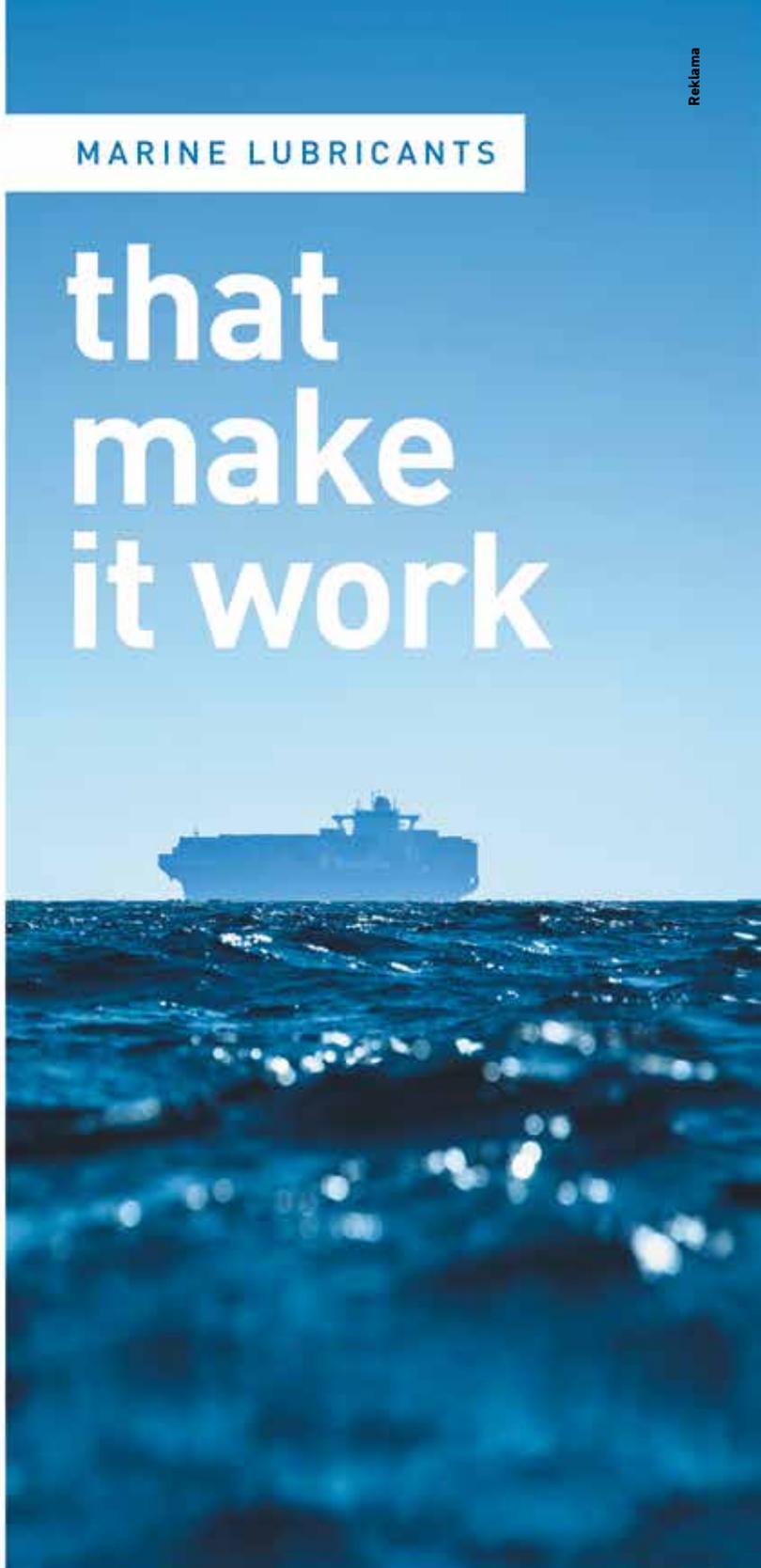
— There are foreign students but I would not say there are many of them — there is a lot to be done to this end. Today, we are traditionally focused on our partners of USSR times: Vietnam, Mongolia, Iran, India ... But I think our educational organizations should have a wider footprint and involve developed countries in exchange of specialists. In this context, I would note that I expected language problems when IMO Secretary-General had a meeting with cadets. Yet, there were no problems and I even envied some of the cadets over their good English pronunciation. Both IMO Secretary-General and me were favorably impressed with that.

*Interviewed by Nadezhda Malysheva*

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