MAGAZINE OF THE UNITED
SHIPBUILDING CORPORATION
2023

THE CORPORATION'S ANNIVERSARY – STEPS INTO THE FUTURE

NEW PAPANINITES MOVED NORTH
EXPEDITION ON SRV IRSPP «NORTH POLE» BEGAN!

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110 YEARS OF SNSP
JUST AHEAD!

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NUCLEAR-POWERED SUBMARINE K-3
WILL BECOME THE MAIN EXHIBIT OF THE MUSEUM IN KRONSTADT

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15 EVENTS IN 15 YEARS

COMMERCIAL SHIPBUILDING AT USC

2007 The Russian President signed a decree establishing the United Shipbuilding Corporation (USC)

2010 Admiralty Shipyards handed over the first Project R-70046 ice-class tanker Mikhail Ulyanov

2011 The world's first offshore ice-resistant fixed platform Prirazlomnaya left Murmansk for the field of the same name in the Pechora Sea, the place of its permanent «residence»

2012 The flag-hoisting and commissioning ceremony for the research and expedition vessel Akademik Tryoshnikov, built for the Russian Antarctic Expedition, took place at Admiralty Shipyards

2012 Shiprepairing Center «Zvyozdochka» completed the construction of the jack-up drilling rig Arkticheskaya

2015 The official flag-hoisting ceremony aboard the lead icebreaker Vladivostok of Project 21900M took place at Vyborg Shipyard

2017 Project 23290 innovative passenger catamaran Grifon set sail on its maiden voyage from Sredne-Nevsky shipbuilding plant's outfitting quay

2019 The world's first floating nuclear power plant Akademik Lomonosov, built at Baltic Shipyard, was handed over to the customer

2019 YANTAR shipyard handed over the Project SK-3101R trawler/seiner Leninets to the customer

2020 The national flag was hoisted aboard the Project 22600 icebreaker Viktor Chernomyrdin built at Baltic Shipyard

2020 The world's most powerful Project 22220 nuclear-powered icebreaker Arktika, built at Baltic Shipyard, was handed over to the customer

2020 Project PV300 passenger ship Mustay Karim, built at «Krasnoe Sormovo» Shipyard, was handed over to the customer

2021 The flag-hoisting ceremony was held aboard the Project KMT01 large trawler/processor Barents Sea built at Vyborg Shipyard

2022 The national flag of the Russian Federation was hoisted aboard the rail/motor ferry Alexander Deyev built at Amur Shipbuilding Plant

2022 The ice-resistant self-propelled platform North Pole, built at Admiralty Shipyards, set off on its first expedition

CEO Alexei Rakhmanov's column

Dear colleagues,

In 2022, we celebrated the 15th anniversary of the United Shipbuilding Corporation (USC) and it was also the the first year of its operation in a fundamentally new situation in the world and in our country. There is no longer a single global economic space operating under laws of the market. As a country, we must rely on our own strength to a greater extent than before and gain technological sovereignty in key industries.

The corporation has worked on this before. We have already managed to build up domestic competencies on many projects, and in a number of areas we are able to replace imports in the coming years, including by establishing in-house production facilities within USC. One of these facilities will be built in Kolpino. It's very important to do this in order to meet the rapidly growing demands of cargo owners and carriers for domestic vessels. They will have to be built at our shipyards.

But at the same time, we should not withdraw into ourselves – we need to restore old economic relationships and establish new ones with most of the countries of the world that share our values. The St. Petersburg International Economic Forum and the Eastern Economic Forum have convincingly proved that our enemies' plans to isolate Russia failed. There is the option to shift in the foreign market to partners interested in our products. Especially given that USC shipbuilders have technologies for building nuclear icebreakers, floating power units and underwater robotic systems that are unrivalled in the world. Foreign colleagues understand this very well.

We clearly know what we need to focus on at this crucial moment. Today as never before, much depends on each of us, on common coordinated actions. Russia's Maritime Doctrine, approved by the President of the country, defines the priorities for shipbuilding enterprises for the years ahead – both in terms of the fulfillment of the government's defense order and commercial orders, the implementation of large-scale Arctic projects. In order to move towards the intended targets, Russian manufacturers will be provided with government support. Such measures have been developed by the Ministry of Industry and Trade and relate to import substitution, preferential leasing, subsidizing the retrofitting of industrial enterprises.

USC has a fairly large margin of safety. For 15 years since 2007, the corporation's enterprises have become stronger, more solid, and have increased their capacities. Nowadays we build more sophisticated vessels than before and many shipyards have acquired additional competencies.

Admiralty Shipyards have handed over a truly unique vessel to scientists – the ice-resistant self-propelled platform North Pole. Thanks to USC shipbuilders, research in the Arctic, which began 85 years ago, will continue at a completely different level of technology.

The most important thing by which people will judge us and our work is the connectivity of the country's territories. Amur Shipbuilding Plant has built a new ferry, Alexander Deev, which will improve transport accessibility of Sakhalin Island. And in St. Petersburg and Nizhny Novgorod, the river tram Sotalia, a small, but very nice and useful passenger vessel designed and built by USC, was presented. This project is not only the fruit of our cooperation with other Russian companies, but also a tangible result of the import substitution program. The vessel was designed from scratch and built in Russia almost entirely from domestic components. Recent examples show how the corporation is expanding its activities in a variety of segments, primarily focused on the development of Russian regions, the interests of people.

In such pivotal times as today, the cohesive work of our teams, mutual support and reliance on traditions, which give us a sense of confidence and strength, help to cope with difficulties. In this issue of the magazine, we honor Severodvinsk-based Northern production association «Arktika» and Sredne-Nevsky shipbuilding plant that celebrate their anniversaries. These enterprises are of considerable age, but their teams are young, energetic and capable of much, which is confirmed by the production results.

The fate of the nuclear-powered submarine K-3 Leninsky Komsomol, the firstborn of the domestic nuclear submarine shipbuilding, has brought together many enterprises of the corporation. In 2021 and 2022, the submarine traveled a long way from the Murmansk Region to Kronstadt, where it will become the main exhibit of the new Museum of Naval Glory. Our publication tells the history of the boat itself and details of a unique transport operation, brilliantly implemented by the teams of USC enterprises. It's not just rusty metal that was brought back to life. K-3 is a symbol of the intellectual power and heroism of our people, the triumph of the design thought of Soviet shipbuilders, who, with incredible exertion of strength, were able to lay the foundation for the country's naval nuclear shield.

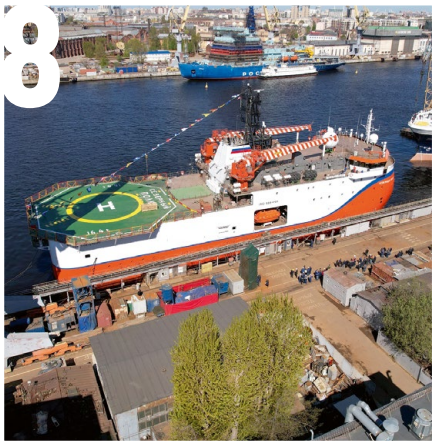
We continue a series of publications related to the personality of the founder of the Russian navy and shipbuilding – Peter the Great, whose 350th anniversary was widely celebrated in 2022 at the highest government level. USC, its enterprises and museums held many commemorative events in honor of this date, and a simple idea that the history of our country is continuous, and every day, every year we ourselves add more and more new pages to it ran across these meetings, exhibitions and presentations.

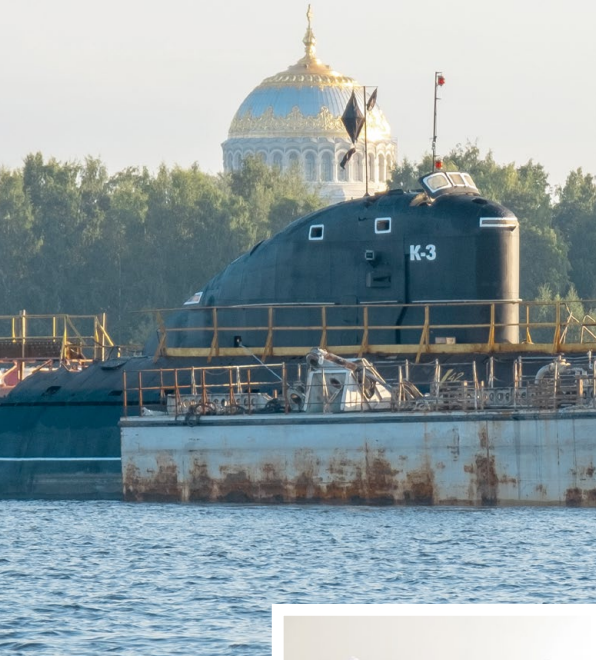
That is why the deeds of Peter I and the K-3's combat missions are not an empty sound for USC shipbuilders. Studying the experience of our predecessors, learning how they acted in critical situations, we better understand how we ourselves should act now, in our very difficult modern world.

But no matter how international events unfold, we should always be ourselves, live our lives – compete at the USC Corporate Games, raise children (and be sure to educate future shipbuilders from them), and of course – work well for the good of our country. After all, Russia needs both warships and commercial vessels.

And we'll build them.

Alexei L. Rakhmanov
Chief Executive Officer of JSC USC





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PRESIDENT OF THE RUSSIAN FEDERATION

Moscow. Kremlin

To the staff of United Shipbuilding Corporation

Dear friends,

I congratulate you on the 15th anniversary of the establishment of the United Shipbuilding Corporation.

Over the years, your company has gone an eventful way, united shipyards, design bureaus, research centers and ship repair facilities from Polyarny, a town in Murmansk Region, to Sevastopol, from Kaliningrad to Komsomolsk-on-Amur and has rightfully taken a leading position in the shipbuilding industry of the country.

Largely thanks to the skill and the highest competence of USC designers, shipbuilders and specialists, their commitment to the wonderful traditions of the national engineering school, it has been possible to significantly strengthen capabilities of the Navy, make a significant contribution to the development of commercial shipbuilding. Russia has started building cruise liners, fishing and research vessels. The newest icebreakers Arktika and Siberia operate on the routes of the Northern Sea Route, and passenger ferries and motor ships enter the river routes.

Today, in the context of not only serious external challenges, but also opportunities, the corporation is facing large-scale, time-demanded problems related to localization of production and import substitution. I am sure that the holding's enterprises will establish new business connections as soon as possible, including with foreign partners. And of course, it's important that you look ahead, give priority to training qualified personnel, increasing the prestige of the shipbuilding profession.

I wish you success, health and all the best.

Vladimir Putin

Congratulations of the Chairman of the Government of the Russian Federation Mikhail Mishustin to the staff of United Shipbuilding Corporation

Dear Alexei Lvovich,
Dear friends,

Please accept my sincere congratulations on the 15th anniversary of your joint-stock company.

This is a significant event for not only the USC team, but also for the national defense industry and the whole country. It is especially pleasant that the birthday anniversary takes place in the year of 355th anniversary of laying the keel of the first Russian frigate Oryol (Eagle), construction of which marked the beginning of shipbuilding in Russia.

For all these years the United Shipbuilding Corporation has been preserving and building on the glorious traditions of the Russian marine engineering school. During this time the Joint Stock Company has become a major shipbuilding holding, the leader of naval and commercial shipbuilding. It has done a lot to strengthen the defense capabilities of our state.

Today the United Shipbuilding Corporation unites dozens of shipyards, design bureaus, ship repair facilities in different regions of our country and contributes to supplying the Navy with the latest frigates, corvettes and nuclear-powered submarine cruisers. Modern research and production capacities of the Corporation, application of innovative technologies and advanced solutions make it possible to develop and produce unique naval equipment and armament that are highly effective and in many ways superior to their foreign counterparts. They make up the backbone of the Russian Navy and reliably protect the lives of millions of our citizens.

The United Shipbuilding Corporation not only fulfills the Government's Defense Order in a timely and efficient manner but also builds the world's only new-generation nuclear-powered icebreaker fleet and marine equipment for development of oil and gas fields on the Arctic shelf. For the first time in many decades, it builds cruise liners and implements a large-scale program for renewal of the fishing fleet. It's important that import substitution and accelerated transition to domestic equipment and components has become a priority for the Corporation.

I am confident that, relying on the experience gained and the accumulated research and production capacity, USC will continue to evolve at a fast pace and successfully solve the key national tasks.

I wish the staff of the United Shipbuilding Corporation good luck in everything, health and wellbeing, new achievements for the benefit of our Motherland. Special words of gratitude are to the veterans whose commitment serves as an example for the new generation of specialists.

Mikhail V. Mishustin,
Chairman of the Government of the Russian Federation

To the staff of United Shipbuilding Corporation

Dear colleagues,

On behalf of the Ministry of Industry and Trade of the Russian Federation, please accept my sincere congratulations on the 15th anniversary of the establishment of the United Shipbuilding Corporation.

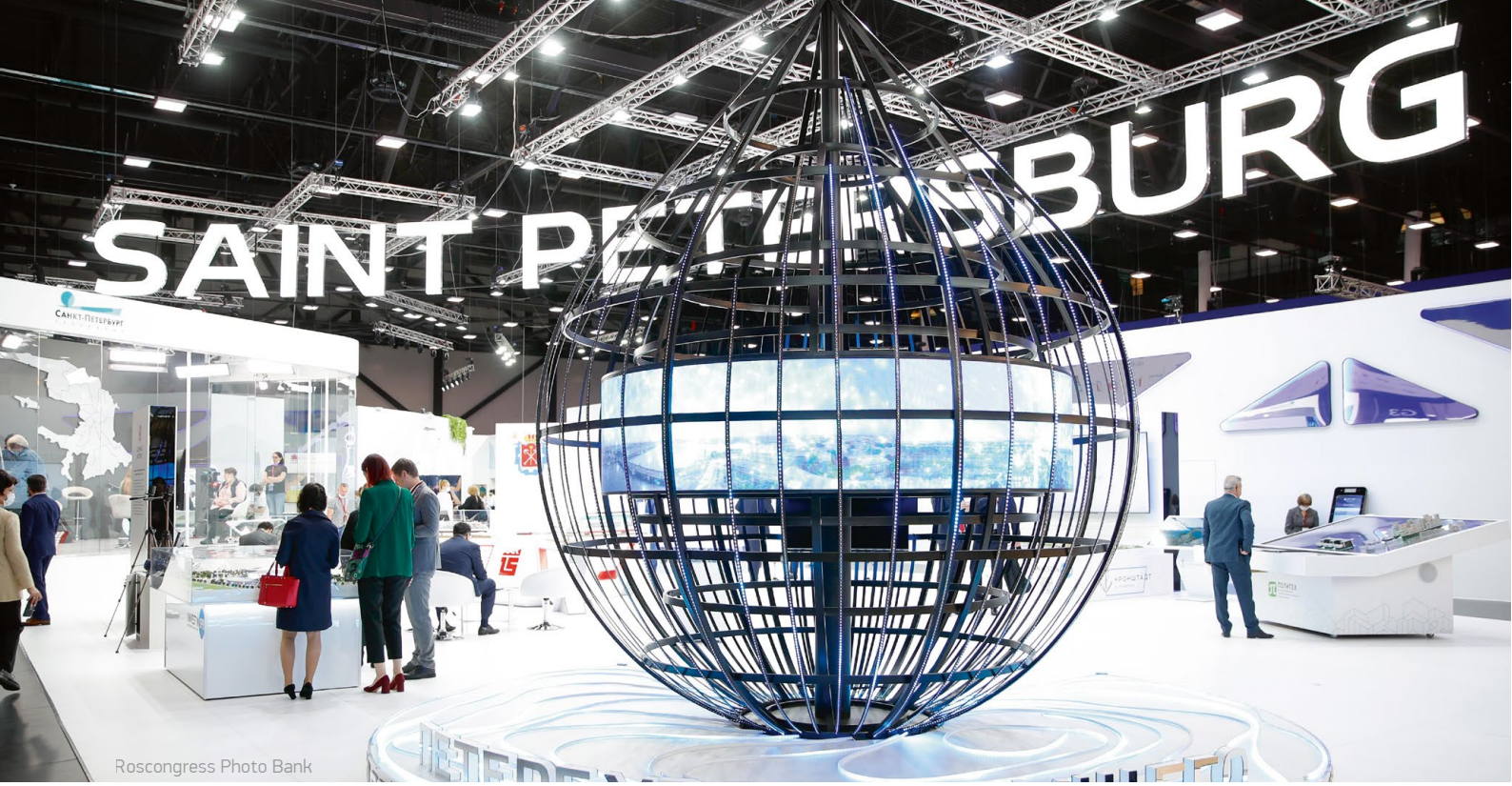
It's hard to overestimate the importance of shipbuilding for Russia. Since Peter the Great's times many generations of shipbuilders have been supporting our state's status of the great maritime power and everyday hard work of outstanding designers and scientists predetermined the lead of the Russian engineering school.

Today the USC shipyards and design bureaus continue with dignity the work of their predecessors and make a significant contribution to strengthening the Navy by building outstanding ships and making marine equipment. It is also worth noting the successes of the diversification program: USC enterprises are increasing the rate of civilian production at a rhythmical pace. Large-scale renewal of the icebreaker fleet occupies a special place in this work.

Modern shipbuilding serves as a driver of growth in related industries. Uniting more than 40 enterprises across the country, USC plays the role of an industry development institute and an aggregator of advanced technologies. I am sure that a significant intellectual capacity accumulated by the Corporation's staff will continue to be effectively used to ensure the breakthrough development of our country, and the professionalism and experience of the shipbuilders will make it possible to successfully achieve the targets.

I wish all workers and veterans of the Corporation good health, new achievements and all the best.

Denis V. Manturov,
Deputy Prime Minister – Minister of Industry and Trade of the Russian Federation



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TOWARDS TECHNOLOGICAL SOVEREIGNTY

In June, St. Petersburg traditionally hosts an international economic forum. It was held for the first time twenty-five years ago, in 1997, and in 2005 the President of Russia took part in it for the first time. The only time it was canceled was in 2020 due to the coronavirus pandemic. Thus, 2022 SPIEF was the anniversary 20th and the most unusual.

Many doubted that it would take place at all – because many Western countries made efforts to isolate Russia internationally after the beginning of the special military operation. However, the results of the forum disproved all Western predictions – about 80 countries have sent official delegations, and businessmen from 130 countries arrived in St. Petersburg.

The motto of the Forum was "New World – New Opportunities". Indeed, no matter how much Russia-unfriendly countries wanted the opposite, they are no longer "the whole world", but only a relatively small part of it. Most of the countries of the planet have their own ideas about how political and economic ties should be built in the new world, part of which is Russia.

The most heated discussions at the forum were devoted to attaining technological sovereignty by Russia – how to achieve it in the key industries, one of which is shipbuilding.

FLEET IN THE CONTEXT OF GLOBAL TRANSFORMATIONS

This is what Alexei Rakhmanov, CEO of the United Shipbuilding Corporation, was talking about in his speech at the session "World Ocean and Global Transformations: What Fleet Does Russia and the World Need?". The challenge faced by the Russian shipbuilding industry right now is, of course, to achieve technological sovereignty. Everything that we used to call localization and tried to implement through attracting foreign investors has come to the point that we no longer need to rely on our partners, who left, slamming the door loudly, and now are knocking on wickets and gates once more. But strategically we are no longer likely to rely on them.

Therefore, Russia needs to build up import-substituting production of ship components, and in some cases, it can be cheaper and more effective to reach a new technology level.

USC Group's Center for Serial Machine Building and Logistics in the North-Western region could be a step in that direction. An agreement to establish such a Center was signed at the forum by USC CEO Alexei Rakhmanov and Governor of St. Petersburg Alexander Beglov. The project, which will be implemented in Kolpino, is aimed to establish new technologically independent innovative production of shipbuilding equipment and introduce modern logistic facilities. The expected duration of the project is 10 years and the planned investments are at least 20 billion rubles. 1500+ new jobs will be created at the Center, including about 500 high-performance jobs.

Another topic relevant for commercial shipbuilding is the construction of a large-capacity fleet. In the new situation the capabilities of only one major shipyard – Zvezda shipbuilding complex in the Far East – may not be enough. Boris Kabakov, Director of Shipbuilding Industry and Marine Facilities Department, the Ministry of Industry and Trade, assessed USC's prospects to build large-capacity fleet: "Measures to modernize the Shipbuilding plant «Severnaya verf» will make it possible to build the additional large-capacity fleet. The option of building such a fleet in a dry dock on the North side of Sevastopol is also under consideration".

NEW PARTNERS

Holding the Forum in the city where there are a lot of shipbuilding enterprises is a good opportunity to build partnerships with potential customers of ships and vessels. In 2022 the Forum guests were particularly interested in the Baltic Shipyard, which has unique competences in building nuclear-powered civilian vessels.

The Baltic Shipyard was visited by high-ranking delegations from two countries which have plans for the development of nuclear power and access to the sea – the Islamic Republic of Iran and the Republic of Union of Myanmar. On the part of the United Shipbuilding Corporation (USC), the talks were attended by David Adamia, USC Deputy CEO for Civil Shipbuilding Market Development, and Alexei Kadilov, Director General of Baltic Shipyard.

During the visit to the Baltic Shipyard the guests from Iran confirmed their high interest in further joint work and also discussed the possibilities for joint construction of various ships and marine structures at USC Group shipyards, including within the framework of international cooperation, in order to meet the needs of Iranian, Russian and international markets.

During the talks with the delegation from Myanmar, the necessity of developing trade relations between the countries in the sphere of shipbuilding, promotion of USC Group's key competences to the Republic of the Union of Myanmar was discussed. The Myanmar delegation paid special attention to the possibility of acquiring floating power units, which are a unique competence of USC Group.

A HIGHLIGHT FOR SPIEF GUESTS

The St. Petersburg Economic Forum also attracts guests with its cultural program. This is where USC unveiled the river tram Sotalia, its newest vessel. The vessel made its first cruises in the waters of the Neva River, during which it demonstrated its capabilities to potential buyers – Russian regions represented at SPIEF by their governors.

Denis Manturov, the head of the Ministry of Industry and Trade of the Russian Federation, attended the presentation of Sotalia: "This vessel is a "workhorse" for inland waterways. Shipbuilders competently approached the development and construction of the project: the vessel has minimal draft and a wide variety of engines used (a diesel, a gas engine version, and finally an electric one) turns Sotalia into a truly "green vessel".

USC CEO Alexei drew the visitors' attention to the fact that practically only domestic enterprises took part in its development and construction. On the part of USC, the designer of the project is NIPTB Onega, a unique design of the exterior and interior of the vessel belongs to the Kinetika Engineering Center, the passenger cabin was designed by Key Systems and Components and the ship control system is supplied by USC-Technology. The vessel is equipped with a 312-hp YaMZ-536 6-cylinder 4-stroke diesel engine produced by the Yaroslavl Motor Plant and used in buses and trucks. For use in Sotalia, the engine was marinized, that is, modified to meet the requirements of the Russian River Register and certified as a part of the propulsion unit. The water-jet propulsor VD33M4 was developed by NPO Vint (a branch of Shiprepairing Center «Zvyozdochka», part of USC).

The Sotalia has interested many governors, but Nizhny Novgorod was chosen as the place of the first pilot operation. In early September, Chairman of the State Duma Vyacheslav Volodin got acquainted with the new river tram, which will run along the Volga and Oka rivers. Governor of the Nizhny Novgorod Region Gleb Nikitin, who visited the vessel together with Vyacheslav Volodin and Sergey Lyashenko, USC CTO, who demonstrated the capabilities of the vessel, explained: "We've reached an agreement that we will get the Sotalia for trial operation. Nizhny Novgorod citizens and guests of the city will have an opportunity to become the first passengers".

NEW PAPANINITES MOVED NORTH

85 years ago, on March 22, 1937 a group of planes flew from the Moscow airfield to the north – that's how the legendary North Pole 1 expedition began. The planes delivered a group of polar explorers, headed by Ivan Papanin, to an ice floe. From June 1937 to February 1938, on an ice floe measuring 3x5 km (ice thickness was 3 m) the first drifting station not only conducted scientific observations, but also was a symbol of the Soviet triumph – the conquest of the Arctic by its aircraft and fleet. In 2022, the ice epic, which began 85 years ago, was continued with the research vessel North Pole designed and built by the United Shipbuilding Corporation.

April 2018

The Admiralty Shipyards and the Federal Service for Hydrometeorology and Environmental Monitoring (Roshydromet) signed a contract for the construction of the ice-resistant self-propelled platform (IRSPP). Five years after the completion of the last drifting expedition North Pole 40, the Russian Government decided to take polar research to a new technical level because the ice fields in the Arctic are no longer a reliable basis for the expedition due to warming. The Project 00903 ice-resistant self-propelled platform was developed in close cooperation of the Roshydromet, Vympel Design Bureau, Admiralty Shipyards and the Arctic and Antarctic Research Institute (AARI). To draw up the basic specifications for the project, AARI's unique experience in the organization, conduct and results of research of the North Pole drifting stations for the entire history of their existence was analyzed.

April 2019

On April 10, a keel laying ceremony for the scientific research vessel ice-resistant self-propelled platform "North Pole" (IRSPP "North Pole") was held at the Admiralty Shipyards in St. Petersburg. It was attended by Chairman of the Board of Directors of USC Georgy Poltavchenko, USC CEO Alexei Rakhmanov, General Director of the Admiralty Shipyards Alexander Buzakov, Head of Roshydromet Maxim Yakovenko and Chairman of the Committee on Industrial Policy of St. Petersburg Yuri Kalabin.

December 2020

The IRSPP North Pole was launched. Addressing the participants of the ceremony, General Director of the Admiralty Shipyards Alexander Buzakov said that "the enterprise has once again proved its competence in building complicated science-intensive vessels". Fitting-out of the vessel is underway on the water.

January 2022

The degree of readiness of the IRSPP North Pole was over 90%. Alexander Kozlov, the Minister of Natural Resources and Ecology, visited the vessel; auxiliary bow diesel generators were already started and the thermal boilers were commissioned. The construction was on schedule.

May 2022

The builder's sea trials of the North Pole were successfully completed. The Admiralty Shipyards' specialists checked operation of auxiliary diesel generators, main diesel engine, service systems, auxiliary boiler units and main marine units, performed speed and maneuvering trials of the vessel. After the platform returned to the outfitting quay, the shipyard workers began to eliminate the identified observations.

July 2022

The control stage of builder's sea trials of the ice-resistant self-propelled platform North Pole was completed. Between June 30 and July 6, the Admiralty Shipyards specialists made adjustments to the autopilot and scientific equipment on board the vessel in the waters of the Gulf of Finland. In addition, the shipyard's commissioning team performed a set of works on landing and receiving a Mi-8 helicopter, functional testing of the helipad lights and radio communications with the helicopter.

August 2022

The Admiralty Shipyards handed over the North Pole for operation. The vessel unmoored from the shipyard's outfitting quay and departed for the Big Port of St. Petersburg. According to Ruslan Sheremetiev, Chief Builder at the Admiralty Shipyards, "the main function of the platform, whose height from the keel to the top of the middle mast is 42.5 meters, which is equal to a 13-storey house, is to "live" in the ice. And I am convinced that this life will be successful and fruitful for Russian science, and the data obtained during the expeditions to the Arctic will make a significant contribution to further exploration and development of the region".

Chief Executive Officer of the United Shipbuilding Corporation Alexei Rakhmanov said: "The IRSPP North Pole is a good example of how the corporation's enterprises carry out a sophisticated order entrusted by the state. The Vympel Design Bureau and the Admiralty Shipyards, which are part of USC, have designed and built a unique high-tech vessel which is unrivaled throughout the world. USC shipbuilders have justified the trust placed in us with their work. A bold idea has been successfully embodied in metal and will soon benefit both Russia and the world science".

September 2022

On September 1, the national flag of the Russian Federation was hoisted on board the IRSPP North Pole and it left St. Petersburg for Murmansk.

On board the IRSPP, Chief Engineer of the Admiralty Shipyards Andrey Veselov reminded that in 1959 the company had built the world's first nuclear icebreaker Lenin, which opened a new era in global shipbuilding: "Work on the ice-resistant platform was also a fundamentally new step in the development of the domestic Arctic fleet, and once again gave the staff of our company an excellent opportunity to confirm its capabilities in implementing unique projects. At the same time the experience of our shipyard was sufficient for building such a vessel. Moreover, both we and our customer were united in our wish to realize such a vital project for Russian science."

On September 27, the IRSPP North Pole met with the research vessel Akademik Tryoshnikov at the edge of drifting ice in the Arctic.

"We met the Akademik Tryoshnikov scientific expedition vessel at the boundaries of drifting ice. Then within a day we will follow it along its channel to the area of the ice field, where we plan to unmoor. The Akademik Tryoshnikov crew has already performed reconnaissance and specialists have determined the thickness on the ice fields, which are potentially suitable for an ice camp. We will analyze this information once again and take a final decision regarding the choice of an ice floe, which will be the base of our station, where we plan to place the equipment of the ice camp", Kirill Filchuk, head of the North Pole 41 expedition, told a TASS correspondent.

October 2022

October 2, 7 a.m., 82 degrees north latitude, 155 degrees east longitude. The flag of the North Pole 41 expedition was hoisted.

When the Papaninites returned to the mainland, they were met as heroes. They were the heroes – the Arctic explorers who stepped into the unknown. Today the polar explorers will work at the Pole in much more comfortable conditions. But just like submariners or cosmonauts, polar explorers will always be special kind of people, taking deliberate risks for the sake of a great goal. USC shipbuilders wish the new Papaninites success and return to their home harbor when all the expedition tasks are completed.

ALEXEY RAKHMANOV. LAYING THE COURSE: WHAT STRATEGY FOR THE SHIPBUILDING INDUSTRY SHOULD BE

The United Shipbuilding Corporation (USC) has been operating under sanctions imposed by unfriendly countries since 2014. For eight years we have been telling our customers that it might be more expensive to build ships using Western designs and Western equipment. For eight years they agreed with us on paper, but they kept ordering commercial ships from us with Western "stuffing", that has already proven itself unlike the products of national machinery manufacturers. And if there is no demand, there is no supply, that's the way the market works.

But we managed to prepare for some things. We created competence centers, found (or are currently searching for) replacements for Western components, some of which we already successfully make in-house within the corporation. Our design bureaus are re-designing ships to accommodate the new equipment. There are results: substitution of all 250 positions where it was necessary in the design of the 18-MW icebreaker (project 21900M2). But at the same time, we are well aware that import substitution is, by and large, a patch, and clothing made up of patches will not last long.

Proactive import substitution is more relevant for shipbuilding — creation of ships and ship components for fundamentally new projects. In Russia it is not simply relevant, but the only possible – simply because over the past 30 years we have already missed one shipbuilding revolution, related to large-scale shipbuilding.

This is what made Japan, South Korea and China the "big three" of the global industry. After the Japanese, who realized that it is more profitable to transport oil in large tankers, the Koreans and the Chinese decided that it is more profitable to transport everything – from gas to containers with teddy bears for Christmas – in large ships. And they took on a venture that could only bring in revenue decades later.

China would not have become the world's largest exporter if it had not built its fleet, and it would not have built its fleet if it had not built shipyards before that. Both Korea and China know that shipbuilding not only makes exports possible by its own rules (any other way is eventually wasteful), but also drags the national machine building industry along with it. They made the industry as favorable as possible: some introduced domestic prices in vertically integrated companies, while others pumped investment into the industry and placed government orders on it. And as a result, they naturally became world leaders, along the way "sentencing" many shipyards with a glorious history in the G7 countries.

We have inherited many shipyards from past ages, which were built with the same design in mind. They were used in their time to create a great fleet – naval and commercial, sea and river. River ships alone, for example, at the dusk of the Soviet Union era transported more than 500 million tons of cargo annually by river — for comparison, today we have plans to transport 200 million tons along the Northern Sea Route by 2035. But even these shipyards were not enough for the Soviet Union – part of the orders had to be placed in the CMEA countries (especially for passenger and fishing vessels).

Then happened what happened, and while there were shipbuilding revolutions in the APR countries, many of our shipyards ended up outside Russia, and the rest inside the country were balancing on the verge of bankruptcy. As a result, from the moment of its creation in 2007 USC had to solve the issues of survival of the enterprises and recovery of the industry rather than its development.

Currently there are more than 40 shipbuilding and ship-repair plants and design and construction bureaus within the corporation. In 2022 alone, Rybinsk Vympel and Feodosiya More (Sea) joined USC. Shipyards are working hard: berths are scarce almost everywhere. And there is a personnel shortage, just like everywhere else in the industry. The corporation makes it possible to operate based on the distributed shipyard principle (when one project is handled in Astrakhan, Kaliningrad or St. Petersburg). The strategic initiative of the Russian government "Development of new materials production" contributes to the creation of modern composite and polymeric materials for the Russian industry. The national project to increase labor productivity is also implemented everywhere, and it has increased noticeably. But there are actually still many problems.

The time has come for decisions to be made with a planning horizon of 2040-2050. We finally got a consensus, albeit a compelled one, that ships should be built by ourselves after all. There are exporters who need to transport cargo and therefore need ships. There are shipyards which have gained momentum and are able to build ships that no one else can build (serial universal nuclear icebreakers of project 22220 – Baltic Shipyard, ice-resistant self-propelled platform "North Pole" – Admiralty Shipyards). There are big national goals – year-round operation of the Northern Sea Route and the launch of the North – South transport corridor using inland waterways. And there is an efficient state support through leasing, which already makes it possible to constantly provide the shipyards with large-scale projects.

We need to believe in our own strength. To continue localization of the entire process chain of shipboard component equipment up to the 3rd-4th level. To invest in the modernization of enterprises and venture into the creation of new production sites. The national project "Workforce Productivity" among other things helps Russian enterprises upgrade production through preferential loans from the Industry Development Fund.

Here is a story to learn from. In 2022, USC celebrated the 110th anniversary of two St. Petersburg shipyards – Shipbuilding plant "Severnaya verf" (formerly "Putilovskaya verf") and Sredne-Nevsky shipbuilding plant. They were established in 1912, seven years after Tsushima, with similar aims – to build high-speed destroyers powered by Parsons steam turbines (a revolutionary technology at the time). One might wonder that the city on the Neva had very large shipyards, but it took more and two more were established.

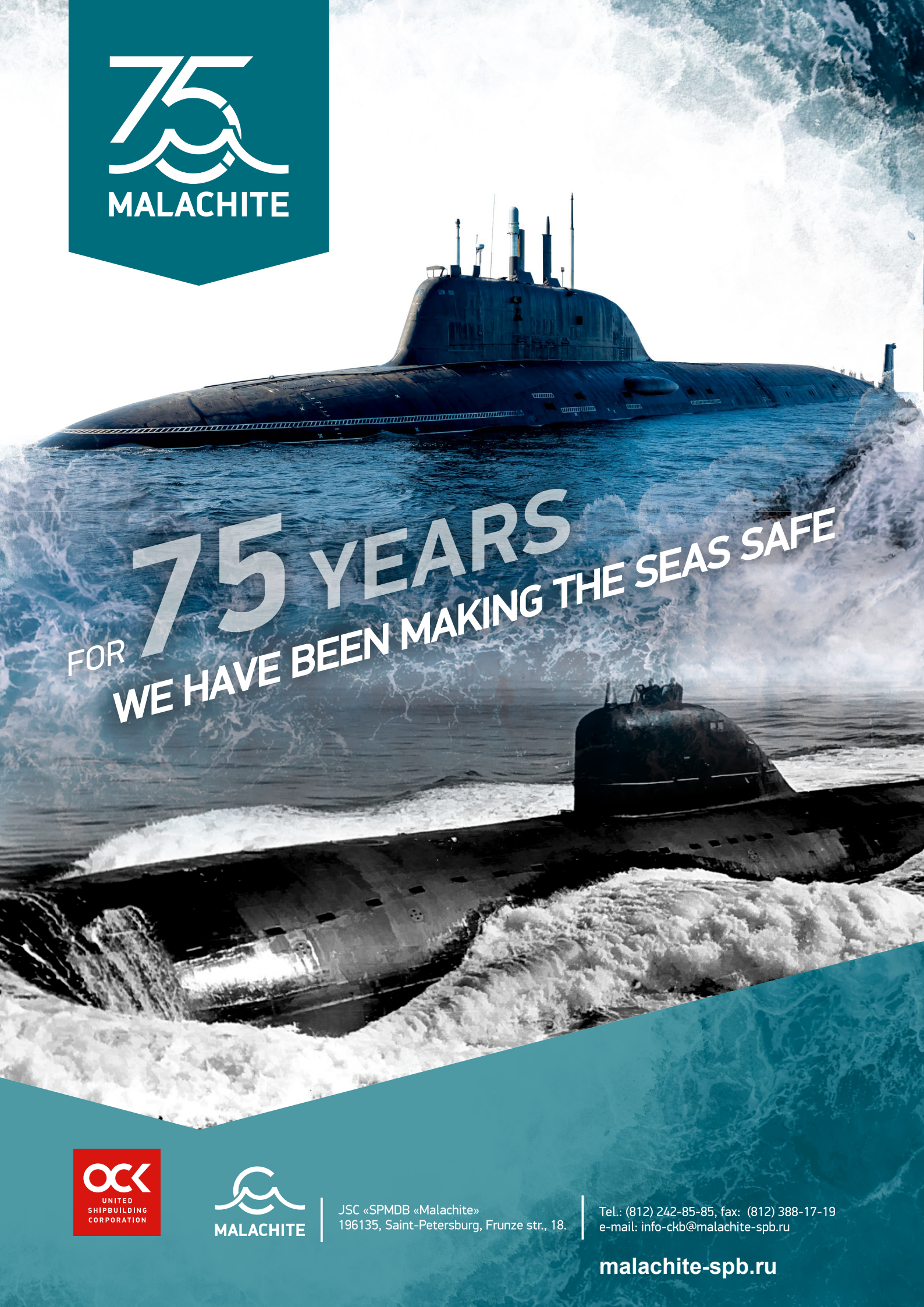
An interesting question: what did it take seven years for, from 1905 to 1912? All these years a very intensive work on the development of a new shipbuilding program was under way, and alongside with it - a mutually beneficial cooperation with shipbuilders of Germany, which had already been building destroyers for Russia and was considered a reliable partner. This country received orders to build ships or parts for them and used the money from these orders to rapidly build up the power of its shipyards. By 1912, Russia realized – Germany was rapidly turning from an old friend into a new enemy – and began to make up for lost time by establishing new shipyards. But the fact remains that during World War I, a number of German destroyers were powered by boilers and turbines, manufactured by German companies for Russian money under Russian contracts, but never delivered to Russia.

That is why a new covered-in berth is now being completed at the Shipbuilding plant «Severnaya verf» (formerly «Putilovskaya verf»). It will be the largest industrial building in St. Petersburg. And USC center will be built in the Kolpino district to supply the city's shipyards with domestic components. To build a new Russian fleet at least by 2040-2050, it is high time to create new shipyard facilities and machine-building plants with guarantees of workload for decades to come.

Alexei L. Rakhmanov
Chief Executive Officer of JSC USC

Published first in RBC.RU

On December 2, 2022 the URAL nuclear-powered icebreaker built by the Baltic Shipyard (part of the USC) departed from Murmansk for her maiden business trip. A solemn ceremony of hoisting the state flag of the Russian Federation on the icebreaker was held on November 22, 2022 in Saint-Petersburg. During the ceremony President of Russia Vladimir Putin gave permission to raise the flag on the icebreaker.



KRONSTADT - VYBORG- KRONSTADT ROUTE

The marine stage of the operation to transport the K-3 to the Museum of Naval Glory has been completed.

Early in August, after restoration work at the Kronstadt Marine Plant, the first Soviet nuclear-powered submarine K-3 Leninsky Komsomol was unmoored from the Winter Pier in Kronstadt and towed by tugboats to the Vyborg Shipyard waters. Before towage, pontoons were attached to the submarine, which after its mooring were removed using floating cranes.

In Vyborg's water area, the submarine was installed on the submersible barge Atlant secured with "dead anchors". The place was not chosen by chance. Only in this water area Atlant was able to dive to the depth of about 18 meters with an average depth of the Gulf of Finland of 6 to 9 meters.

Preparatory work for the transportation of the boat was carried out on board the Atlant. Then the barge was towed to the docking operation site.

On board the barge, which brought the K-3 from the Bay of Vyborg to Kronstadt and raised it to the level of the berth in the port of discharge, the pressure hull of the boat was into two parts. Using a diamond wire, a neat cut was made along the donor compartment, which replaced the reactor compartment that had been cut out long ago for safety reasons. Otherwise, it would have been technically impossible to unload the 107-meter ship weighing 2,500 tons at the port terminal. Besides, the transportation of the whole boat through the city by land would have required much more work to dismantle the road structures, which would have "immobilized" the whole Kronstadt.

A special ramp was assembled for the K-3 on the Moby Dick Terminal berth. The boat parts, each over 50 meters long, were unloaded by the roll-on/roll-off method using a self-propelled modular transporter designed for the project.

When both parts of the submarine were on land, the Atlant crew blew the horn, symbolically saying goodbye to the submarine, and the operator of a self-propelled loader docked the two submarine segments with jewel-like precision.

The marine phase of the operation to transport the K-3 Leninsky Komsomol to the building of the Museum of Naval Glory was completed.

The next phase of the K-3 delivery operation was the ground transportation through the city of Kronstadt to the building of the Museum of Naval Glory — an event worthy of the Guinness Book of Records. Such a large ship has never been transported through a city road network. More than 70 road structures (signs, lighting masts, traffic lights), two overpasses of heating system, more than 800 meters of curbs were dismantled and then rebuilt along the way.

The submarine was delivered in parts to the museum building, where on the 13th of October there was a solemn ceremony dedicated to the submarine's home-coming. The K-3 was permanently moored at the Museum of Naval Glory.

The author would like to express his gratitude to the Island of Forts autonomous non-profit organization for the help in preparing the material. Photo: Island of Forts ANO, Roman Egorov.

Alexander Lebedev

K-3

RETURN OF THE LEGEND

The metal predator dives out of the ocean deep....Plowing through the waves the nuclear submarine is bound for the native shores in the surface condition. Inside a powerful nuclear heart is beating supplying energy to all systems and subsystems of the huge submarine. Professionalism of navy men and most powerful nuclear weapons is the guarantee of the security of our immense Motherland. The nuclear-powered submarine is the synergy of bold scientific solutions and patient work of shipbuilders. She is the child of scientific evolution and daring design solutions. Now the nuclear submarine underwater fleet of Russia is the reliable foundation of the national defense capability. The first brick was laid into that foundation 70 years ago when design and construction of object 627 had begun. It is exactly in 1952 that construction of Soviet nuclear-powered submarines commenced.

First Soviet nuclear submarine

The first Soviet nuclear-powdered submarine K-3 Leninsky Komsomol was laid down in Severodvinsk at plant No. 402 (now "Sevmash", part of USC), manufacturing No. 254. More than 80 plants and more than 50 research institutes and design bureaus nationwide took part in making the first nuclear submarine of the Soviet underwater fleet. The K-3 was launched on August 9, 1957. On March 12, 1959 the submarine joined the 206th separate brigade of submarines in Severodvinsk.

The K-3 opened an era of submarines with nuclear reactors. The power of the first such submarine proved to be many times more than that of WWII submarines. Owing to special steel developed within the framework of the project submergence depth increased to 300 m, an unthinkable figure for that time. Underwater speed and endurance grew almost twofold. Underwater speed could be developed to 30 knots, 1.5 times faster than the speed of the first American nuclear submarines. Cruising range became unlimited.

Unlike the US projects of the world's first and second nuclear submarines (Nautilus and Seawolf) using classical designs of the hulls of the diesel-electric submarines, the hull of the K-3 was designed from scratch with emphasis on the quality of underwater movement. Therefore, she can be considered the first nuclear submarine in the world designed to derive all benefits of the nuclear propulsion plant and the capabilities the latter offers for the vessel.

On July 4, 1958 in the Sevmash water area in Severodvinsk running trials of the first domestic nuclear submarine commenced. Both the reactors were powered up and Academician Alexandrov made a memorable entry in the logbook of the main propulsion plant control room at 10.03: "For the first time in this country steam was applied to the turbine without coal and residual oil." For the first time in the history of domestic fleet a submarine got under way under nuclear power.

The construction of the Leninsky Komsomol submarine was the first and most complex stage in the development of nuclear underwater fleet in this country. Success in this endeavor made it possible to pass over to the mass production of nuclear-powered submarines of the first and second generations. Many solutions found in the process of development proved to be very successful and were used in subsequent generations of nuclear submarines.

The construction of the boat and all her service were actually a long-term experiment with many hidden dangers, but this did not stop anybody. All the units and assemblies of the submarine were employed for the first time. To shipbuilders it was a very interesting and very responsible job. Not even the job. It was Life! People did the impossible.

Construction of the country's first nuclear submarine began under the guidance of Vladimir Nikolayevich Peregudov in 1952. The design was made in the design bureau SKB-143 of the Ministry of Shipbuilding Industry, now Marine Design Bureau «Malachite» (part of USC) of Saint Petersburg. Under Peregudov's guidance a team of highly qualified specialists within a short time designed, built and transferred to the Soviet Navy the first domestic submarine with a nuclear propulsion system. Project manager Vladimir Peregudov was awarded the title Hero of Socialist Labor in 1959. The first commander of the K-3 was Captain 1st rank Leonid Gavrilovich Osypenko (later a Rear-Admiral, Hero of the Soviet Union).

It is worth noting that in June 2022 Vladimir Peregudov would be 120 years old. It is symbolic that in 2022 exactly the submarine built under his guidance got a new life.

In the museum of the Marine Design Bureau «Malachite»there is a separate booth dedicated to the K-3's general designer. According to the design bureau's specialists Alexei Znamenschikov and Konstantin Kunikhin, the nuclear submarine was designed and built by real patriots, hard-working, talented people who sacrificed themselves and gave themselves entirely up to work. It is about such people that as far back as 1919 poet Nikolai Rubtsov wrote a poem admiring their force of character and adding a metaphoric figure of speech that if nails were made from such men these nails would be the strongest in the world.

Through difficulties to new victories

In July 1962 for the first time in the naval history the K-3 submarine undertook a long cruise under the ice of the Arctic Ocean during which she twice crossed the North Pole. On July 17, 1962 she surfaced at the very North Pole point.

Submarine commander Captain 2nd rank L.M. Zhiltsov remembers: "In that location ice was about 25 m thick.

We steered the boat close to the surface, and when we saw an opening in ice we surfaced immediately. The submarine' s bow then froze at the very edge of ice, the K-3 was wedged from all sides by endless snows. It was so calm that one could hear ringing in the ears."

The USSR state flag was solemnly posted on the highest ice reef, and the crew were granted shore-leave.

During the cruise valuable scientific data was collected on the ocean depths, on bottom surface relief. With the crew on board the submarine moved under the ice blindly and without hearing a sound. Extremely thick ice above the submarine reflected the noises of her own propellers simulating sound illusions, soundmen were working in toughest conditions. However, seamen once felt that the depth under the keel decreased sharply. Having received an alarming report the submarine commander L.M. Zhiltsov ordered his men to ascend a little and to reduce the boat speed. Specialists thoroughly scrutinized the echogram, thus a gigantic underwater ridge on the bottom of the Arctic Ocean was detected. This was the biggest geographic discovery of the XX century. Later the underwater ridge discovered was named after the famous oceanographer Yakov Gakkel.

The submarine received the honorary name Leninsky Komsomol on October 1962 on the eve of the 45th anniversary of the October revolution.

Throughout the submarine' service period 10 members of the crew were awarded the title Hero of the Soviet Union, 13 became holders of the Order of Lenin, 60 were awarded the Order of the Red Banner. The first nuclear-powered submarine was declared 'excellent' six times on order of the Commander-in-Chief of the Northern Fleet.

The submarine was in operational service for almost 30 years until October 1987 having done 6 combat duties and covered the total of almost 129,000 miles during 14,000 of running hours.

Oblivion. Difficult road to revival.

In 1991 the submarine was phased out of the Northern Fleet. From early 2000-s she was meant for disposal in the city of Polyarny at 10 Shipyard (part of USC), and then in the water area of the Nerpa Shipyard (branch of the SC Zvyozdochka, part of USC) in the Murmansk Region. In 2008 it was decided to convert the boat into a museum.

The United Shipbuilding Corporation along with the project 'Island of Forts' and the Russian Navy suggested commemorating the Leninsky Komsomol submarine as a central exhibit of the Museum of Russian Naval Glory being created in the tourist and recreational cluster of Kronstadt. A concept was born to place the full-sized submarine on land on the premises under roof. There is no precedent in the world yet.

During preparation of the Leninsky Komsomol nuclear submarine for museumification the reactor compartment was cut out and replaced with a compartment from another boat of the same type. By 2020 conversion work on the board was completed: all sea water inlets were welded up. The submarine was floated out in the water area of the Nerpa Shipyard.

In the second half of 2021 the K-3 nuclear submarine was redeployed from Snezhnogorsk (Murmansk Region) to Kronstadt. It was a unique operation. Nine relevant organizations took part in it. The K-3 was carried on the floating transport dock 'Sviyaga' belonging to the Chief Deep Sea Research Department of the Russian Ministry of Defense. Because of her dimensions the submarine barely fitted into the floating dock. If the K-3 were a meter longer the operation would have been impossible. The 'Sviyaga' dock very closely passed through the sluices of the White Sea Canal: on either side there were only 10 cm left.

The Leninsky Komsomol submarine was indeed redeployed with pinpoint precision.

At the first stage the submarine moved en route from Snezhnogorsk through the sea legs of the Barents Sea to the White Sea towards the inlet to the White Sea-Baltic Sea Canal. The second stage included transportation through the legs of the White Sea Canal via Lake Onega and Lake Ladoga, the rivers Svir and Neva to the water area of the Shipbuilding plant «Severnaya verf» (part of USC) in the Gulf of Finland where the K-3 was unloaded from the 'Sviyaga' dock and towed to Kronstadt.

Beginning of a new life

Very thorough and very important work on the submarine was done by the shipbuilders of Kronstadt Marine Plant (part of USC). The K-3 was put into the dock named after Mitrofanov to perform repairs and to prepare for museumification.

According to the K-3 repair project manager Sergei Sushinin, the plant personnel performed such work as depreservation of compartments, removal of waste, comprehensive examination and repair of the boat hull. An important phase of preparation for museumification was installation of bearing blocks on which the historical relic will be mounted as an exhibit. Eight blocks for the K-3 supporting structure were made at Vyborg Shipyard (part of USC). The submarine's outer hull was fully restored. The boat was painted and prepared for movement to the building of the Museum of Naval Glory.

The return of the legend of the national underwater fleet was greatly facilitated by the First Deputy to the General Director of Kronstadt Marine Plant Leonid Ivanov, Director for Production Alexei Prusakov, shipbuilder Alexei Morozov, foremen Alexander Stazhkov, Alexander Gulin and many other shipbuilders of Kronstadt.

Plant specialists changed more than 1,000 sq.m of the outer hull, 24 t of the outer hull framing, dismantled 30 t of defective metal structures and 300 sq.m of special coating. They also cleaned and painted more than 9300 sq.m of the pressure and outer hull, applied paint-and-varnish coating, attached 8 support blocks with a total weight of 240 t.

Document and design support to the submarine's repair was rendered by the experts of the Design Bureau «Malachite» and NIPTB Onega (both part of USC), work was performed and presented under the control of the Quality Control Section of Kronstadt Marine Plant, responsible representatives of the LLC 'Island of Forts' and the JSC UES.

The project museumification of the K-3 nuclear submarine is unique in complexity and responsibility. Several enterprises of the United Shipbuilding Corporation at a time take part in this project.

On the photo: stages of K-3 redeployment from Snezhnogorsk to Kronstandt

The submarine was towed to the Vyborg Shipyard where she will be mounted on the submersible barge 'Atlant,' the only one in Russia fit for carrying a vessel of such dimensions and able to lift her to the berth level at the unloading port. Then the boat was moved to the museum along the streets of Kronstandt.

After transportation the K-3 submarine was placed in the building of the future Museum of Naval Glory. Then restoration of the submarine's external appearance will be completed, restoration of the interiors, making up the internal exhibition will begin.

The first domestic nuclear-powered submarine, built dozens of years ago at the enterprise which is now part of the United Shipbuilding Corporation had fulfilled her mission and now has come back to USC enterprises, to the descendants of those shipbuilders who forged the underwater nuclear shield of the country in mid-fifties of the past century. Modern shipbuilders gave the K-3 boat a second life, returned her from oblivion. Now she will become a sort of a 'time capsule' carrying visitors to the past century, to the times of great discoveries and feats!

Welcome back, legend!

The material was prepared by Alexander Lebedev

P.S.

The name of the nuclear submarine 'Leninsky Komsomol' was given to one of the peaks of the underwater ridge in the Arctic Ocean.
It is the only geographical point named after the Soviet nuclear submarine.

8 DAYS OF ONE SUBMARINE

September 9, 1952

Joseph Vissarionovich Stalin personally signed decree of the USSR Council of Ministers No. 4098-1616 'On designing and building object No.627.' Anatoly Petrovich Alexandrov was appointed as Academic Adviser on development of the first Soviet nuclear submarine, Vladimir Nikolayevich Peregudov was appointed as Chief Designer, Nikolai Antonovich Dollezhal, Director of Research Institute No, 8, was appointed as Chief Designer of the nuclear propulsion system

At a time when the K-3 was finishing mooring trials Dmitri Ustinov, Deputy Chairman of the USSR Council of Ministers, arrived at 'Sevmash.' He wanted to reduce the time of activities and to conduct the next important stage– a physical startup of the nuclear reactor- as soon as possible. It was necessary to exclude any possible complications. Dmitri Ustinov was well informed and asked the Academic Adviser in charge of the nuclear submarine construction about the possibility of a launch motivating it by the fact that all depends on the scientist.

Anatoly Alexandrov replied as follows: "We have indeed everything ready. We shall do a physical launch as soon as you leave, such startup is a serious matter. When high-ranking persons are present something will definitely go awry." This phenomenon is called the 'effect of higher-ups.' Ustinov did not get another answer and left. The startup was fixed immediately.

According to one of the participants of the K-3 construction project Alexander Lagunov, those involved in building the first domestic nuclear submarine did not want to get married. But not because there were no attractive girls at all. They worked with the atom for the first time and did not how it will behave during the construction. Radiation was poorly studied at that time and its impact on the human organism was not known fully. Employees decided for themselves that they would take their fiancés to the marriage registry only after the construction has been completed.

July 1, 1958

The first nuclear submarine 'Leninsky Komsomol' was entered into the lists of ships of the USSR Navy. An official flag hoisting ceremony was held, by circumstance, a few minutes before evening colors. With permission of the Navy Commander-in-Chief Admiral Gorshkov the flag was kept for the night.

July 4, 1958

Tugboats towed the black submarine of unusual configuration, the first Soviet nuclear submarine, from the shipyard pier.

At 10.03 Academician A.P.Alexandrov who stayed in the control room of the submarine's main propulsion plant made a historic entry into the logbook: "For the first time in this country steam was applied to the turbine without coal and residual oil." At the Nikolsky buoy the boat released the tugboat and started moving under the power of the geared-turbine set gaining speed smoothly. Navy commanders and industry officials, members of the inter-departmental commission, boat personnel and commissioning team staying on board paid attention to the fact that in the forward compartments there is no operating noise of the main machinery and there is no deck vibration sometimes unpleasant for the feet.

December 2, 1958

In the Kandalaksha Gulf of the White Sea three-day submersion to a depth of 310 m and navigation without surfacing for three days at a speed of 20 knots were completed. At the periscope depth collision with a sunken log occurred. As a result, the periscope was bent.

December 17, 1958

The acceptance statement was signed and the nuclear submarine was adopted for experimental operation against the industry's guarantee to rectify the defects if revealed. During trials the boat made 29 submersions, went to sea 5 times for a total duration of 25 days, covered 3801 miles for 450 running hours, of which 2002 miles in the submerged condition for 193 hours.

When the K-3 trials were coming to an end

at 'Sevmash" in December 1958 questions arose about the radiation situation. However, the reason was not the reactor, but the plentiful constantly glowing light signs in which radium was added. The naval emergency service refused to remove them, besides, the Commander-in-Chief Sergei Gorshkov extended support. Then the Academic Adviser on construction Anatoly Alexandrov and Chairman of the Shipbuilding State Committee of the USSR Council of Ministers Boris Butoma broke off a piece from a sign and secretly put it into the pocket of Sergei Georgievich.

During the exit from the nuclear submarine an alarm signal went off. The watch officer went pale and asked the C--in-C to return, wash himself and change clothes. After the reason of the incident was revealed to Admiral Gorshkov all signs were removed.

July 17 1962

For the first time in the history of Soviet underwater fleet the nuclear submarine surfaced near the North Pole. The crew posted the USSR flag in the ice of Central Arctic close to the pole. Upon return to base the submarine was met by Nikita Sergeevich Khruschev and Minister of Defense Rodion Yakovlevich Malinovsky. Commanding Officer of the cruise Rear-Admiral Alexander Ivanovich Petelin, submarine commander Captain 2nd rank Lev Mikhailovich Zhiltsov and commander of combat compartment No. 5 (BCh-5) Ruyrik Aleksandrovich Timofeev were awarded the title Hero of the Soviet Union. All personnel of the board received orders and medals.

September 8, 1967

Fire broke out on board the nuclear submarine 'Leninsky Komsomol' in the I and II compartments when stationed on combat duty in the Norwegian Sea. As a result, 39 seamen died. The explosion of torpedoes, including those with nuclear warheads, was prevented. The boat returned to base under her own power. The accident was caused by a bad sealing gasket in the pipe connection of the hydraulic machine. Instead of a standard copper ring in the system operating under great pressure a paronite seal was used.

December 16, 2014

In accordance with the Decree of the President of the Russian Federation Orders of Courage were awarded posthumously to 39 submariners who died heroically on September 8, 1967. In the Navy research and training center Naval Academy named after Kuznetsov in Saint-Petersburg three Orders of Courage were solemnly handed in to the relatives of the crew members who had died on board the nuclear submarine 'Leninsky Komsomol.'

SHIPS COME TO LIFE IN THEIR HANDS

In 2022, the Northern production association «Arktika» (NPA «Arktika»), the flagship of electrical installation industry, celebrates its 70th anniversary. The article written by Anna Solovyeva tells the history of a unique team in Severodvinsk and its prospects

As part of Shipyard 402

In 1939, the future center of nuclear shipbuilding - the largest Shipyard No. 402 (Sevmash) - was founded in the settlement of Sudostroy (future Molotovsk and then Severodvinsk). Construction of large warships began in December 1939 in an unfinished covered slipway, which would later become workshop No. 50. From October 1940, the ship's electrical installation was entrusted to a specialized organization called Elektromortrest.

Specialists were sent from Leningrad, from a Northwestern electrical installation enterprise (which was part of Elektromortrest). At the same time, Svyazmortrest enterprises were engaged in radio installation, adjustment and commissioning of communications equipment (and then other electronic warfare systems).

Much has been written about the ordeals endured by the people who worked "before" and during the war at the unfinished plant, about the living conditions in the worker's settlement of Sudostroy. The inhabitants heroically fought for existence, continuing to build the city and fulfill the defense order.

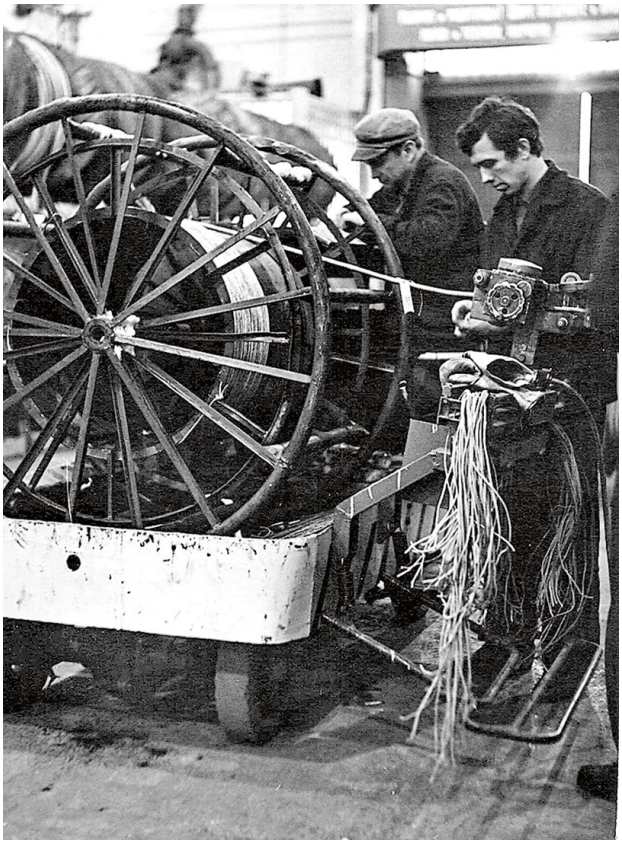
During the war, Shipyard 402 repaired and modernized a total of 139 ships, on which electricians as well as radio fitters and adjusters performed their tasks on a par with the shipwrights.

It's a curious fact that many production managers and almost all ordinary employees during the war and post-war did not even have secondary education, and sometimes finished 3-5 grades in a rural elementary school. It is amazing that at the same time they fulfilled the most difficult and critical tasks!

After the war the team grew, front-line soldiers arrived. In addition, the ranks of the electricians were swelled by recent graduates of the factory and trade schools, who later became excellent specialists. Many of them later turned into competent, gifted production managers of various ranks and became masters of their craft.

Due to higher qualification of work, the educational level of the adjusters was, of course, higher than that of electricians. Accustomed to constant trips to manufacturing plants and remote bases, Svyazmortrest's employees were distinguished by a great love of freedom, independence and self-reliance.

The birth of the enterprise



Another dozen years passed and on April 22, 1952 an independent electrical installation enterprise, EMP-8, appeared in Severodvinsk, where all these specialists teamed together to revive the ships. By that time, with their participation, Shipyard 402 had built and delivered 23 Project 122A large submarine chasers, two Project 30K destroyers and 13 Project 30bis destroyers to the Navy.

Already in those years a tradition was born to train workers directly on the job. Attention was paid not only to personnel, manufacturing capacities were also expanded: stands for checking and tuning special devices were developed, a laboratory for repair of electrical and radio measuring instruments was established, and a repair stand for high and low current equipment was built.

At the same time an event happened in workshop 42 of the shipyard that determined the future of Severodvinsk: the first domestic Project 627 nuclear-powered submarine was laid down there in June 1954, which later entered history as Leninsky Komsomol. Since October 1955, electrical installation section 1 with its design and process services began to form on the territory of workshop 42.

Earlier, EMP-8 specialists traveled to Obninsk to perform work during the installation of the reactor and steam gener-

ating unit, of which only the shipyard director was aware. The seconded V.A. Polushin, L.Y. Pankratov, V.A. Zabelin, P.V. Pakhov, F.E. Puminova and 14 other people became the first specialists in EMP-8 in the installation of the main plants.

The submarine commissioning team worked 24 hours a day, 7 days a week without holidays. 120 kilometers of cables were laid and about 200 000 cable cores were connected on the first nuclear-powered submarine.

Leninsky Komsomol gave an impetus to the electrical installation industry: the number and complexity of the systems increased manifold with a sharp increase in requirements to their quality and reliability.

A high level of responsibility and an intense pace of construction also aggravated the situation: the first nuclear-powered submarine became a real challenge for all the employees, including the EMP-8 specialists... The names of those who worked on Leninsky Komsomol were included in the enterprise's Book of Honor, many of them were awarded state decorations.

There are memories of Vitaly Polushin, an outstanding NPA «Arktika» veteran and one of the specialists seconded from EMP-8. In his essay he told about his work under the guidance of Academician Anatoly P. Alexandrov, who led the reactor tests on the stand.

Here is what happened in 1957 after loading the core into the reactor on the first nuclear submarine: "Alexandrov came to order 254. He went down to the boat through a hatch of the eighth compartment and came into the seventh compartment, heading for the powerplant control panel. At that time our shift was on watch. In the middle of the compartment an individual dosimeter (Geiger counter), given to him in Japan, as they said, started clicking in the academician's pocket. Anatoly Petrovich stopped and said: "Where from?" I realized that the instruments on the turbine generators' control panels were "glowing": the scales of electric meters were painted with glowing paint. The meter went silent with distance from the instruments, and "clicked" again when approaching them. The academician's attendants were perplexed, and he said that "this disgrace" must be removed and one cannot work with such background radiation.

After a while, the instruments were replaced. The engine order telegraph's scales and other signs, where permanent glow paint was applied, were replaced too. New instrument scales and signs had only temporary glow, but were not radioactive. From that time the radioactive signs and instrument scales on all ships began to be replaced. God alone knows how much health the previous paints took away..."

At the forefront of production

Almost 70 years have passed since then. Domestic shipbuilding was developing by leaps and bounds. The Severodvinsk shipyard has mastered series production of nuclear-powered submarines and became the center of nuclear submarine shipbuilding.

In parallel, the electrical installation production in Severodvinsk was developing and strengthening. The names changed: in the 1960s, EMP-8 was renamed ERA, and already in the mid-1970s, due to an increase in output and the development of multi-profile production, the enterprise was transformed into the Northern production association «Arktika» (NPA «Arktika»). Its specialists worked on all orders of Russia's leading shipyards, were responsible from laying the keel to the handover to the Navy, without passing the post also at sea on all types of tests. Among the projects implemented by its specialists are all record-breaking ships, the latest models of military equipment.

Every ship came to life only after passing through the hands of the NPA «Arktika» employees. Whether it is construction, repair or modernization, the team can handle any problems.

Over the past 10 years, together with shipyards, all large orders have been handed over, the vast majority of which were fulfilled for the Russian Navy and through military-technical cooperation. The largest commercial orders were also fulfilled – the offshore ice-resistant fixed platform Prirazlomnaya and the jack-up drilling rig Arkticheskaya. Today, work is underway on the large freezer trawler Viktor Gavrilov, floating cranes PK-700 and PK-400.

To achieve these goals, NPA «Arktika» continues to pursue a personnel policy that includes systemic training and retraining of specialists at all levels. Traditionally, the company acts as a "talent foundry." Workers on the front line never part with studies - before each order in the series, electricians study the electrical part of the ship.

In recent years, NPA «Arktika» specialists have mastered new technologies of work with cable, learned to handle relevant materials. Marine electricians work with modern frequency-type drive control systems. They also mastered the check-out of an electric propulsion drive and a static reversible converter and tested them. Specialists learned to work with optical cable and install digital communication systems.

On the threshold of its 70th anniversary, the company opens a new chapter in its history - the USC-EMR Production Specialization Center with branches throughout the country is being established on NPA «Arktika»'s premises. The company will have to implement high standards of electrical work in the construction of ships and vessels. Its professional cohesive team is waiting for new impressive victories on the slipway, which will get into the chronicles of domestic and world shipbuilding.

RYBINSK BUILDS VESSELS FOR BAIKAL

On May 13 and August 2, two passenger catamarans ordered by East Siberian River Shipping Company (VSRP) were laid down at the Vympel Shipyard in Rybinsk. The vessels will be more economical, environmentally friendly and faster compared to the passenger fleet already operating on the lake.

On May 13, the keel laying ceremony for an innovative high-speed passenger hydrofoils-supported catamaran was held in Rybinsk. It was attended by Denis Manturov, Minister of Industry and Trade of the Russian Federation, Mikhail Evraev, Governor of the Yaroslavl Region, and Alexei Rakhmanov, CEO of the United Shipbuilding Corporation.

Opening the solemn event, the Head of the Ministry of Industry and Trade noted: "Russian shipbuilders have already achieved substantive results by developing a wide range of passenger vessels that are deployed for operation on routes. These are high-speed Kometas, which have been sliding down the Vympel Shipyard's ways since 2017, composite catamarans Grifon, new Valdais and Meteors, and Project PV300 four-deck motor ships, which are being built by other shipyards of the country. As early as next year, hydrofoil catamarans, which Vympel starts building in partnership with East Siberian River Shipping Company and Mashpromleasing, will join the fleet.

"We have three major holidays in shipbuilding and laying the keel of a new vessel is one of them. Today we give birth to a new project, which, I hope, will work very effectively on Baikal, and then move on to conquer all of South-East Asia. Despite everything, we are doing a great job today, which will definitely get new opportunities for development as part of this transition phase and the inclusion of Vympel into the big family of USC shipbuilders," stressed Alexei-Rakhmanov, head of the United Shipbuilding Corporation.

On August 2, the keel laying ceremony for the second high-speed passenger catamaran was held. It was attended by Evgeny Norenko, General Director of the Vympel Shipyard, Elena Letunova, General Director of Eastland, the VSRP management company, and Roman Prostotin, Chief Designer of Project HSC150B. According to Elena Letunova, "as soon as the Vympel Shipyard delivers us the hulls, we'll outfit them. VSRP is both an operator and a builder, so we are more interested than anybody else to make sure that the vessels are delivered on time and comply with all the design characteristics. With the delivery of the new catamarans, we will resume voyages to Nizhneangarsk and Severobaikalsk, which existed historically, and connect two regions, the Irkutsk Region and the Republic of Buryatia".

"These catamarans will be unique, this is the first experience of building such vessels in the Russian Federation. They have combined the best of traditional hydrofoils and catamarans," Evgeny Norenko emphasized.

ProjectHSC150B passenger vessels are an innovative type of high-speed passenger ships for Russia. Compared to a glider developing the same speed, the new vessel consumes up to 40% less fuel, carries up to 8-10% more payload. Due to its design features, the vessel is more environmentally friendly: the wave formed during the passage of the vessel causes much less damage to shores.

The designer of the vessel is Nizhny Novgorod-based LLC SEA TECH GROUP.

The hydrofoil-supported passenger catamaran is intended for high-speed passenger transportation on main river and lake lines. Its shallow draft significantly expands the geography of passenger transportation, while a feature of its foil system makes it possible to safely embark and disembark passengers on unequipped shore.

The customer – East Siberian River Shipping Company (VSRP) – is the largest shipping company and cargo carrier on inland waterways in the Irkutsk Region. On Baikal, VSRP operates six ferries on four lines (including its in-house built ones), as well as a whole fleet of pleasure craft involved in the tourism sector. VSRP's vessels go from Irkutsk to Listvyanka and Olkhon Island. Interestingly, VSRP's largest passenger vessels of Project 19591 Barguzin, built more than 30 years ago, were also designed at the "Vympel" Design Bureau in Nizhny Novgorod.

On December 13, 2021, the Vympel Shipyard, East Siberian River Shipping Company and Mashpromleasing signed a trilateral agreement on the construction of two catamaran-type vessels. The construction is planned in cooperation with Irkutsk-based shipbuilding enterprises. The operation of catamarans should begin in the navigation season of 2023 on Lake Baikal.

YANTAR SHIPYARD – DOUBLE GROWTH

Ilya Samarin, General Director of the Yantar Shipyard:

– The Yantar Shipyard joined the United Shipbuilding Corporation in 2008. Over the years, the company has grown significantly in terms of technical facilities and professional competencies, the number of employees and the order book have approximately doubled.

Sixteen various ships and vessels have been built, among which serial projects are worth mentioning. Three frigates for the Indian Navy were successfully completed under the military-technical cooperation in 2013. In the same year, the shipyard was recognized as the best exporter of the shipbuilding industry according to the Russian Ministry of Industry and Trade.

Three patrol ships were transferred to the Russian Navy in 2016-2017 and two large landing ships – in 2018 and 2020.

In 2016, Yantar became the first Russian company to start building vessels for the domestic fishing fleet under the "quota for a keel" state investment program. A series of three Project SK-3101R trawler/seiners was delivered to the Lenin Fishing Collective Farm in 2019-2020.

Today, these projects and activities make up the backbone of the shipyard's production program.

Two large landing ships, Vladimir Andreev and Vasily Trushin, are under construction for the Ministry of Defense of the Russian Federation. Project 5670WSD large freezer/trawler Viktor Gavrilov is being built and in March 2022 the Project MPSV06M rescue vessel Pevek was laid down.

The strategic objective for the shipyard is to further develop its shipbuilding complex. Modernization, reconstruction and re-equipment of production facilities, implementation of modern technologies have been underway since 2011. More than 200 pieces of new equipment have been put into operation and the reconstruction of a part of the outfitting quay has been completed. In the near future we plan to build a hull plating center and a new floating dock.

GREAT FUTURE OF THE SMALL FLEET

Peter the Great appointed an old English boat he found in a barn as the "grandfather of the Russian navy." It is safe to say that the dimensions of the boat would allow it to be attributed to small and low-displacement vessels. At the forum on small and low-displacement shipbuilding, which was held in Kaliningrad from September 8 to 9 at the site of the World Ocean Museum, it was about the grandchildren of the legendary museum grandfather, whose construction will be handled by the United Shipbuilding Corporation.

Previously, many enterprises that are part of the corporation, along with large warships and commercial vessels, widely produced small boats. The Yantar Shipyrad, as a host, presented amazing figures: for 75 years, almost one hundred thousand (95,840 to be exact) motorized water craft (Yantar water bikes and Neman motor boats) have been built in addition to 600 large ships and vessels. A total of almost 1.4 million small vessels are registered in the State Inspectorate for Small Vessels (GIMS), but their number is decreasing every year, and by 2027 there will be less than a million of them at such a rate of decline. Unfortunately, the production of new small vessels is also declining – almost 10,000 such vessels were produced in Russia five years ago, whereas now the figure is less than 5,000. Both numbers are several times smaller than the annual decommissioning numbers. And imports, which are much lower than domestic production, won't make a difference. It would seem that the market is collapsing – what's the point of entering it then?

Exactly for the same reason, as the United Shipbuilding Corporation was set up at the time. Our boats are mostly built today at small private shipyards, whose survivability in real market conditions depends on too many factors. It was easy to enter this market, but it turned out to be even easier to leave it, moreover, when coronavirus and sanctions are piling on the "baby" from both sides. So, USC comes to the small vessel segment not to trample competitors, but to help them survive and grow, and at the same time earn money for themselves.

According to USC CEO Alexei Rakhmanov, the corporation will not threaten the business of private companies: "By entering the boating segment, we do not want to chase the work that a private owner did before us. We define the range of models, introduce unification both by the hull shape and design, and we want to robotize production so that the hulls do not require additional many hours of alterations, checks and clarifications. Therefore, I think we will work with private companies and will give them kits to adapt to individual customers. So we do not remove business from private shipyards, but only add a certain industrial note to it."

Standardization of structural elements, their series production is the key to reducing the cost of ships, and therefore to a greater price - consumer expectations compliance. Moreover, we are talking not only about private buyers, but also government agencies interested in a small fleet – everyone is counting money now.

According to Alexei Rakhmanov, the catamaran Dobrynya built at the Yantar Shipyard and demonstrated to the audience at the forum is one of the potential versatile vessels: "it can become a platform which can be interesting to both private and corporate customers".

The CEO of the Corporation said at the forum that USC's specialized small shipbuilding centers will be established in the future, where it is planned not only to build vessels, but also to support them during the whole life cycle. "We've been tasked to build several such centers – one of them will be in the Krasnodar Territory, the second in the Crimea, and I have a proposal how to do it in Kaliningrad. Such a center will carry out all necessary service works, repairs and accept boats for winter storage. Having started building boats, we should establish the warranty and service system without putting that on others' shoulders," he explained.

During his presentation, besides the catamaran Dobrynya and passenger vessel Sotalia (which, however, "can be attributed to small vessels only conditionally" – Alexei Rakhmanov), he noted a project of a serial vessel for the State Inspectorate for Small Vessels (GIMS) under the EMERCOM of Russia, designed at the Central marine design bureau "Almaz", and spoke about problems with marinizing Russian auto engines – in fact, the main problem in mass construction of small vessels.

We would like to remind that by the order of the President USC became the only supplier for the GIMS and the EMERCOM of Russia for 2022-2023 – and most likely, in the near future we will see a new small fleet from USC on the water. And not only under the flag of the EMERCOM of Russia, but also on sale for private buyers, which is equally interested in both they and the corporation.

Grifon, a catamaran produced by SNSP, operates in St. Petersburg

SNSP: 110 years – JUST AHEAD!

Vladimir Seredokho, CEO of the Sredne-Nevsky shipbuilding plant (SNSP), tells about the past, present and future of the shipyard

Vladimir Alexandrovich, please tell us what path the plant has gone over the years?

Our company is celebrating its 110th anniversary today. For more than a century of history, generations of SNSP shipbuilders have come a long way that turned our plant from a small shipyard into a leading enterprise of the shipbuilding industry in Russia and the flagship of domestic composite shipbuilding. Over the years, more than 600 ships and vessels have been built for the Russian Navy and commercial fleets and for export.

The Sredne-Nevsky shipbuilding plant has always been distinguished by the introduction of innovative ideas that helped not only the enterprise, but also the Russian shipbuilding industry as a whole to develop steadily. SNSP was a pioneer in the use of electric welding, was the first in the domestic shipbuilding industry to master the construction of ship hulls of aluminum-magnesium and low-magnetic alloys and was the first in the country and in the world to build hulls of fiberglass. And today SNSP does not depart from the established traditions and continues to pay special attention to the introduction of innovative ship construction technologies, which is a key factor for success in the market.

Vladimir Seredokho has been SNSP CEO since 2007

How has the company evolved in the last decade?

Innovative products cannot be created without updating key production facilities. An in-depth modernization program has been implemented at the Sredne-Nevsky shipbuilding plant since 2014.

Almost all of the shipyard's strategic facilities have been modernized, which helped increase its production capacity several times. Modernization embraced workshops, warehouses, machine tool fleet as well as a launching/lifting system, which was a bottleneck in the shipyard's production chain for many years. After modernization, an advanced ship launching/lifting facility made it possible to build and launch ships and vessels up to 110 m long, up to 16 m wide, with draft up to 4.5 m and launching weight up to 2700 tons.

The basic principle which is applied at the Sredne-Nevsky shipbuilding plant in the organization of work is the principle of a compact yard. All basic production operations, from metal cutting to final installation of equipment at the outfitting stage are carried out under one roof. This saves time and optimizes logistics.

Tell us about the company's production program.

The shipyard's workload has already been planned for 10 to 15 years ahead. As part of the government's defense order, we continue to build mine countermeasures vessels, and we have big plans for them.

What is the situation at the shipyard with commercial production?

The shipyard is actively developing commercial production. The SNSP's order book includes Project A45-90.2 passenger vessels – Andrey Dubensky (lead vessel) and Viktor Astafiev, which are being built under a contract with the State Transport Leasing Company using state support measures. The contract is worth over 5 billion rubles. For the first time in the country SNSP is to build two "river-sea" class vessels, which will operate in the Arctic zone of the Russian Federation on the a socially-significant route in the Krasnoyarsk Territory – Krasnoyarsk – Dudinka – Krasnoyarsk on the Yenisei River, where the transportation of people over long distances by waterways is practically a non-alternative means of transportation. The Project A45-90.2 vessels are designed to carry 245 passengers in comfortable cabins on the route up to 5000 km long. Safety, economic efficiency and a comfort level meeting the modern international standards and high environmental friendliness play a special role in the project.

With this project the shipyard has not only opened a new direction in its production activities, but also made a big step towards a large-scale renewal of a fleet of domestic civil vessels that are able to successfully perform their tasks in most regions of the country.

In April, two Project 04580 Kotlin-class passenger catamarans, Fort Kronshlot and Fort Peter the First, were laid down. A total of six such catamarans will be built. They will be used for the needs of the actively developing Island of Forts Museum and historical park and will also help solve a socially important question of transporting passengers from St. Petersburg to Kronstadt and back, and also connect the city center with all important attractions of the Neva Bay (Strelna, Peterhof, Marine Facade, Lomonosov, Lahta, Gorskaya). Under the terms of the contract, the delivery of the first two vessels is scheduled for May 2023, the second pair will be handed over to the customer in the navigation season of 2024, and the third – in May 2025.

A unique research vessel, Pioneer-M, having a composite hull was launched in September last year. The vessel will employ unmanned navigation technologies. It is planned for year-round operation in the Black and Azov Seas. The manufacture of the PF-1 poloidal field coil, which is carried out jointly with the D.V. Efremov Scientific Research Institute of Electrophysical Apparatus (NIIEFA) as part of the international project to build the ITER experimental thermonuclear reactor, is also being completed.

It is impossible not to mention the Project 23290 passenger catamaran Grifon – it's a vivid example of the application of composite materials in civil shipbuilding. The vessel has already proved itself on the route Novorossiysk – Gelendzhik – Sochi and since 2022 delivers passengers from Sochi to Sukhum for the first time in 29 years.

April 14

Keel-laying of two Project 04580 Kotlin-class passenger catamarans, Fort Kronshlot and Fort Peter the First. According to the contract signed on December 20, 2021, six catamarans will be built.

July 21

SNSP turns 110! The celebration was attended by Vladimir Seredokho, CEO of SNSP, Mikhail Romanov, deputy of the Russian State Duma, Alexei Yakovlev, Deputy Chairman of the St. Petersburg Committee for Industrial Policy, Innovations and Trade, Yulia Logvinenko, head of the Kolpinsky District Administration, and the SNSP staff and veterans. Alexander Beglov, Governor of St. Petersburg, and Alexander Uss, Governor of the Krasnoyarsk Territory, addressed the attendees via video link. The company's anthem, composed by Stanislav Shubin, People's Artist of Russia, was played for the first time for the employees and guests. And in the central alley near the plant's gatehouse, the employees planted 10 linden seedlings, which will please many generations of shipbuilders.

August 10

Completion of the final stage of the manufacture of the PF1 poloidal field coil for the ITER reactor – packing the PF1 coil and preparing it for shipment. For shipping the coil to the port of St. Petersburg, its further transshipment at the port and transportation to ITER, the pontoon with the coil was moved from the production shop to a standby holding track.

August 17

The research vessel Pioneer-M (NIS) left St. Petersburg for its permanent base in Sevastopol after signing the acceptance certificate.

What else does the shipyard do today?

Our activities are not limited to solving production tasks. For example, last year we held a big corporate event – the VI USC Corporate Games, dedicated to the 325th anniversary of the Russian Navy. The organization of this event is one hundred percent merit of the shipyard's young people, who were able to hold a sporting event for our corporation in such a difficult time, taking into account all the restrictions. The holiday was held for more than 500 sportsmen - employees of United Shipbuilding Corporation's plants and design offices. The Games were held very well. The result of the work of the plant's friendly team in organizing and holding the Games was noted by the management of the corporation. I would like to express my gratitude once again to all our employees, who took part in preparation and realization of this complex event, and of course to the sportsmen, who participated and defended the honor of the shipyard.

What are the company's plans for the near future?

We are not resting on our laurels. We have big plans for the future. I can say with confidence that despite everything, our shipyard is growing and we continue to launch new capacities. We are planning to build and renovate the outfitting quay, reconstruct the boiler house, we need to increase its capacity, modernize the warehouse facilities for materials and equipment. The work will be organized at a high technical level with the application of automated accounting and storage technologies. Digitalization of the shipyard will continue.

How did you manage to achieve such significant results?

The implementation of such challenging projects at our enterprise demonstrates once again the innovative capacity of the Sredne-Nevsky shipbuilding plant and the high qualification of its employees. Thanks to the daily efforts by all shipyard employees, the enterprise has not only managed to preserve the capacity accumulated by generations of veterans, but also successfully mastered new promising areas of activity. Today the SNSP staff builds the newest warships and passenger motor ships, multipurpose boats and work vessels, takes part in building an international experimental thermonuclear reactor and produces components for a network of domestic wind farms which is under construction.

For 110 years we have been working for the good and prosperity of our Homeland, building ships to defend the interests of the country. I congratulate everyone on this momentous date. I wish you, your relatives, your nearest and dearest, good health, good mood, and confidence that together we will continue to successfully fulfill all our tasks and achieve high results. I wish everyone great success in the future. Our motto is "Just ahead!" ■

Prepared by of Sredne-Nevsky shipbuilding plant's press service

ABOUT MY ENTERPRISE

Kristina Kryuchkova
process engineer of thepre-production engineering department at SNSP

I always wanted to link my career with something meaningful for my Homeland. And that is why I chose shipbuilding – one of the most complex and high-tech industries.
From my first days at Sredne-Nevsky shipbuilding plant I was surrounded by friendly and experienced specialists in their field. They are always ready to help in difficult situations, share their experience and knowledge, as well as answer questions of any complexity regarding the construction
of ships and vessels. Thanks to support of my colleagues and mentors, I was able to quickly join the team and acquire the necessary skills for work.
At present our enterprise is the leader of composite shipbuilding in Russia. I would like to believe that further coordinated work of all departments will allow us to conquer unprecedented heights and new horizons.
On behalf of the pre-production engineering department and on my own behalf, I congratulate all factory workers with the 110th anniversary of our plant!

Ekaterina Alexeyevna Korkina
SNSZ veteran

I came to the Sredne-Nevsky shipbuilding plant right after high school, worked for a year, and then I was sent to the Pioneer House to work with the children of plant employees. After working at the Pioneer House they took me back to the plant. For 16 years I worked with children and was head of the plant's pioneer camp, which we had in Luga. The camp was wonderful and the children went all the time with pleasure. And even the kids came to visit their tutors after they served in the army. And now many residents of the settlement of Pontonny, who were children back then, meet me and hug me.
My whole family worked at the plant. I am the youngest. My elder brother was conscripted to the front straight from the plant and went missing. So every year I come to the plant on Victory Day, bring flowers in memory of my brother and all the guys who stood up to defend our homeland in that difficult time, those who raised the plant after the war and who are no longer with us.
I would like to wish the young men and women who work at the plant now: you also live in a difficult time, you are the future of the plant, the future of our country. Work well, just as we once worked to defend our homeland.

SNSP Museum turns half a century

The Museum of the History of the Sredne-Nevsky shipbuilding plant was opened in 1972, on the sixtieth anniversary of the shipyard, on the initiative of Vladimir Alexandrovich Emelyanov, the director of the shipyard. The Museum's premises were placed on the fourth floor of the production building and occupied a 100-square meter hall. The exhibit included handwritten and printed materials on the history of the shipyard, photographs, panel pictures and 18 models of ships and vessels which had been built over the years.

But in 1992, due to a difficult economic situation at the shipyard, the museum was conserved. In 2009, at the initiative of Vladimir Seredokho, the plant's CEO, the operation of the museum was resumed. In 2017, the museum moved to new premises, which turned out to be the oldest building at the shipyard built in 1887, where the administration lived before the revolution and where the office of Academician A.N. Krylov was located. The building underwent major repairs and restoration.

Hundreds of visitors have been there since the opening of the museum's new exhibit – plant workers, production veterans, residents of the settlement and the Kolpinsky district, school pupils, members of specialized clubs, St. Petersburg students, present and potential customers of the shipyard's products. The museum of Sredne-Nevsky shipbuilding plant's history is an important element of corporate culture and contributes to further development of the shipyard and the whole shipbuilding industry.

SNSP's milestones

1912 Ust-Izhora Shipyard (now the Sredne-Nevsky shipbuilding plant) was laid

1913 The construction of the shipyard was completed: four slipways 120 meters long and 15 meters wide were in operation, the number of personnel was 1500

1916 Eight Orfey class destroyers were built and delivered to the Navy

1917-1920 The shipyard was mothballed

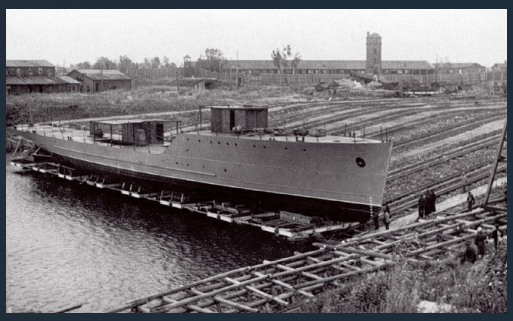
1920 The shipyard's operation was resumed

1928 The Dzerzhinsky ship repair yard was transferred from Leningrad to the Ust-Izhora Shipyard.

1930 The shipyard was renamed Ust-Izhora Pilot Shipyard. An electric welding laboratory was established there under the guidance of Academician Volgin

1934 Electric welding was used at the shipyard to build the passenger ship Belorybitsa for the first time in Russia

1937 Minesweepers become the main specialization of the shipyard



1941-1945 Being five kilometers away from the front line, the shipyard continued to outfit minesweepers, built ferryboats and self-propelled tenders for the Road of Life, small minesweepers with a displacement of 100 tons and repaired warships.

For itsself-denying work and delivery of military equipment to the front, the Sredne-Nevsky shipbuilding plant was awarded the Order of Great Patriotic War, 1th Class

1947 Sredne-Nevsky shipbuilding plant mastered the use of automatic welding and large-scale construction of ships by the flow block method for the first time in the USSR

1950s Ships with superstructures made of aluminum-magnesium alloys were built for the first time in the USSR

1960s The shipyard mastered the construction of ships from low-magnetic steel for the first time in the world

1980s Modernization of the shipyard to ensure the construction of qualitatively new ships, but in the 1990s the reconstruction was frozen

2000s The shipyard entered the Federal Target Program "Development of Defense Industry Complex", which made it possible to start modernization of its production facilities. The shipyard purchased new machine tools, equipment, tooling, software products, retrofitting of the existing production facilities and construction of new ones began

2011 Vacuum infusion technology was developed and put into production for the first time in Russia, a one-piece fiberglass hull 62 meter long was formed (world record)

2013 The shipyard mastered the technology for manufacturing carbon-fiber composite hulls and a carbon-fiber hull of Project 23290 150-seat passenger catamaran was made

2015 The shipyard won the All-Russian Competition "Defense Industry Organization of High Social and Economic Efficiency" established by the Ministry of Industry and Trade of the Russian Federation
In September 2015 the Sredne-Nevsky Shipyard was awarded the Diploma of the Government of the Russian Federation for high results achieved during the fulfillment of Government's defense orders in 2014

Today The shipyard is the leader of composite shipbuilding in Russia. It employs about 1700 people including more than 200 qualified specialists in composite materials.

Work is underway to build innovative mine countermeasures (MCM) vessels for the Russian Navy: in December 2016 the shipyard handed over the lead MCM vessel Alexander Obukhov to the Navy; the construction of follow-on vessels continues.

EASTERN ECONOMIC FORUM: PEOPLE ARE MOST IMPORTANT

The Eastern Economic Forum (EEF) traditionally held in Vladivostok in early September caused a special interest 2022. Under the challenging conditions of sanctions, the role of the macro-region is growing rapidly. In the welcome speech to the guests of the event Vladimir Putin noted: "The Forum makes an essential contribution to the buildup of business ties between Russia and the countries of the Asia-Pacific Region (APR). As early as now one can observe a trend of the APR being turned into the center of the world economic activity, while the industrial centers in Europe and the USA are gradually fading away."

The EEF 2022 confirmed that in the world there are enough countries that continue building up business connections with Russia. More than 7,000 participants and mass media representatives from 68 countries, including Russia, took part in the Forum. Of them, 1,700 were business representatives from 700 companies. The most numerous foreign delegations came from China, Myanmar, Mongolia, India, Armenia, Republic of Korea.

At the thematic session of the Eastern Economic Forum in Vladivostok CEO of the United Shipbuilding Corporation Alexei Rakhmanov in his speech outlined major trends in domestic and world shipbuilding and proposed the development of industrial programs with an eye to 2050. According to the Head of the Corporation, "we should look ahead. Horizon to 2035 in shipbuilding is somewhat shallow. We should look at the horizon of 2050 and maybe further. We should also build up measures of state support to the industry in such a way that our products would later find their niche at the foreign market."

Alexei Rakhmanov highly appreciated the development of the Amur Shipbuilding Plant (Komsomolsk-on-Amur), a unit of USC, which built a new railway-automobile ferry 'Alexander Deev' and raised a flag above it on September 6. Speaking about the said plant Alexei Rakhmanov noted the role of the work collective of the enterprise in the output of a new product type: "People are most important in our business. One can invest hundreds of billions of rubles, but if there is no man who can do things right, nothing will happen... Keeping the human potential is a key to everything that is going on today. People are our core capital, a key asset and we are certainly proud of them.'

According to the head of USC, there is still an acute shortage of personnel in shipbuilding industry and to bridge this gap the Corporation supports engineering education at schools, vocational schools and institutes and starting from 2022 opens shipbuilding classes in the regions of presence of the Corporation's enterprises.

Vladimir V. Kulakov,
General Director
of PJSC
Amur Shipbuilding Plant

- The Amur Shipbuilding Plant three times decorated with an order was initially built as a highly mechanized enterprise for handling tasks related to enhancing combat effectiveness of the Pacific Fleet. The plant is part of the JSC United Shipbuilding Corporation and is included into the list of strategic enterprises and organizations. During 85 years of its history the plant produced more than 300 ships and vessels of various purposes, modernized oil and gas drilling platforms and created infrastructure for servicing the above-mentioned facilities, repaired military ships earlier built by the plant and participated in the regional road-building programs. Fifteen years ago the Amur Shipbuilding Plant was going through another crisis because of the plant's shortsighted management and general economic and political situation in the country. In December 2009 Sberbank of Russia transferred 59.12% of shares of the PJSC Amur Shipbuilding Plant to the JSC United Shipbuilding Corporation. The plant was taken under control by the state-owned company. As of today, the Amur Shipbuilding Plant features radical modernization of the production facilities, introduction of most advanced process controls, including the 5S system and consistent introduction of the lean production principles. At the enterprise a factory of processes is working where not only the plant's personnel undergo training. The plant became a member of the program "Labor Productivity" every year top and mid-tier executives undergo training under the programs developed by the domestic leading universities of management and production control. The First Deputy to the General Director and the Chief Engineer of the plant became members of the third enrollment training program for the federal personnel reserve of the senior management of the military and industrial complex. Production agenda of the Amur Shipbuilding Plant includes construction of ships to provide the fulfillment of the state defense order. The Amur Shipbuilding Plant remains the main base in the Far East for building combat ships for the Pacific Fleet In the field of commercial shipbuilding the plant is completing the construction of the second of the two cargo-and-passenger automobile-railway ferries for the island of Sakhalin and a 7 MW ice-class rescue tugboat. We are searching for potential commercial customers and hope for the comprehensive assistance and support of USC.

THE ALEXANDER DEEV FERRY HOISTED THE FLAG OF RUSSIA

After the two ferries built by the Amur Shipbuilding Plant began working connection of the main land with the island of Sakhalin will become more reliable. The first of them already operates on the Vanino-Kholmsk line

EVENT

On September 6 a state flag hoisting ceremony took place in Vladivostok on the railway-automobile ferry ALEXANDER DEEV built by Amur Shipbuilding Plant in which the President of the Russian Federation took part via video communications. USC CEO Alexei Rakhmanov and General Director of Amur Shiplbuilding Plant Vladimir Kulakov reported on the ferry readiness being on board.

The state flag hoisting ceremony was held within the framework of the Eastern Economic Forum. The ALEXANDER DEEV ferry will operate on the line Vanino-Kholmsk connecting the island of Sakhalin with the continent. The vessel will be able to carry dozens of railway cars and cargo trucks, as well as up to 200 passengers. A high ice-class (Arc5) will allow the ALEXANDER DEEV to stay on the line throughout the year.

According to USC CEO Alexei Rakhmanov, "the new ferry will make Sakhalin more accessible for citizens. As compared with Soviet-built predecessors, the ferry can carry twice as many cargos and almost three times more passengers. It is already the third vessel that USC transfers for the region." Since last year Sakhalin and the Kuril Islands were connected with the two new cargo and passenger ferries Admiral Nevelskoy and Pavel Leonov built by Nevsky Shipyard.

General Director of the Amur Shiplbuilding Plant Vladimir Kulakov told the President that the ALEXANDER DEEV is the lead vessel of the two passenger-and-cargo ferries built by the 'Sakhalin order' at the enterprise. "For the convenience of passengers, the vessel will be provided with an Internet-café, a spacious mess-room, a medical ward,' he said.

After receiving the report Vladimir Putin gave an order to hoist the flag.

On the same day a ceremony was held to award the personnel of Amur Shipbuilding Plant during which the Head of the Federal Agency for Maritime and River Transport Zackary Djioyev and USC CEO Alexei Rakhmanov thanked the staff of the enterprise for working on the order.

General Director of the Amur Shiplbuilding Plant Vladimir Kulakov handed in commendation letters of the Governor of the Khabarovsk Territory and the Mayor of the city of Komsomolsk-on-Amur to the employees of the plant for dedicated work and distinguished services. Letters of commendation of the General Director of the Amur Shiplbuilding Plant for significant contribution into the construction of the ferry ALEXANDER DEEV and for prompt handling of production tasks were handed in to the heads of LLC Shipbuilding Company Cohorta TM, LLC BaltTechMash, Production Association Geser, LLC Bi Pintron.

FERRY...

The ferry Alexander Deev was built by the Amur Shiplbuilding Plant under project CNF11CPD. The vessel was designed by Marine Engineering Bureau SPb, design and operational, as well as process flow documentation was done by the Vympel Design Bureau (part of USC). The order for the ferry was placed by the State Transport Leasing Company (GTLK).

The ferry was laid down in June 2017 and was launched in August 2019. In the period from June to August 2022 manufacturer's running trials were completed successfully during which the ferry developed the speed of 18.2 knots. Enhanced icebreaking capability allows the ferry to keep the speed of at least 3 knots in the 1 m thick level unbroken ice and 6-8 knots in the ice with thickness up to 0.8 m

The enterprise continues working on the second ferry Vasily Oschepkov of project CNF11CPD. After commissioning connection of the Sakhalin with the continent will become even more reliable.

... AND MAN

Alexander Timofeevich Deev was a Soviet shipbuilder, Director of the Amur Shiplbuilding Plant (1964-1977), Hero of Socialist Labor (1966). In the A.T.Deev anniversary year his name was given to one of the passenger-and-cargo ferries under construction at the Amur Shiplbuilding Plant. Under the guidance of Alexander T. Deev Amur Shiplbuilding Plant developed an effective management system focused on the construction of nuclear-powered submarines, introduced specialized workshops intended for these tasks, organized the use of electronic computing machines for production management. Along with the construction of the first-and-second generation nuclear submarines the shipyard also built diesel submarines unique in purpose: 'Kefal,' a target boat, 'Lenok,' a rescue boat. When his was in charge the Pacific Fleet received 29 nuclear and 5 diesel submarines. In so doing, new steel grades were developed for the pressure hull, panoramic exposure of welded seams was practiced, a dry method was used to bring ships out of covered slip ways and many other things were done.

The plant personnel held Alexander Deev in high esteem, he combined firm character and high exactingness in fulfilling production tasks and constantly looked after work and leisure organization for his staff.

Many Far East shipbuilders met Alexander Deev in the course of studying. For many years he taught at the Far-Eastern Polytechnical Institute and in the Komsomolsk-on-Amur Polytechnical Institute. The 'production professor' gave lectures to students and backed up each of his talking points with real production examples. Then he took exams from graduate students and, being the head of the examination board, was looking for the most talented and savvy employees.

SEPTEMBER 1. PATRONAGE TAKEN!

USC enterprises actively joined efforts in order to create and provide engineering school classes

Any educational process is a transfer of knowledge and experience, and the experience, before being shared, should be gained somewhere. For this reason, projects in the sphere of education are always of a multi-stage nature: for a teacher to teach a pupil, first somebody should teach a teacher, give him/her new competencies.

It is exactly what the task of a federal project on creating engineering classes in schools is all about. In such classes schoolchildren will get all proper conditions in order to receive additional knowledge in engineering required by enterprises. For this knowledge not to be far away from reality teaching at schools will be done by the personnel of shipyards and USC design bureaus (USC DB). Enterprises helping schools to organize the educational process will also gain a benefit for the earlier a child develops an engineer's way of thinking, the bigger will be his/her contribution to the common cause.

FEDERAL PROJECT

In summer the theme of creating shipbuilding classes became very topical in many regions where the corporation was present because the task was set on the state level to put future engineers at school desks from September 1. The Ministry of Education created a specialized site «судоавиакласс.рф ('sudoaviaclass.rf') which listed the project participants: shipbuilding profile included 31 schools in 9 regions of Russia. Educational programs in these schools were developed in accordance with the recommendations approved by the famous 'Korabelka' (Saint-Petersburg State Marine Technical University).

For USC participation in this project is an essential personnel matter. The Director of USC Personnel Management Department Eduard Bobritskiy believes that creation of high-tech work places will present new requirements for the future ship-builders: "To get soon well-educated young people who are aware of the ongoing changes training of personnel for the industry should be started as early as the school bench. Development of USC network of engineering classes in the regions helps to resolve this task."

NIZHNY NOVGOROD

At the initiative and with the support of the United Shipbuilding Corporation first engineering classes with emphasis on shipbuilding were opened in Nizhny Novgorod in 2019. The partner of USC and the "Krasnoe Sormovo" Shipyard on this project was Nizhny Novgorod State Technical University named after R.A. Alekseev. Classes were opened based on the facilities of school No. 79. The idea was accepted and practice confirmed its viability.

Presently, an educational shipbuilding cluster comprising 9 schools, 4 institutes and 4 institutions for additional education of children was set up in Nizhny Novgorod. In the 10th grade of engineering-focused classes pupils are to study mathematics, physics and information science. Besides, they will attend extracurricular shipbuilding lessons. Success in Sormovo stirred interest in many people both in the region and nationwide. In the spring of 2022, a session of the club of personnel directors incorporated into the Nizhny Novgorod Association of Industrialists and Entrepreneurs attended by representatives of 35 industrial companies was held at the "Krasnoe Sormovo" Shipyard. In summer lyceum 82 was visited by an RT channel shooting team: schoolchildren demonstrated their design of an autonomous submarine base for the Northern Sea Way developed at the additional classes under the program of the education and production cluster.

KALININGRAD

In the westernmost region of Russia an agreement was signed in the Training Center of the Yantar Shipyard on August 4 between JSC Yantar Shipyard, Kaliningrad State Technical University, Kaliningrad Marine Lyceum and Kaliningrad secondary general education school No. 39 on creating engineering classes. USC CEO Alexei Rakhmanov who took part in the signing ceremony emphasized that the initiative on creating engineering classes emanates back from the professional orientation classes which were developed in this country many decades ago: "Such practice was exceptionally useful for the youth and effective for Russian economy. We support the development of a network of engineering-shipbuilding classes in all the regions of presence so that young, qualified specialists aware of the new conditions and new technologies would come to us to work at USC enterprises."

ASTRAKHAN

In the Astrakhan Region engineering classes focused on shipbuilding opened in 2022 based on the facilities of 4 schools: Astrakhan municipal budgetary general education institution Gymnasium No.3, secondary general education schools Nos. 32 and 20, state budgetary general education institution JSC Engineering School. The pilot project related to making up such classes had

started last year: schoolchildren visited production sites of the Southern Shipbuilding and Ship Repair Center, took part in thematic meetings.
The Southern Shipbuilding and Ship Repair Center, along with the Astrakhan division of the Russian Union of Machine-Builders are the regional curators of the project.

SAINT-PETERSBURG

In Saint-Petersburg the agreement on creating the education and production cluster Shipbuilding (machine-building) within the framework of the Federal Project 'Professionalitet' under the State Program 'Development of Education' was signed in the historic walls of the Smolny Palace. The document was signed by the Director of USC Personnel Management Department Eduard Bobritskiy, General Director of the Baltic Shipyard Alexei Kadilov, Deputy General Director for personnel and general issues of Admiralty Shipyards Igor Saveliev, Deputy General Director for personnel management and administrative issues of the Shipbuilding plant "Severnaya verf" Yuriy Ermilov,

Chairperson of the Saint-Petersburg Education Committee Natalia Putilovskaya and directors of educational institutions of secondary vocational education of the northern capital. Summarizing the event results Eduard Bobritskiy said: "As is customary for shipbuilders to lay down ships, so did we lay down today a new model of secondary vocational education. We shall soon reap the benefits of this new model when employing young specialists to work at our enterprises."

SEVERODVISNK

In Severodvinsk engineering classes will be formed from the parallel 7th grade pupils of school No.20. The educational program for the pupils is different from the standard school curriculum: shipbuilding problems and information were added to the customary subjects. According to the plans, in senior classes schoolchildren will study major subjects and additional modules in-depth. Besides, 7th grade pupils will go on excursions, will create innovative designs, will listen to lectures given by instructors of the branch of the Northern Arctic Federal University and specialists of the Production Association "Sevmash". According to the city's mayor Igor Skubenko who took part in the ceremony, "children should be given a chance to fall in love with the profession off shipbuilder." Sevmash's Deputy General Director for personnel management Andrei Monogarov suggested disseminating the experience gained among other schools of the city as well. He referred to the agreement as a 'new word in the professional orientation component of the enterprise personnel policy.'

SIRIUS

The United Shipbuilding Corporation is ready to share its practices on the professional orientation with other companies for the entire domestic industry is facing staffing objectives. Methods to achieve these objectives became the agenda of the XVI International Congress 'Young Professionals. Training Personnel for Economic Growth' held on the federal territory Sirius on September 15-16.
Within the framework of this representative forum the Director of USC Personnel Management Department Eduard Bobritskiy took part in the session of the Industrial Council (organized in the form of panel session with participation of the Minister of Education of the Russian Federation Sergei Kravtsov) and in the solemn signing of the agreement on cooperation under the project Engineering Classes. Igor Sovyk, USC Deputy CEO for personnel management, told at the section 'Training of Personnel for Machine-Building' what profession orientation projects are being implemented by the Corporation and what results they produce.

CHILDREN IN WORKSHOPS

When children come to the workshops of the shipbuilding enterprise, especially little ones (for example, fifth-graders, as in excursion from Astrakhan school No. 20 who visited the production site of the Southern Shipbuilding and Ship Repair Center there are troubles galore: where to get helmets of the right size for them, what to show them so that it would be clear and interesting and how to watch them all so that none of them would be lost. There is more to it: children ask questions which make grown-ups feel at a loss. Yes, there is a lot to worry about and children will not understand everything during such an excursion, but they will definitely remember the way to the enterprise and in ten years' time such enterprise will gain more as compared with another one where children are not invited today.

Peter the Great turned 350

Peter the Great by Godfried Schalcken, Dutch artist, 1703–1706

HOW USC CELEBRATED ANNIVERSARY OF THE DOMESTIC SHIPBUILDING'S FATHER

The year 2022 was marked with the 350th anniversary of Peter the Great's birth. Given his exceptional merits in developing a shipbuilding industry and establishing Russia as a sea power the anniversary was widely celebrated at all USC enterprises. Timed to this very important date was a large-scale program implemented by the Corporation in order to keep and promote Peter's heritage, including educational multimedia and editorial projects, thematic exhibitions, intellectual tournaments, round tables and other events.

Preparation for Peter the Great's anniversary had begun long before the year of celebration. We marked important milestones in our maritime history linked with the name of the first Russian Emperor. Above all, 325 years of the Russian regular Navy and the momentous decision "Naval ships will be!", 300th anniversary since Russia was proclaimed an empire, anniversary of St. Andrew's Flag and Navy Regulations, anniversaries of decisive victories won by Russian seamen at Gangut and Grengam.

In 2018 the President of Russia issued a decree on celebration of Peter the Great's anniversary. The Government of the Russian Federation formed an Organizing Committee on preparation and celebration of the anniversary in which USC CEO Alexei Rakhmanov was included, too. Also, a plan of major events was drawn up including 150 activities. Five of them were added to the Plan at the initiative of the USC shipbuilders.

One of the central events was the multimedia historical/educational project 'Sea Power' which we launched in February 2021. USC is implementing it together with the Russian Historical Society and International News Agency Russia Today. The media was designed for a wide range of readers, for all those who are interested in ships and fleets. The portal of the Russian news agency RIA Novosti issues on a regular basis educational and historically credible materials about legendary and relatively unknown events of the country's maritime history, about the destinies of ships and shipbuilders. Many publications are focused on Peter I and his anniversary. Worthy of separate attention are stories about the work of the USC enterprises and modern shipbuilders prepared in conjunction with Corporation's shipyards and design bureaus, our museums. The 'Sea Power' project became a most popular information media, as of today it published more than 120 materials, while its audience exceeded 500,000 users from Russia and foreign countries. We managed to discover earlier unknown pages of the Russian maritime history, but many are yet to come.

One more key event of the celebration plan related to USC's efforts to promote Peter the Great's heritage was the virtual tour of the exhibition "Naval ships will be!": by the 325th anniversary of the Russian Navy and 115th anniversary of the Russian submarine fleet." The exhibition was prepared by the Boris Yeltsin Presidential Library together with USC's enterprises: «Rubin» Design Bureau, Design Bureau "Malachite", JSC "Admiralty Shipyards", JSC "Baltic Shipyard", PJSC "Proletarsky zavod", Production Association "Sevmash". The exhibition was held in the library building from October 18, 2021 to January 23, 2022. Here one could see unique documents and models of ships demonstrating continuity of the Russian Navy from the Peter the Great's times to the present day, as well as modern achievements of USC's shipbuilders. We managed to show the way the industry had made from the 'stealth vessel' built in the times of Perter I to the state-of-the-art strategic nuclear-powered missile-carrying submarines. Now this exhibition is available in the virtual tour format on the portal of the Presidential Library.

The heritage of Peter I is not only the shipbuilding industry and our oldest shipyards, but also unique book memorabilia. USC supported the edition of the Book of Mars also included into the big Federal Plan. It is a reprint of a rare edition of Peter the Great's period which collected reports on the main victories of the Russian Navy in the Great Northern War from the seizure of Noteburg (1702) up to the battle at Gangut (1714). The Book of Mars was issued for the first time in 1713 when Peter I was still alive and was the first book printed in Saint Petersburg. By the XVIII century it became a bibliographical rarity and in 1766 was reprinted. From this second edition now kept in the Russian State Archive of the Navy the present reprint was made. The book kept its original text and design. The publishers (The Navy Archive and the Maritime Heritage publishing house) provided it with illustrations and a historical preface, as well as a vocabulary of terms and obsolete words to make the text clearer for a modern reader. Besides, the book was supplemented with a list of archive documents about the two major battles that took place after 1714: at Ezel (1719) and at Grengam (1720).

Some of the first to see the book were representatives of press services, museums and exhibition activities specialists of the USC Group companies during the presentation of the edition at the Corporation's HQ in Saint Petersburg. Now this Peter the Great's rarity is open for all to see.

Peter the Great's anniversary became the hallmark of the Saint-Petersburg Economic Forum last year

To Peter I fleet was a pet project. He himself designed and built ships and for this reason many of them were deservedly named after him. Now on the production site Lotos of the Southern Shipbuilding and Ship Repair Center (part of USC) the motor ship Peter the Great of project PV300VD is being completed and will soon depart for a maiden trip. Of course, the new Peter ship was not on the sidelines of the festivities. The Federal Plan envisaged a thematic exhibition about the founder of the Russian shipbuilding being held on board the ship.

Young generation is to continue the industry history. Therefore, it was important that Peter the Great's anniversary would be celebrated not only by the USC personnel, but also by their children and grandchildren. For a number of years, USC has been running the project 'Tsar-Carpenter' (part of the federal plan). Thanks to it young shipbuilders learn about Peter the Great's deeds, get familiarized with the country's maritime history and shipbuilding professions. Pupils of partner schools, cadets of the naval educational institutions also take part in this tournament.

Showpieces of the exhibition 'Peter the Great. Travels to Europe' in the State History Museum: globe (Amsterdam, 1640), spotting scope (Western Europe, early XVIII century)

USC shipbuilders regularly render support to the initiatives and projects aimed at historical education. A lot or work is being done along with the Russian Historical Society, a long-time partner. Owing to the experts of the said society (including most competent historians among the country's scientists) discovered, based on documentary sources, the date of the first 'state order' for the construction of the ship 'Oryol' commenced on June 29, 1667. It is exactly from this date that 355 years ago the history of Russian state shipbuilding began and served as a ground for instituting a professional holiday – Shipbuilder's Day.

Exhibition 'Sea Power' in Klimentovsky lane, Moscow

The 'Oryol' is closely related to the birth of the Russian national tricolor flag. For this reason, for shipbuilders Flag Day is a special and significant holiday. Today USC along with the Russian Historical Society do a lot to inform the broad public audience about the achievements of shipbuilders from the Peter the Great's times to the present day. Among many anniversaries of the year 2022 there was a date which is equally dear to us: in June the Russian Historical Society marked the


КНИГА
МАРСОВА
ИЛИ ВОИНСКИХЪ ДѢЛЪ
ЦАРСКАГО ВЕЛІЧЕСТВА
РОССІИСКИХЪ.

The Book of Mars or of War Affairs, 1713

10th anniversary of its rebirth.The shipbuilding topic became 'its own' for the State History Museum, too, because last year it also had an anniversary: 150 years since the day of foundation. Coincidence is not incidental for the museum appeared owing to the Polytechnic Exhibition, prepared by the 200th anniversary of Peter I. The maritime part was most impressive there. In 2021 USC and the State History Museum held two joint exhibitions dedicated to Ivan Kruzenshtern and the 300th anniversary of the Russian empire. Last year a new exhibition was opened: 'Peter the Great. Travels to Europe.'

USC took part in a series of educational events 'The Tsar and the sea' organized by the Russian Ministry of Culture. These events were intended to keep, study and promote the heritage of Peter I. The Peter I marathon attended by the Corporation's representatives visited Saint Petersburg, Kaliningrad, Astrakhan and other Russian cities.

On Shipbuilder's Day a round table was held in Saint Petersburg dedicated to the 355th anniversary of the Russian state shipbuilding. Representatives of the industry, maritime and shipyard museums, other organizations outlined the major areas of their educational activities, the tasks they set to promote the history of the national Navy and shipbuilding.

Timed to the professional holiday of shipbuilders, 15th anniversary of USC and 355th anniversary of state shipbuilding a photo exhibition 'Sea Power' was opened in Klimentovsky lane in Moscow. The exhibition reflected major deeds of the Tsar-Reformer, told about the origin of domestic shipbuilding and the history of the Russian Navy a big part of which was built at the shipyards now included in USC. The historical part of the photo-exhibition presented key milestones in the development of domestic shipbuilding technologies for three and a half centuries, as well as gave information on significant ships created with participation of outstanding Russian shipbuilders. The modern part demonstrated the latest ships and vessels recently built by USC.

Peter the Great's anniversary was a very appropriate moment to remember the history of the industry marked with a multitude of outstanding discoveries, names and memorable dates. Therefore, the Corporation will continue to promote rich heritage of Peter I after the anniversary year as well for, as the historian Vasily Klyuchevsky said: "studying ancestors we learn ourselves."

Natalya Krivova

TSAR-CARPENTER 2022
SIXTH SEASON

On July 22 the results of the international professional orientation competition 'Tsar-Carpenter' were summarized in the Technograd pavilion of the Exhibition of Achievements of National Economy (VDNKh).The competition supported by the United Shipbuilding Corporation was held already for the sixth time. Winners and prize-takers were selected who, after the victory, become project ambassadors and share their knowledge with other schoolchildren.

At the end of May children and grandchildren of USC enterprises' personnel, pupils of partner schools and cadets of the naval educational institutions at the age of 11-16 were invited to join the scheduled season of the project 'Tsar-Carpenter.' Besides, schoolchildren from Kazakhstan, Armenia, Lugansk People's Republic and Donetsk People's Republic joined the project.

Project goals were the same: to boost the prestige of the shipbuilding and maritime professions, to form professional identity, to educate children in the spirit of patriotism and to develop their intellectual and creative potential. The 'Tsar-Carpenter' project helps schoolchildren to learn sea traditions, to find new friends from other cities and countries and to develop their communication skills.

At the first stage the participants competed in the on-line quizzes, the final one took place on June 25-26. Based on its results, participants of the final face-to-face round were determined which was this time fixed in Moscow, on the grounds of the VDNKh Exhibition. In the struggle for awards participants were to show not only their personal qualities, but also demonstrate teamwork ability.

Final. Moscow

The final round program was full of team-building events and excursions. After an adventure quest excursion schoolchildren went to the Patriot Park and visited the USC Demonstration Center. Then they went, this time as teams, to the VDNKh Exhibition to the Technograd Pavilion.

The team championship included an intellectual quiz, a business game to train in lean production and a robot engineering course.

At the end of the day international winners and winners of the final competitions were awarded solemnly. The team that took the first place in the category 14-16 years won a sea cruise on board the legendary sailboat 'Mir.' All prize-takers of the junior age category and the teams that took the second and third places received vouchers to the 'Shtormovoy' camp of the All-Russian Child Center 'Orlyonok' (Krasnodar Territory) on the Black Sea coast.

Intensive course in the 'Shtormovoy' camp

Selection of the site on which children spent the last month of summer was not incidental for the 'Shtormovoy' camp unites those who are fascinated by the water element romantics. It got its name to honor the escort ship 'Shtorm' which took part in the Great Patriotic War fighting as part of the Black Sea Fleet.

In the 'Shtormovoy' camp there is everything as if it were a real ship: crew quarters and mess-rooms, cook-galley and upper deck, log-book and ship's bell. The maritime academy program for children contains many interesting things: children learn how a semaphore works, what rigging consists of, study fleet history and traditions, go to sea under sail and under oars, while at the shipyard for children they assemble sailboats.

USC experts developed an educational program "I am an Ambassador" for the project winners: children could learn more about ship specialities and 'try' them on themselves to get the feel of it. To this end, all participants had undergone preliminary profession orientation diagnostics and were split up as per the roles: general director, innovations engineer, economist, marketing expert, personnel management specialist.

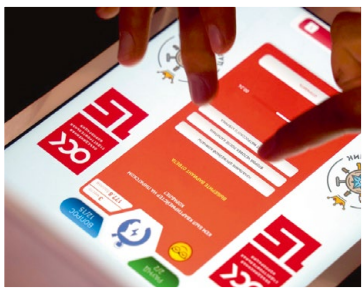
During training participants were divided into teams – improvised shipbuilding yards. The teams competed with each other fulfilling practical tasks reflecting the essence of each professional role: they conducted negotiations, distributed roles in the team, presented their shipyard, thought through effective use of resources, created an innovative product.

August in the 'Shtormovoy' camp gave project participants not only vivid impressions, but also offered them the first experience in the future profession, complex, but fine.

Ambassadors. Severodvinsk

The sixth season of the project 'Tsar-Carpenter' has been completed, but its winners are already trying to play a new role of ambassadors. This word translated into Russian accordingly imparts some weight to the words of quite young guys when they independently teach shipbuilding classes for their peers. They not only tell about the project in which they had participated, but also inform on how the shipbuilding industry is organized and what specialists will be in demand there in few years' time.

At the end of September, the first such meeting took place on the site of Northern (Arctic) Federal University in the city of Severodvinsk where the 'Tsar-Carpenter' ambassadors Ilya Kislitsyn and Ivan Fedorov conducted the first shipbuilding class for the school pupils.



Ilya Kislitsyn told the pupils about his family of shipbuilders, professions of his ancestors starting from great-grandfather and why he himself became interested in shipbuilding.

Ivan Fedorov chose as the topic of his lecture great variety of shipbuilding professions and work of the United Shipbuilding Corporation.

Meetings of the project 'Tsar-Carpenter' ambassadors will continue in other cities, too, and many participants of such meetings will test themselves in the seventh season of the project Tsar-Carpenter 2023.

AGE CATEGORY 11-13 YEARS

1ST PLACE

Team 'Torpedo'

Sofia Panteleeva (LLC Nevsky Shipyard), Darya Bulygina (Production Association "Sevmash"), Daria Kuznetsova ("Rubin" Design Bureau), Anastasia Ivanova (Central marine design bureau "Almaz")

2ST PLACE

Team 'Osminozhki'

Mikhail Lensky (Central Design Bureau "Corall"), Alina Shevchenko (Production Association "Sevmash"), Denis Tsvir (Amur Shipbuilding Plant), Suren Petrosyan (municipal secondary education school No. 39, Kaliningrad)

3ST PLACE

Team 'Morskoi otryad'

Mark Kriger (Vyborg Shipyard), Matvei Dragunov ("Krasnoe Sormovo" Shipyard), Vladelika Ketkova (secondary school No. 5, the city of Mariupol), Andrei Zakharov (municipal secondary education school No. 79 named after N.A. Zaitsev, Nizhny Novgorod)

AGE CATEGORY 14-16 YEARS

1ST PLACE

Team 'Morskaya pekhota'

Kirill Bondarenko (Kronstadt Sea Cadet Corps), Viktoria Klimtseva (Production Association "Sevmash"), Miron Sorokin (PJSC "Proletarsky Zavod"), Vasily Belsky (state budgetary secondary school No. 174, Saint-Petersburg)

2ST PLACE

Team 'Flagman'

Ekaterina Petrichenkova (LLC Crane Marine Contractor), Denis Shienko ("Vympel" Design Bureau), Andrei Avtukhov (Kronstadt Sea Cadet Corps), Artyom Nikitenko (Admiralty Shipyards)

3ST PLACE

Team 'Akulyata'

Maria Sergeeva (municipal secondary education school No. 79 named after N.A. Zaitsev), Maria Zhukova (Amur Shipbuilding Plant), Daria Sharipova (Dedinovo municipal secondary education boarding school), Nikolai Viyushkin ("Vympel" Design Bureau, Nizhny Novgorod)

HOLIDAY OF SPORT AND CORPORATE COHESION

From the 8th to the 10th of September, 2022 Kaliningrad became USC's sports capital,while the Yantar shipyard an organizer of the VII Spartakiade of the USC Group personnel dedicated to the 15th anniversary of the United Shipbuilding Corporation. The competitions were held in Russia's biggest sports and fitness center Avtotor-Arena and on the track-and-field athletics stadium Baltika. Shipbuilders competed in mini-football, volleyball, streetball, table tennis, swimming, track-and-field athletics, kettlebell lifting, shooting, billiards, chess.

The Spartakiade set a record in the number of participants and teams. Kaliningrad was visited by the teams of shipbuilders from Sevastopol, Astrakhan, Vyborg, Komsomolsk-on-Amur, Moscow, Nizhny Novgorod, Polyarny, Saint-Petersburg, Severo-dvinsk and Schlusselburg. 600 sportsmen represented 28 companies of the

USC Group. Last year fans could support the sportsmen for the first time after coronavirus restrictions. For this first on-line broadcasting of competitions and ceremonies was organized, which gave the possibility of watching the major sports event to any employee of the one hundred thousand-strong Corporation.

The Governor of the Kaliningrad Region Anton Alikhanov and USC CEO Alexei Rakhmanov took part in the Spartakiade opening ceremony. One of the most impressive moments during opening was raising the flag of the Spartakiade onto the 17-m rock climbing wall, one of the biggest in Russia.

The Spartakiade was also full of other exciting events. One of them is the final mini football match between the teams of the Yantar shipyard and the Production Association "Sevmash". After the hard-fought play the winner was not determined within the main time of the match and the referee called a penalty shootout. Experience and absolute calm of the goalkeeper of the Sevmash team allowed them virtually to wrestle out victory in this difficult match.

Sevmash's goalkeeper Vladimir Avramenko, a ship fitter, said: "We trained hard for this Spartakiade because we understood quite well that all love football at USC shipyards and hold competitions all the time honing their skills. Frankly speaking, it was very difficult. All the teams were well prepared and it cost us great efforts to become champions in mini football. We are very tired, but we are very happy."

The final chord for the Spartakiade was the closing ceremony, in which team players did a number for all those present singing a song named 'Team' to a tune by Polina Gagarina with the following lyrics: "We start and only win, if we fall, we fly up again. But we know what the truth is: USC is our team!" which will long remain in the memory and hearts of all the participants. All in all, 210 medals were competed for with 39 of them in the individual event. In the team event the victory was gained by the hosts of the Spartakiade – the team of the Yantar shipyard. Shipbuilders of Sevmash won the second place, the third place was taken by the team of the Shiprepairing Center «Zvyozdochka» (both teams represent Severodvinsk). In the contest of fans 'Video visiting card' the first place was won by the video clip of the Nevsky Shipbuilding and Ship Repair Plant, the second place was taken by the Nevskoe Design Bureau, the third place was shared by the teams of OSK-Service and Sevmash. 19 teams presented their works for the competition.

USC's next VIII Spartakiade will be held in 2023 in Saint-Petersburg,"Rubin" Design Bureau will be the organizer.

Place	Team event	Points
1	Yantar shipyard	18
2	Production Association “Sevmash”	25
3	Shiprepairing Center “Zvyozdochka”	25
4	Northern production association “Arktika”	28
5	Admiralty Shipyards	29
6	Baltic Shipyard	37
7	“Rubin” Design Bureau	37
8	Shipbuilding plant “Severnaya verf”	56
9	Nevskoe Design Bureau	59
10	Vyborg Shipyard	60
11	Marine Design Bureau “Malachite”	64
12	Central marine design bureau “Almaz”	66
13	PJSC Krasnoye Sormovo Shipyard	80
14	PJSC Amur Shipbuilding Plant	81
15	JSC USC	83
16	Kronstadt Marine Plant	86
17	Sredne-Nevsky shipbuilding plant	89
18	Proletarsky zavod	91
19	Severnoye Design Bureau	92
20	JSC 33 Shipyard	93
21	Shiprepairing Center “Zvyozdochka”	97
22	LLC Nevsky Shipyard	104
23	LLC OSK-Service	115
24	AO NIPTB Onega	117
25	10 Shipyard	141
26	LLC TsPS OSK-Dvizhenie	146
27	SDEBE	159
28	Sudoexport	165

OUR SHIPS ARE ON THE STAMPS AGAIN

In the 1970s when the USSR built icebreakers of project 10520 the Soviet Postal Service issued a whole set of stamps with icebreakers ranging from Pilot to Arktika. In 2022, new stamps with icebreakers and other ships built at out shipyards will be issued at the initiative of USC.

The United Shipbuilding Corporation engaged in returning names. The purpose of this initiative is simple: to return the former renown to the legendary shipbuilders of the past: designers, engineers, scientists, inventors, in a word, to all those who made Russia a great maritime power.

The project 'Return of Names' started last year as a rubric of the big joint multi-media project 'Sea Power' of USC, Russian Historical Society and the RIA Novosti news agency. On the portal pages one can learn about the contribution to shipbuilding by the Perter the Great's close associates: industry organizer Fyodor Apraksin and outstanding shipbuilder of that time Fedosei Sklyaev, read about the founders of the Russian underwater fleet: ship engineer Ivan Bubnov, the designer of the first domestic combat submarines, and the father of nuclear submarine shipbuilding Vladimir Peregudov.

In the year of its 15th anniversary the United Shipbuilding Corporation continues to return names. The initiative goes up to a new level owing to the partnership with the JSC 'Stamp,' the official issuer of postage stamps. The result of the joint work was the appearance of a postage stamp, envelope and postcard dedicated to the 200th anniversary of the engineer and shipowner Mikhail Britnev, the designer of the world's first icebreaker ship Pilot.

Essentially, it was an ordinary tugboat with a rather unassuming (by today's standards) mere 60 h.p. engine, however, owing to a special shape of the stempost, i.e.the bow, the vessel was able literally to 'climb up' on the ice breaking it under its own weight. Such principle is still in use in building icebreakers up till now.

By the way, it was only the first of several stamps suggested by USC and planned for issue in 2022. The Corporation decided to seriously associate stamp collectors with shipbuilding: recently in the set 'Sea Fleet of Russia' a stamp dedicated to the cruise passenger liner Mustai Karim was issued, while on September 22 stamps were issued with nuclear-powered icebreakers of project 22220 – Arktika and Sibir.

Special cancellation of stamps took place simultaneously at the Baltic Shipyard and on the Sibir icebreaker in Murmansk. "We are glad that out proposal to perpetuate on the stamps the latest models of the nuclear-powered icebreakers Arktika and Sibir was supported. It is a fine present for the Corporation's anniversary," said USC CEO Alexei Rakhmanov. According to General Director of the Baltic Shipyard Alexei Kadilov, "on letters and postcards our icebreakers will spread all over Russia, ordinary people will see them and, together with us, will be proud of the nuclear-powered ship built by the Baltic Shipyard."

Prepared by Mikhail Ustinov

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On the outer cover: transportation of the K-3 NPS by the barge Atlant

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