PANORAMA

CASPIAN PIPELINE CONSORTIUM

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PIPELINE
CONSORTIUM

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LINEAR
UPDATE

LABOUR MANAGEMENT
COURSE – FOR CORPORATE
TRAINING

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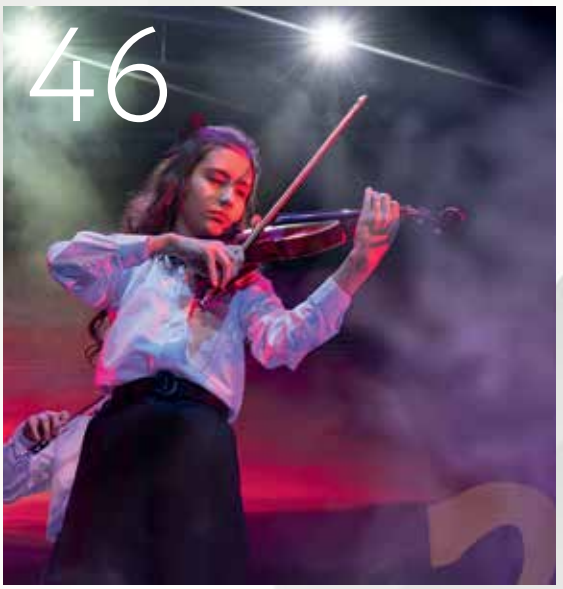

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DEAR COLLEAGUES AND FRIENDS!

The beginning of the year is a traditional time for summing up results and discussing plans for the future. The past year was a record in the history of the CPC in terms of oil shipments – 63.5 million tons. In 2024, we are determined to exceed this figure, since shippers have announced 70 million tons for transportation, and as we know, the complex of works performed under the Debottlenecking Program allows us to pump such volumes with a large margin.

The beginning of the year will also be marked by two significant events in the production sector: the transportation of the 900 millionth ton of oil and the loading of the nine-thousandth tanker since the start of CPC operations. At the same time, the improvement and increase in reliability of the pipeline system will continue. The replacement of 400 km of the linear part has begun; people and special equipment are already working on sections of this project, which is important in terms of the reliability of the pipeline system. This year, preparations for the planned replacement of SPM-1 and SPM-2 will begin; new devices will begin loading oil onto tankers in 2026.

The implementation of new production tasks involves increasing attention to issues of labor protection, industrial safety and environmental protection. The team of CPC-R completed 2023 with good performance in this area: 12 million man-hours without accidents and 28 million km of total vehicle mileage without registered accidents. At CPC-K these figures amounted to more than 1.7 million hours and 3.4 million km, respectively. The Consortium's traditional Safety Day will be held in Almaty this year; it will once again become not only a platform for competitions, but also a place for communication and exchange of positive experiences in the development of a Safe Work Culture.

The "Protect Nature of Our Native Land" project, which celebrated its 10th anniversary last year and gave the green light to the interregional scientific and practical conference "Preservation of natural reserve heritage and environmental strategy of industrial enterprises", has now brought saigas to Kazakhstan and Kalmykia, as well as deer in the Stavropol Krai from the risk of extinction zone. The same joint work with scientists is being carried out in the Astrakhan Oblast regarding the restoration of the sturgeon population.

As part of CPC's charitable activities, over the past year over 610 million rubles in Russia and about 1.5 billion tenge in Kazakhstan were invested in regional and municipal medicine and infrastructure, culture and sports, transport and education. Every year, the festival-competition "CPC for Talented Children" gathers more and more participants and becomes an increasingly spectacular event.

The Consortium has a lot of plans for this year. An oil pipeline, especially on an intercontinental, Eurasian scale, is a very complex system in which all processes are interconnected. Realization of plans is directly related to a high level of professionalism, responsibility and quality of work, while the growth of production potential is directly related to the growth of profits, taxes, and funds allocated to charity. Everyone who works in the close-knit multinational CPC team has a share in this.

N.N. GORBAN
GENERAL DIRECTOR
CASPIAN PIPELINE CONSORTIUM

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CPC: 2023 RESULTS

In 2023, **63,473,894** tons of oil were shipped at the CPC Marine Terminal over the entire history of CPC operation.

578 578 tankers were shipped in 2023.

The volume of oil shipped in 2023 includes:

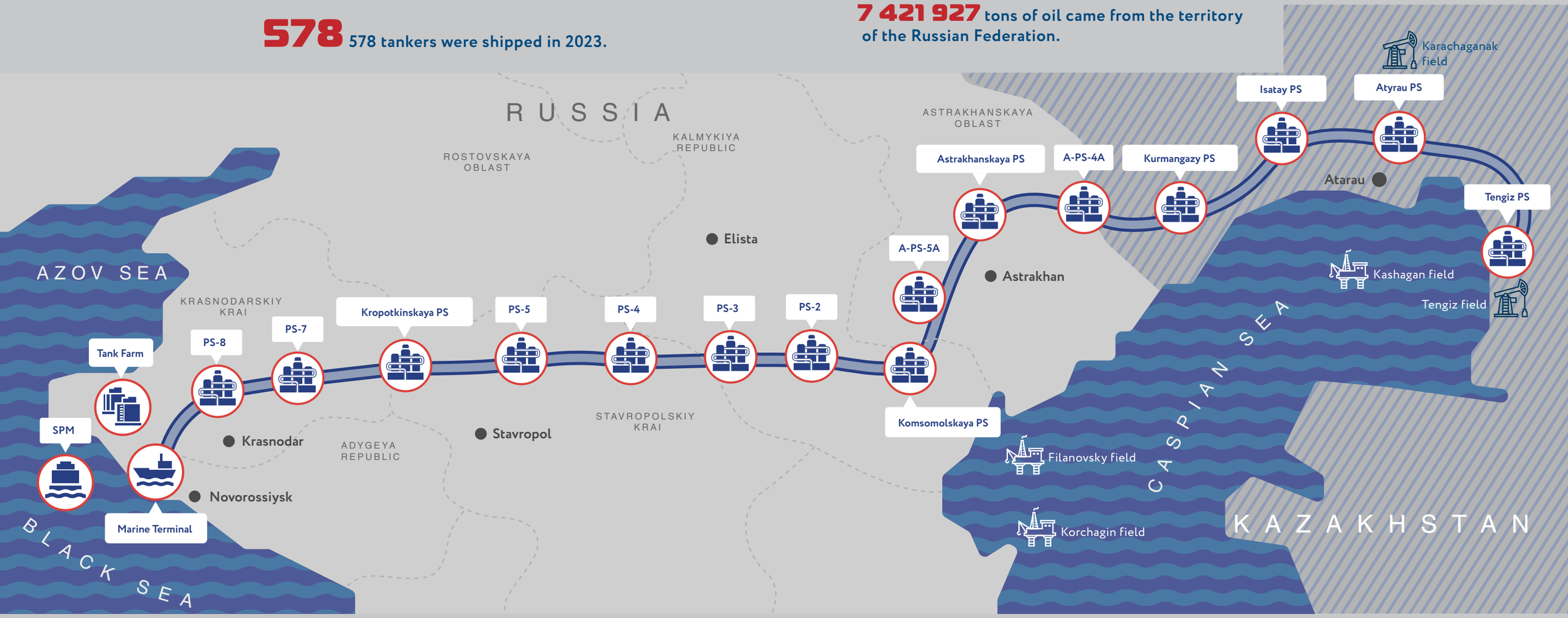
56,051,967 tons of oil from the territory of the Republic of Kazakhstan, including

Tengiz field - **27,463,081** tons,

Karachaganak field - **9,619,452** tons,

Kashagan field - **17,897,972** tons.

7 421 927 tons of oil came from the territory of the Russian Federation.



888 076 899 tons of oil were supplied through the Tengiz-Novorossiysk oil pipeline system to world markets in the period from 2001 to 2023.

In 2023, the total amount of charitable programs and projects of CPC in the Republic of Kazakhstan amounted to about **1,500,000,000** tenge.

In 2023, the total amount of charitable programs and projects of CPC in the Russian Federation amounted to over **610,000,000** rubles.

BRIEFLY

INTERNATIONAL AND LOCAL EVENTS WITH THE PARTICIPATION OF CPC

CPC SUCCESSFULLY PASSED THE HSE MANAGEMENT SYSTEM AUDIT

In October 2023, the Caspian Pipeline Consortium successfully passed an external supervisory audit of the Occupational Health, Safety and Environmental Management System (HSE) for compliance with international standards ISO 14001:2015 and ISO 45001:2018. The audit was conducted by the certification body Bureau Veritas Certification Rus JSC. During the period from October 10 to October 19, 2023, auditors inspected the facilities of CPC-R JSC and CPC-K JSC in Russia and Kazakhstan, analyzed documented information and interviewed managers and specialists.

Based on the results of the surveillance audit in 2023, the Consortium once again confirmed compliance with the international certificates ISO 14001:2015 and ISO 45001:2018, which are valid until July 2025.

CONFERENCE “PRESERVATION OF NATURAL RESERVE HERITAGE AND ENVIRONMENTAL STRATEGY OF INDUSTRIAL ENTERPRISES”, OCTOBER 26–27, STAVROPOL

The first interregional scientific-practical conference held within the framework of the CPC ecological-educational project “Protect nature of our native land” was attended by representatives of scientific-educational, public organizations, industrial complex, heads of state authorities, nature protection structures and organizations, institutions for the management of specially protected natural areas from 20 regions of the Russian Federation.

“The consortium recognizes a high degree of social responsibility and considers its activities in the context of sustainable development goals. Environmental safety, environmental protection, rational use of natural resources, and conservation of biodiversity are among the priority areas of CPC activities. The company implements a wide range of activities related to ensuring the environmental and industrial safety of the Consortium’s production facilities, as well as charitable projects and programs for the conservation of biodiversity in the regions where CPC operates and environmental education of the younger generation”, noted CPC General Director Nikolay Gorban in his report.

4 JV FORUM , NOVEMBER 8, ATYRAU

The Caspian Pipeline Consortium hosted the next meeting of the Forum of four large international oil companies (Tengizchevroil, North Caspian Operating Company, Karachaganak Petroleum Operating B.V., CPC) on the exchange of best practices in the field of labor protection, industrial safety and environmental protection. The agenda of the November meeting of the Forum included a discussion of such issues as key performance indicators in the field of HSE, a proactive approach to ensuring road safety, environmental issues, the role of additional checklists (appendices to the work permit) to ensure safe carrying out work at sites and other topics.

Speakers and participants of the Forum traditionally included managers and specialists in the areas of HSE, as well as representatives of operation units of oil producing and oil transportation companies. Representatives of the CPC made a number of reports on the agenda of the meeting.

In her speech at the session “HSE Management of Contractors”, CPC Labor and Industrial Safety Manager Elena Bulatova emphasized the importance of developing technologies for conducting induction training for performers of hazardous work. Labor protection engineers involved in the process should be more of a mentor and adviser to the employees being instructed than inspectors and supervisors.

“It is important for CPC not only to select a quality contractor, but also to increase the responsibility of its employees at all levels in the field of labor protection and industrial safety. This is a bureaucratically complicated process, but we are systematically working on it”, said Sergey Polovkov, CPC Deputy HSE General Manager in Russian Federation, on the sidelines of the meeting.

CPC Lead Engineer for Labor and Industrial Safety Konstantin Zakharov in his report emphasized that the Safe Work Culture is being actively implemented in contractors performing work in the main activities of the Consortium. This practice has already been successfully tested at the construction of CPC facilities as part of the Debottlenecking Program.

AWARDING OF CPC WITH THE GOLD PARYZ AWARD , DECEMBER 12, ASTANA

The Paryz Award, one of the most prestigious awards of the Republic of Kazakhstan, has been presented since 2008 to companies operating in the country for their contribution to improving the well-being of citizens, active support of social initiatives, caring for the environment and creating the best working conditions for their employees. On December 12, 2023, the President of the Republic of Kazakhstan Kassym-Jomart Tokayev took part in the awards ceremony for the winners of the Paryz competition.

The gold award of the republican competition for social responsibility Paryz in the nomination «Best Socially Responsible Enterprise» in the category of large entrepreneurship was awarded to the joint stock company Caspian Pipeline Consortium-K. The first degree diploma and the golden Paryz figurine were presented to CPC General Director Nikolay Gorban by the Deputy Prime Minister of the Republic of Kazakhstan Tamara Duysenova.

“Dynamic development and financial performance allow the Caspian Pipeline Consortium to consistently implement charitable programs aimed at supporting medicine, culture, education, ecology, as well as infrastructure development in the Atyrau region. For the period from 2001 to 2022, the company allocated more than 12 billion tenge (over $28 million) to charitable projects. Currently, the Consortium annually allocates about 1.38 billion tenge ($3 million) for charitable projects in the Republic of Kazakhstan”, noted CPC General Director Nikolay Gorban in his response.

MEETING ON THE ENVIRONMENTAL AGENDA, DECEMBER 13, NOVOROSSIYSK

The meeting on environmental protection issues in the municipal territory adjacent to the CPC Marine Terminal and the Black Sea waters was organized by the Caspian Pipeline Consortium in response to requests from local residents as part of the further development of the dialogue initiated earlier during the round table "Ecology of the port city", held on April 26, 2023.

The meeting participants included representatives of the city administration, CPC managers and specialists, environmental activists, local residents, and media correspondents. The results of monitoring volatile organic compounds in the atmospheric air in the area of the Marine Terminal of the Consortium, the results of scientific studies of the aquatic environment off the coast of the Abrau Peninsula and other topical issues of the environmental agenda were discussed.

Director of the Novorossiysk educational and research marine biological center of Kuban State University, Ph.D.-M.Sc. Irina Matasova presented the results of studies of the Black Sea ecosystem in the area of the CPC Marine Terminal, carried out from September 2021 to March 2022 and the results of industrial environmental monitoring of sea water for 2022-2023. It was noted that the bottom flora and fauna of the study area is typical in its qualitative and quantitative composition for the studied depths and soil composition, and has characteristics typical for the corresponding seasons. Oil contamination of soils and bottom sediments at the research site does not exceed 50 mg/kg.

Head of the scientific direction of the Azov-Black Sea branch of the Federal State Budgetary Institution VNIRO, Candidate of Biological Sciences Timofey Barabashin introduced the audience to the long-term dynamics of the state of seawater pollution with oil products and the state of bottom sediments of the shelf in the northeastern part of the Black Sea, as well as current methods for identifying oil pollution.

In her speech, Arina Nikolaeva, CPC Environmental Manager, Candidate of Geographical Sciences, spoke about the implementation of the Action Plan to reduce atmospheric emissions during oil loading at the CPC Marine Terminal, the results of research and development and implemented measures, such as reducing the loading modes of tankers in adverse weather conditions and monitoring the gas contamination of tanks of loading ships using mercaptan and hydrogen sulfide.

If violations are detected based on the results of gas contamination monitoring, tankers are not allowed to load. Vessels with the highest number of complaints from the local residents about unpleasant odors during loading are also identified. For such vessels, additional monitoring of the tank atmosphere is carried out.

During the meeting, participants asked a number of questions and received comprehensive answers from specialists. The dialogue was held in a positive manner within the framework of the CPC's transparent policy in the field of environmental protection.

SAFE WORK CULTURE COMMITTEE MEETING, DECEMBER 1, MOSCOW

Representatives of CPC management, heads of departments and structural divisions took part in the regular meeting of the Steering Safe Work Culture Committee. Communication with CPC regional offices was carried out via teleconference.

The meeting summarized the results of the Consortium's HSE activities in 2023. In particular, there was an increase in staff activity in filling out observation cards, almost fourfold compared to 2022. The number of violations of industrial safety requirements decreased overall by 17%, including a 20% decrease in the number of violations in the field of use of personal protective equipment (PPE) for the visual organs.

One of the priority topics on the agenda of the meeting was the participation of managers and employees of CPC contracting organizations in the development of a Safe Work Culture. The leaders among such enterprises in terms of the level of personnel involvement were named STARSTROY LLC and Zaman Kvantor LLP. In 2023, CPC created a joint working group with contractors to develop an electronic work permit.

The 2023 results also included the introduction of a system for rewarding employees based on their proactive HSE performance, as well as a point system for assessing violations, preparation of a new draft of the Enterprise Standard in the field of development of Safe Work Culture, taking into account the experience of implementing leadership practices, and the creation of full-time positions for coordinators of Safe Work Culture.

A "Safe Work Culture" page has been created on the corporate Intranet portal, where every employee of the enterprise can familiarize themselves with the minutes of meetings of regional committees, news and analytics, and reference materials on the implementation of leadership practices. Another specialized information resource has become the regularly published interactive "Safe Work Culture Bulletin", which, in addition to the motivational component, plays the role of a tool for implementing ergonomic improvements in work processes. Special attention in the decisions of the meeting was paid to the development of software to solve current and future problems of the direction.

The next meeting of the Steering Safe Work Culture Committee will be held in the first quarter of 2024.

PRESS CONFERENCE OF THE HEAD OF CPC, JANUARY 16, ASTANA

In a conversation with journalists from Kazakh and international media, CPC General Director Nikolay Gorban announced the results of the company's work in 2023 and prospects for 2024, as well as a number of other tasks related to the current activities of the Consortium. In 2023, CPC's consolidated revenue amounted to $2.3 billion. For CPC-K JSC this figure is equal to 460 million dollars or almost 210 billion tenge.

Steady production indicators allowed the Consortium to regularly fulfill its financial obligations to CPC shareholders. Thus, in 2023, $1.34 billion in dividends were paid. In 2023, for the first time, the Consortium paid interim dividends separately to shareholders of CPC-K JSC in the Republic of Kazakhstan in the amount of $93.5 million.

In 2024, CPC expects two significant events: the Consortium will cross the threshold of 900 million tons transported through the pipeline system and 9 thousand tankers will be processed at the Marine Terminal near Novorossiysk. Work on improving and enhancing the reliability of the pipeline system will continue. The replacement of 400 kilometers of the linear part of the oil pipeline has begun. About 150 kilometers of them are in Kazakhstan, where CPC will also continue to build external power supply facilities for pumping stations. This work has already been completed at the Isatay and Kurmangazy stations, now Tengiz and Atyrau are next in line. In 2024 preparations for the planned replacement of SPM-1 and SPM-2 will begin; new devices will begin loading oil onto tankers in 2026.

Since the fall of 2023, CPC has been using the practice of loading from three single-point moorings at the same time when necessary, which was made possible by the completion of a new lease automatic custody transfer (LACT) at the MT as part of the Debottlenecking Program. Experience shows that the Consortium's greatest need for loading from three SPMs simultaneously is after storms in November, February and March.

"In recent years, we have noted an increase in the number of storm days per year: in 2021, downtime due to weather was 16 days, in 2023 – already 27", noted CPC General Director Nikolay Gorban. "According to statistics, if before 2017 there were 60-75 storm days on average, last year there were 111. All this requires us to find optimal solutions both in ensuring the interests of shippers and in meeting industrial safety requirements when loading at the terminal".

AUTHOR
DMITRY KONSTANTINOV

FROM NEW FACILITIES TO NEW QUALITY

WE CONTINUE THE TOPIC STARTED IN THE LAST ISSUE OF EXPERT ASSESSMENT OF THE TECHNICAL CONDITION OF DBNP FACILITIES PUT INTO OPERATION. OPERATIONS AND MAINTENANCE CHIEF ENGINEER NIKOLAY PANKOV TALKS ABOUT THE OPERATION OF SUCH FACILITIES AT THE CPC MARINE TERMINAL

Nikolay Ivanovich, what mode of operation are the DBNP facilities at the Marine Terminal currently in?
DBNP facilities, which were put into operation at the Marine Terminal in 2023, are currently fully involved in the technological process of loading tankers with oil.

Did the commissioning of new DBNP facilities require changes in the operating mode of the Tank Farm and Shore Facilities of the Marine Terminal, as well as in the number of operating personnel and contractors?
The technological operating modes of the Tank Farm have not changed. The change in the technological scheme of the MT Shore Facilities, after the introduction of three new metering units instead of the previous two, required fundamental changes to the logic of the SF control system. During the operation of old LACT systems, pressure control units were located before the metering units along the oil flow. After switching to the new scheme, the PCUs adjust the flow, and now they are located after the new metering units for the flow of oil. The operation mode, as well as the number of operational personnel at the base station and the personnel of contractors providing service maintenance for the new LACT, remained unchanged.

Were there any difficulties with commissioning DBNP facilities? How were these issues resolved?
The DBNP facilities at the MT Shore Facilities were constructed and commissioned in stages. Certain issues arising at each stage were jointly considered and promptly resolved at weekly and extraordinary meetings, which were organized by the headquarters for the construction of the DBNP at the MT, by specialists from the headquarters itself, the Operations Department, and the Projects and Design Department.

How is the new equipment working, are there any comments?
After connecting the new LACT to the process pipelines of the MT Shore Facilities, the pipelines of the new site, inlet and outlet manifolds, measuring line units, oil quality measurement units, a pipe piston testing unit and drainage tanks with piping were filled with oil. Then, in accordance with the approved commissioning program, new LACT began to be tested on working fluid, while commercial accounting of oil shipped to tankers was carried out using the old LACT. All problematic issues that arose during the pilot operation were promptly resolved with the involvement of specialists from the supplier of the new LACT and specialists from the DBNP headquarters, the Operations Department, and the Projects and Design Department.
After completing the so-called run-in stage and putting the measurement systems into commercial operation, the final transfer of commercial accounting to new LACT was completed. From the moment the LACT A570, A580, A590 were put into operation until now, no comments on the operation of the new equipment or deviations in metrological parameters have been identified.

Was it necessary to change the HSE requirements, facility regime, briefings and other related procedures at the Marine Terminal?
When putting new facilities into operation, it is always necessary to both develop new regulatory documents and instructions, and make changes to existing operational documentation. In advance, approximately six months before the planned date of commissioning of DBNP facilities, a list of documentation was prepared for the phased introduction of the MT LACT. All divisions and services of the Marine Terminal Operations Department developed the required procedures in a timely manner and prepared all the necessary operational documentation.

TO DATE, NO COMMENTS ON THE OPERATION OF THE NEW EQUIPMENT OR DEVIATIONS IN METROLOGICAL PARAMETERS HAVE BEEN IDENTIFIED

Have the Shore Facilities returned to their normal "pre-DBNP" mode of operation?
It would be more correct to say that the SF will no longer return to the "pre-DBNP" mode, because we now have a site of metering units with the latest equipment, which is operated using modern control and information processing systems. If earlier the old LACT were 100% loaded, now we have a reserve at the SF. For example, using two new LACT we can keep records of shipped oil, and using the third LACT we can carry out scheduled maintenance work. All equipment is now easily accessible for inspection and parameter control, as well as for maintenance. The SF operational staff and service specialists are now located in the new control room building, which contains spacious premises with automated workstations, a meal room, locker rooms, sanitary rooms and production units that house equipment that ensures the uninterrupted operation of the new LACT.

AUTHOR
PAVEL KRETOV

FOURTH ELEVATION

IN 2023, WORK UNDER THE DEBOTTLENECKING PROGRAM (DBNP), IMPLEMENTED SINCE 2019, BEGAN IN THE WESTERN REGION AT PS-4, THE FOURTH CPC-R STATION (LOCATED IN STAVROPOL KRAI), WHERE THE INSTALLATION OF VARIABLE FREQUENCY CONVERTERS IS PLANNED

The final and at the same time rainy ten days of November (at the time of the visit of CPC Panorama correspondents to the station – Ed.) is not the most photogenic time for a production facility where excavation works are in progress, dump trucks are whizzing by, an excavator is spinning a bucket, something is constantly unloaded, transferred and welded. In front of the entrance to the PS-4 checkpoint, special sinks with metal trays are installed for cleaning shoes. By the way, you only have to wash your safety shoes after visiting the construction site. Literally a few steps from the temporary fencing of the work site – and there, behind the main pumping building, nothing reminds of the construction site, there is only clean asphalt and freshly painted curbs around.

For Denis Enaliev, CPC Lead Specialist for Construction Quality control accompanying us, this is not the first large-scale construction project in the Consortium. With many years of experience at STARSTROY LLC, seven years ago he moved to CPC, where, as part of the Expansion Project team, he supervised the construction of two new oil pumping stations in Kazakhstan – Isatay and

Kurmangazy. Denis is well aware of the importance of mutual understanding between the construction and operations teams.

"All issues related to the admission and work of the construction contractor are resolved promptly with unconditional compliance with the company's requirements in the field of labor protection, industrial safety and environmental protection", notes Denis Enaliev.

DENIS ENALIEV

Before being admitted to the site, the contractor's employees underwent introductory training, as well as testing in the Olimpoks-Enterprise system, and after issuing work permits, they began to carry out work. Immediately gaining a good pace, week after week, ahead of schedule, they formed that important time reserve, which allows the customer "not to think down on the seconds," counting the days until the start of the autumn thaw and rains, winter colds and snowfalls.

"The coordinated work of the DBNP construction staff, the station management and the contractor made it possible to install the fifth tank of the surge relief system (SRS) ahead of schedule and connect it to existing pipelines in October 2023", explains Denis Enaliev.

An earlier issue, CPC Panorama wrote about the "cramped conditions" awaiting the installers of the SRS tank at PS 4. Together with the lead specialist for construction quality, we approach this twelve-meter buried tank, and realize that it is indeed cramped, in all three dimensions.

A meter to the left rises the edge of the reinforced concrete pavement of the fourth SRS tank, with a freshly poured concrete rectangular well of a shut-off ball valve at one end, and «houses» or so-called block-boxes of variable frequency drives, of the domestic manufacturer at the other. In fact, there is a cable rack hanging overhead. But the builders were not only required to dig a pit here, transport and lower a hundred-cubic-meter container into it, but also install a sheet pile fence, which prevents the destruction of the walls of the pit during work in it. Along the perimeter, 67 seven-meter tubular piles with a diameter of 219 mm were driven into the ground. Two of them are extended upward, connected by a channel and support the same overpass.

"This kind of technical solutions arise directly in the process of construction and installation work", comments Denis Enaliev. "Of course, they are fully coordinated with the design institute, the CPC design group and the operation services. As a result, we see a temporary metal structure that enhances the strength of the cable rack, and, accordingly, ensures the stable operation of the PS engineering systems".

The largest range of work within the framework of the DBNP at PS-4 is associated with the installation of four VFD block boxes, the total weight of which is almost 328 tons. At this site, CPC Panorama reporters are met by Ruslan Khamatshin, Lead Specialist, Instrumentation, Communication Systems and Integrated Pipeline Security System.

"Now the facility is almost ready and is at the commissioning stage", explains Ruslan. "By the beginning of winter, the builders installed a pile foundation, completed a technical "underground", poured a monolithic

reinforced concrete slab, welded a beam supporting structure for block boxes, and installed a cable overpass. Then, block boxes of variable frequency drives (VFD) arrived from the equipment supplier, seven packages each. As you can see, they have already been assembled and you can go inside".

In hotel terminology, each of the four VFD "houses" is equipped with five-star equipment. At the time of the visit, the contractor's specialists are installing ventilation and air conditioning systems here – one for each block box. There is also an individual fire detection system with an uninterruptible power supply (UPS).

"Each such UPS plays a very important role", notes Ruslan Khamatshin. "Imagine a gas boiler in a country house. If it is not equipped with a backup power supply, then

RUSLAN KHAMATSHIN

with each power outage we expect interruptions with heating as well. That is, there is gas, but no heating, because the automatic control system for the boiler has turned off. But if the boiler is with UPS, then the heating does not turn off. It's about the same with us: thanks to guaranteed power supply, as well as its redundancy, power-saving interruptions do not affect the operation of some equipment for the VFD's own needs.

Before CPC, Ruslan Khamatshin went through the labor school of Transneft PJSC, where he worked in the operation service and then built the facilities of the Eastern Siberia – Pacific Ocean oil pipeline. Similar variable frequency drives were also used there. This experience turned out to be very useful at pump stations being modernized as part of the DBNP and, of course, the skills

ACCORDING TO THE PROJECT SCHEDULE, WORK WITHIN THE FRAMEWORK OF THE DBNP AT PS-4 WILL BE FULLY COMPLETED IN JULY 2024

of the recent installation of VFDs at PS 2 were useful here. In turn, all this information will be summarized and used in the implementation of projects at PS 3 and PS 5.

"Before DBNP, the pressure in the pipeline was regulated mechanically – by PCU flaps", says Ruslan Khamatshin. "Now the pressure is controlled by changing the rotation speed of the electric motors of mainline pumps. There are many advantages from the introduction of VFD: it is more convenient to adjust technological modes, stations start up "softer" and faster after planned shutdowns.

We are allowed to look into the VFD switch cabinet and take some pictures: transformer blocks, controllers, solid threaded contacts, hanging bags of silica gel to control optimal air humidity.

According to the schedule, work within the framework of the DBNP at PS 4, including landscaping, will be fully completed in July 2024. At the time of writing this article, two more stations – PS 3 and PS 5 – had started work on DBNP projects.

AUTHOR
PAVEL KRETOV

LINEAR UPDATE

ON THE EVE OF NEW YEAR'S HOLIDAYS, CPC-R LAUNCHED ANOTHER LARGE-SCALE PROJECT TO REPLACE 400 KM OF LINEAR PART OF THE PIPELINE. THE FIRST STAGE OF THE PROJECT INVOLVES REPLACEMENT OF TWO SECTIONS OF THE EXISTING TENGIZ-NOVOROSSIYSK MAIN OIL PIPELINE IN THE ASTRAKHAN OBLAST AND THE REPUBLIC OF KALMYKIA. THE TOTAL LENGTH OF THE SECTIONS WILL BE ABOUT 25 KILOMETERS

The first stage of the program implementation, based on the results of in-line diagnostics of the Diascan Technical Diagnostics Center, included sections of the oil pipeline with a length of 8 km at the exit of the Astrakhanskaya PS and 17 km at the entrance to the Komsomolskaya PS. According to the results of diagnostics and calculations carried out by the Diascan TDC, these sections have a high density of defects, and therefore local elimination of defects on them using repair structures (couplings) is ineffective.

"Is this project related to the Debottlenecking Program?" – comments Roman Kharitonov, Head of Pipeline Upgrade Project Management Group."This is a pipeline, everything is connected here. If defects are not resolved in time, then at some point the pressure in the above sections will have to be reduced, and with it the productivity of the pipeline, which means that it will not be possible to fully use the reserve capacity provided by the Expansion Project and DBNP".

To implement the project, under the leadership of Roman Kharitonov, a staff of specialists with experience in constructing the linear part of pipelines in various regions of the country was formed. Many participated in the construction of steel arteries for the largest oil transportation company in the world, Transneft PJSC. The contractor, SF SMU-6 LLC, was also carefully selected. This company already has experience in cooperation with CPC – now, for example, as part of the DBNP, it is installing VFD equipment at PS 4 in the Western Region of the Consortium.

"The last time CPC was involved in replacing a linear part was more than 10 years ago", says Roman Sergeevich. "This was quite a long time ago, and now we are collecting up-to-date analytical information on the contractor's performance, have created new forms of contracts and reporting – all this will be useful when continuing the project in the following sections".

50 specialists and 35 units of equipment are involved in the work to replace pipeline sections at the entrance to the Komsomolskaya PS. Five trucks deliver pipe products

ON THE EVE OF THE NEW YEAR'S HOLIDAYS, THE IMPLEMENTATION OF A LARGE-SCALE PROJECT TO REPLACE

400

KM

OF THE LINEAR PART OF THE PIPELINE WAS LAUNCHED

from a warehouse in Astrakhan to the work site daily. In the near future, the mobilization of additional human and technical resources will continue in accordance with the schedule, including for the commencement of work to replace the section at the outlet of the Astrakhanskaya PS.

The pipes supplied for the implementation of the project were produced at Russian factories according to the technical requirements set by the leading shareholder of CPC, Transneft PJSC. The quality of pipe products is checked both at the manufacturer and upon arrival at the warehouse and then at the construction site.

Welding work is carried out by the contractor at an average rate of 16 joints per day, which is about 192 m of pipeline. In the near future, it is planned to begin insulating welded joints on the first segment of the welded pipeline, and then laying the pipeline in a trench.

It is planned to lay the pipeline in the trench in separate segments to avoid causing problems for land users or obstructing animal migration routes. Laying is facilitated by soft sandy soil. If the route had passed through permafrost or soil with solid inclusions, it would be more difficult and longer.

"I must say that the conditions at the current construction site are close to ideal", notes the head of the project management group. "No drilling and blasting required, no severe frosts. The only thing that sometimes affects the pace of our progress is the wind".

50
SPECIALISTS

35
UNITS OF EQUIPMENT
ARE INVOLVED
IN THE WORK OF REPLACING
PIPELINE SECTIONS

The process of replacing pipeline sections is controlled by the CPC Operations Department. In mid-January Alexey Dmitryukov, Operations Division Head (General Manager), and Konstantin Rybak, Regional Operations Division Head (Regional Manager), got acquainted with the progress of work on site.

"A construction headquarters has been opened at the CPC Central Region office in Astrakhan", continues Roman Kharitonov. "We constantly interact with the Operations Department, we have established communication channels for the prompt exchange of all current information, coordination of work areas and requirements for the contractor".

An important stage in the replacement of the linear part in Kalmykia and the Astrakhan Oblast is scheduled for October 2024 during the planned shutdown of the main oil pipeline for its maintenance. Within 72 hours, newly constructed sections will be connected to the existing oil pipeline, which will allow the dismantling of the old one to begin.

AUTHOR
VASILY GORKIN,
LEAD MECHANICAL ENGINEER, CPC-R

PURITY? PURE...OIL

WORK WAS COMPLETED IN THE TANK FARM OF THE CPC MARINE TERMINAL TO CLEAN BOTTOM SEDIMENTS FROM SVFRT-100000 (No. 2) FOR SCHEDULED FULL DIAGNOSTICS

The cleaning of the "hundred-thousander" from paraffin deposits was carried out using the technology of erosion with a dynamic jet of heated crude oil, which is rarely used in Russia. This technology for eroding bottom sediments is the most environmentally friendly, does not change the quality of oil loaded onto the tanker, and minimizes losses of transported raw materials. The washout product is returned to the process pipeline of the Tank Farm and then sent for loading tankers. A similar technique is used to flush the tanks of oil tankers, but is rarely used at onshore facilities of oil pipeline companies.

The operation of washing out and cleaning the tank is carried out in three stages. First, preparations are carried out: equipment for external erosion systems is installed behind the embankment and in the reservoir cage, and 30 rotary erosion heads are mounted and connected with pipelines on the floating roof of SVFRT -100000. These devices are installed in place of the removed support posts. Rotary scouring heads are connected to a mobile oil supply unit operating in the reservoir pit, which also serves to heat hydrocarbon feedstock and pumping of scouring products.

Erosion of bottom sediments can be carried out either by a buried jet of oil (with the roof positioned afloat at a level of no more than 2.5 m), or by a more effective (and more complex) method of a falling jet of oil in an inert gas environment, with nitrogen supplied from a special station and constant monitoring of low oxygen content in the roof space of the tank to ensure explosion and fire safety conditions.

The eroded paraffin deposits flow down the cone-shaped bottom of the tank with an area

of 7 thousand m² into the central sump (a recess for collecting wastewater), from where it is pumped into the process pipeline leading from the Tank Farm to loading tankers. Due to the fact that this purification technology does not use water or chemically active substances, washout products, added as a small percentage to the total flow, do not reduce the quality characteristics of commercial oil.

At the next stage, the tank is completely emptied, its hatches are opened and degassed. Next, specialists equipped with breathing apparatus begin work on residual cleaning inside the tank. At the final stage of complete purification, the use of such personal protective equipment is no longer required. Then, within a week, the washout equipment can be relocated to the next reservoir and work can begin on it.

Typically, the cleaning time for SVFRT-100000 tanks ranges from two to four months and depends on the amount and characteristics of bottom sediments. Due to this technology, there is no need to dispose of the effluents generated during tank cleaning with water and chemically active substances, which helps to minimize the environmental impact of the process. Currently, the SVFRT-100000 tank (No. 2), which has been cleared of bottom sediments, is filled with oil and is operating normally. ●

EQUIPMENT FOR THE EXTERNAL SEDIMENT EROSION SYSTEM OF SVFRT

30 ROTARY EROSION HEADS ARE MOUNTED AND TIED WITH PIPELINES ON THE FLOATING ROOF OF SVFRT-100000

PREPARING FOR WASHOUT. IN THE FOREGROUND IS A ROTARY EROSION HEAD

ROOF SPACE OF A CLEANED TANK

AUTHOR
ANASTASIA BELOVA,
SERVICE HEAD, PERSONNEL DEVELOPMENT,
PERSONNEL TRAINING TEAM, CPC-R

COURSE – FOR CORPORATE TRAINING

THE NEW FORMAT OF CORPORATE TRAINING HAS BEEN SUCCESSFULLY TESTED WITH FOUR PROGRAMS IN 2023

What is the difference between corporate training and standard courses conducted by training centers? Corporate training for an enterprise is not an external, but an internal development, which takes into account the tasks and specifics of the company's activities, as well as the level of staff knowledge.

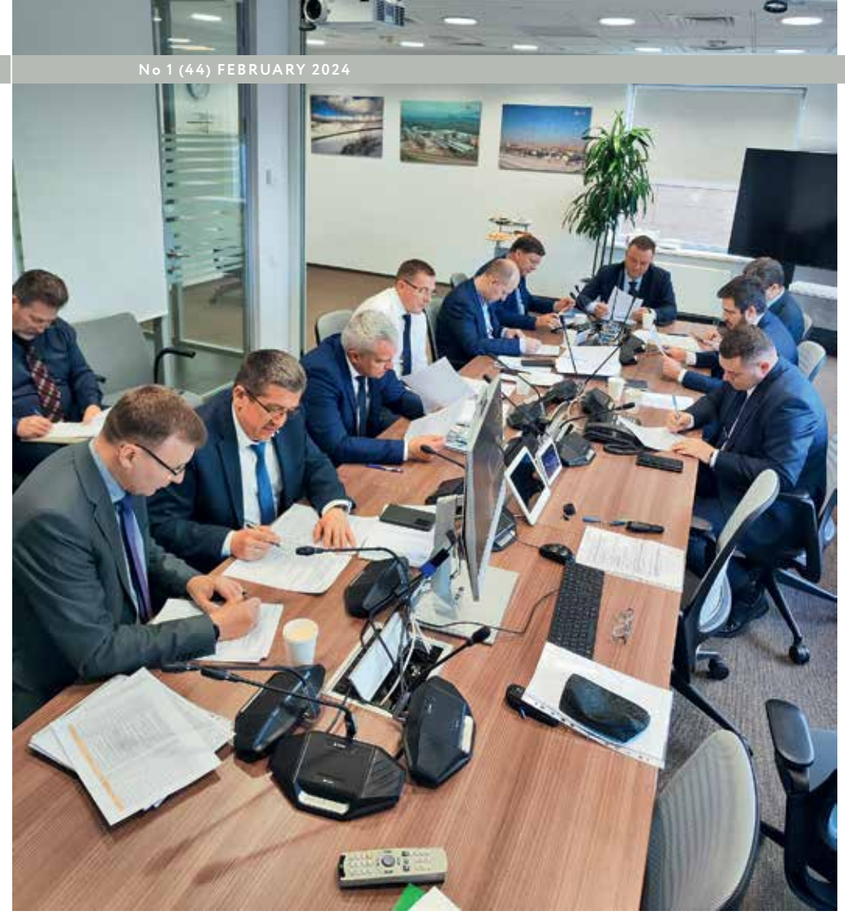
"Starting in 2023, we began a smooth transition to the corporate format of training the company's employees", says Alexandra Rabinovich, Team Leader, Personnel Training and Development (Training Manager). "In less than a year, four courses were successfully developed in areas of knowledge important to colleagues: "Operation of tanks and tank farms. The procedure for diagnostics, maintenance and repair of tanks", "Increasing the efficiency and reliability of operation of pipeline transportation systems for oil and petroleum products", "Safe management of equipment of the CPC oil pipeline system for managers" and "Equipment reliability management".

All these courses have a common goal – they are aimed at increasing the efficiency and reliability of the operation of the oil pipeline system. The first two training programs were developed jointly with the Gubkin Russian State University of Oil and Gas (NRU) based on the results of certification. These programs are being implemented within the walls of the university, and in 2024 they are also planned to be held with the participation of university teachers on the basis of the Atyrau Oil and Gas University named after Safi Utebayev.

The programs were developed based on internal regulatory documentation (IRD) of CPC and include information on topics that are important for company employees to perform daily tasks, such as operation and tank protection systems, methods for detecting leaks and reducing process losses, calculating and assessing pipeline reliability indicators and others.

The workshops held in the laboratories of Gubkin Russian State University of Oil and Gas (NRU) were of great practical benefit for the participants, for example, on complete technological diagnostics of reservoirs, assessment of the influence of various technological factors on the operating modes of the main oil pipeline.

"Feedback based on the results of training is the most important thing for us", says Alexandra Rabinovich. "It is feedback that helps us make programs better and make the necessary adjustments to them. The training and development department carefully studies the feedback left by the training participants on the corporate portal. If necessary, we ask clarifying questions and discuss necessary changes in the programs with university teachers".



DENIS ELKIS,
SERVICE HEAD,
OPERATIONS
READINESS SUPPORT, CPC-R:

«As participants in the corporate training "Equipment Reliability Management," we were indeed a very active audience. Discussions arose on almost all topics of the program. We were especially interested in methods for determining the causes of failures, methods for determining the criticality of equipment and decision-making criteria for risk management.

THE TRAINING WAS CONDUCTED IN A FIVE-DAY COURSE FORMAT, WITH THEORY, PRACTICAL TASKS, AND QUESTION AND ANSWER SESSIONS

To date (December 2023 – Ed.), 91 employees of CPC-R and CPC-K have undergone advanced training. One of the groups was trained at the CPC-K office in Atyrau.

To increase the level of management competence, the "Safe management of equipment of the CPC oil pipeline system for managers" program was developed. The purpose of the course is to introduce the principles of safe remote control of facilities and systems of the Tengiz – Novorossiysk oil pipeline. One of the most interesting parts of the program was the development of practical skills in managing a leak detection system (LDS) and acting in emergency situations. It is important that the program was developed and conducted by CPC's internal trainers and takes into account all the operating features of our company's oil pipeline system.

In November 2023, corporate training "Equipment Reliability Management" was held at the CPC Moscow office, in which 12 people from among the managers and specialists of the CPC Operations Department took part. The training was conducted by SpetsTech, a domestic developer of an automated system for managing maintenance and repair processes (MR) based on its own software.

This program was of particular importance because for the first time it allowed the heads of the company's production departments in a broad group to look at production processes from a new, comprehensive point of view, which was confirmed by the keen interest of the participants in the topic and numerous discussions during the training.

Due to the fact that CPC strives for maximum efficiency in ensuring the operational reliability and safety of the main oil pipeline in its activities, the training provided allows us to lay a practical foundation in the existing plans for the implementation and development of a systematic approach to asset and reliability management, based on attention to the quality of management processes and the use of modern methodologies for analyzing and assessing risks and their consequences.

The training was conducted in a five-day course format, with theory, practical tasks, and question and answer sessions. As a teacher at the training center noted, CPC employees are the most active audience, constantly asking questions, having extensive practical experience and interested in creating the most effective equipment reliability management process.

The training program covered such topics as international standards in the field of maintenance and repair, ensuring equipment reliability, managing enterprise production assets; key performance indicators in the maintenance and repair system; technologies for lean equipment maintenance. The combination of theory and practice, lively discussions, detailed case studies and analysis made the training informative, useful and effective.

As the experience of 2023 has shown, the course for corporate training was chosen correctly, and already in 2024 it is planned to develop and implement new courses in a corporate format that will help CPC employees improve their knowledge.

ANDREY ILYINYKH,
TEAM LEADER,
MECHANICAL
AND PROCESS EQUIPMENT
OPERATIONS, CPC-R:

«The training provided on asset management helped middle and senior managers find the right logical balance between costs, productivity and risks. As a result, decisions are optimized, stakeholder interests are taken into account, and asset performance is monitored.

The knowledge gained allows to assess the quality of personal training, the level of competence, and increase your relevance and "value" in the labor market. They also help in the communication process to form a positive image with business partners, ensure psychological comfort of subordinate personnel and their motivation in meeting modern labor market requirements.

The training made it possible to establish a regulatory framework based on the recommendations of the GOST R 55.0.00 series standards for choosing the optimal failure management strategy, based on the fact that any work should be performed only if it is technically feasible and effective, that is, it reduces the criticality of the failure to an acceptable level. If suitable and effective operation cannot be found, other measures must be determined to reduce the severity of the failure. For failures with economic consequences, the work must be economically feasible.

The ongoing development of barriers aimed at risk prevention at CPC, after the course, allows for a more concentrated definition of the list of these restrictions, such as: operating conditions of assets and their technical condition, compliance with production technology and maintenance regulations, personnel competence in the field of asset management and others.

Further production activities of technical managers, based on the provisions of the course and knowledge of federal norms and regulations, will allow in the near future from reactive maintenance (failure maintenance) and maintenance for planned replacements and restoration to move to maintenance based on the current condition, where the status of machines is assessed in time of equipment operation using condition monitoring technologies. In this case, repair stops are planned based on the current state of the machines, which is determined using sophisticated vibration measuring and other diagnostic equipment.

Ultimately, this will lead to a significant reduction in unscheduled downtime, increased reliability of operated equipment and a reduction in the economic component of servicing CPC assets.

MT TEAM

MAN OF ACTION

VLADIMIR GRIGORIEVICH BARDASH IS A LEAD INSTRUMENTATION ENGINEER AT THE MARINE TERMINAL. AN HONORARY OIL WORKER WHO HAS WORKED IN THE INDUSTRY FOR MORE THAN 25 YEARS, HE MADE THE MOST IMPORTANT AND LARGEST PRODUCTION FACILITY OF THE CPC A SOURCE OF LEGITIMATE PRIDE FOR THE ENERGY DEPARTMENTS OF TWO STATES AT ONCE. NOT ALONE, OF COURSE, BUT WITH COLLEAGUES, BUT HE DID IT

Moscow, June 1981. 23-year-old Vladimir Bardash walks out of the threshold of the Order of Lenin and Order of October Revolution of the Sergo Ordzhonikidze Aviation Institute with a diploma of an electromechanical engineer. The profession at that time was prestigious and in demand: the USSR occupies a leading position in the world in terms of the volume of development and implementation of new technologies, the domestic higher school of engineering is highly rated.

Having worked his way from a radio equipment assembler to an instrumentation adjuster at instrument-making and special-purpose automation enterprises, Vladimir Grigorievich was repeatedly awarded for excellent performance of particularly important tasks and for labor success. In 1996, he moved into the oil and gas industry – he began work at the Sheskharis oil transshipment depot of Chernomortransneft OJSC, where at that time a new berth No. 3 was put into operation. Somewhat later, Vladimir Bardash heads the repair service of the instrumentation section, competently and effectively supervises the work of masters in the repair of instrumentation of berth structures, tank farms and metering units.

Yuzhnaya Ozereevka, August 4, 2003. Vladimir Grigorievich crosses the threshold of the checkpoint of the Marine Terminal of the Caspian Pipeline Consortium, where he will work from that morning until today. An interesting point: in 1960, during the state examination of the project for an oil transshipment complex in Novorossiysk, its construction in Yuzhnaya Ozereevka was considered more promising. But then the feasibility of placing facilities near Cape Sheskharis was proven as a more economical solution.

VLADIMIR BARDASH HAS ESTABLISHED HIMSELF AS A SPECIALIST CAPABLE OF SUCCESSFULLY SOLVING A PROBLEM OF VIRTUALLY ANY LEVEL OF COMPLEXITY

First as an engineer and then as a leading instrumentation engineer, Vladimir Bardash is actively involved in the technical re-equipment of instrumentation systems and equipment. Thus, in 2011, the fire detection and fire extinguishing systems of most TF and SF facilities were reconstructed, which affected the reliability and trouble-free operation of the entire Marine Terminal as a whole.

During the implementation of the Expansion Project (2010-2018), Vladimir Grigorievich organizes testing, commissioning, develops and implements measures to increase the reliability of operation of instrumentation equipment, participates in the verification of as-built documentation, and the commissioning of new facilities at the Marine Terminal. His professionalism and effectiveness were awarded with certificates of honor from CPC and the Novorossiysk administration.

2018. The Expansion Project has been completed, the DBNP is ahead, and the new "five-year period" in the history of CPC is marked by a new philosophy of technological process management. Vladimir Grigorievich takes an active part in the development and implementation of innovative solutions in this area. At the same time, he begins the implementation of a large-scale program to reconstruct the automatic fire detection and fire extinguishing systems of the Marine Terminal, bringing it to a new technological, highly reliable level, with the replacement of imported

equipment with products of domestic manufacturers. In 2018, Vladimir Grigorievich's work was recognized with a Certificate of Merit from the Ministry of Energy of the Russian Federation.

During the pandemic period, which is difficult for all CPC facilities and the entire CPC team, Vladimir Bardash is taking technical and organizational measures to ensure that scheduled maintenance and repair of instrumentation equipment is completed in full. This allows MT facilities to operate normally without loss of power. During 2021, at the Marine Terminal, Vladimir Grigorievich organized and performed work on technical diagnostics of instrumentation equipment and technical devices with an industrial safety examination (ISE) to extend the period of safe operation. In this anniversary year for the company, he was awarded the commemorative medal "25 years of Caspian Pipeline Consortium".

Marine Terminal, July 25, 2023. The construction of the largest DBNP facility, the oil quality and quantity measuring system, has been completed. Vladimir Grigorievich stands shoulder to shoulder with the "heroes of the occasion", whose efforts helped build 18 lines of the new LACT and make them ready for operation in just two years. And in the fall of the same year he received the highest industry award – the title "Honorary Oilman".

Over the years, or rather decades, of working at the CPC Marine Terminal, Vladimir Bardash has established himself as a specialist capable of successfully solving a problem of virtually any level of complexity. The experience and professionalism of Vladimir Grigorievich contribute to the smooth work of the Instrumentation Group, he serves as an example to young specialists, and enjoys well-deserved respect in the team.

Yuzhnaya Ozereevka, February 29, 2024. Vladimir Bardash crosses the threshold of the checkpoint of the CPC Marine Terminal. The honorary oil worker, who has given more than a quarter of a century to the industry, is going on a well-deserved retirement. More than two decades of work in the Consortium are behind him, new horizons, new plans and new peaks are ahead. As colleagues and comrades, we wish Vladimir Grigorievich good health and success in everything. Let the newly acquired free time – an invaluable advantage of the new stage of life – be spent with benefit and interest!

Телекомпания «Игра-ТВ» / Дмитрий Тур

AUTHOR
SERGEY SINAISKY,
DEPUTY PRESS SERVICE TEAM MANAGER, CPC-R

MIND GAMES

ON DECEMBER 24, THE FINAL OF THE TV GAME «WHAT? WHERE? WHEN?» 2023 WAS WON BY THE TEAM OF EXPERTS OF DENIS ELKIS, OPERATIONS READINESS SUPPORT SERVICE HEAD, CPC-R. A CONVERSATION WITH THE OWNER OF THE LEGENDARY "DIAMOND OWL" ALLOWS US TO LOOK AT THE GAME NOT ONLY AS THE OLDEST TV SHOW OF INTELLECTUALS, BUT ALSO AS A PRACTICE THAT IS VERY USEFUL IN THE ASPECT OF PROFESSIONAL ACTIVITY

Denis, how long have you been interested in intellectual games? What was the trigger for you and what keeps you going now?

I started playing «What? Where? When?» in 2003 in my first year of university. At first it was just a way to have fun with friends. Gradually, the game fascinated me more and more and became a significant part of my life. It gives me the opportunity to get real live emotions, feel like part of a team, communicate with interesting people, constantly learn something new and develop. Undoubtedly, success also motivate me to continue playing. In addition, the skills acquired in the game help both in work and in everyday life. «What? Where? When?» helps to develop the ability to communicate with people, team management skills, brainstorming techniques and other useful qualities.

What is the role of loved ones in the passion for intellectual games? Or is this a purely personal story?

If we talk about relatives, then none of them play "What? Where? When?", but they always watch the games and support me. But many friends play. Colleagues from CPC are also starting to get into the game. The game is fast-paced and a great team building activity.

Hence the next question: "What? Where? When?» — is a team game. And yet it is done by specific people, some of whom are known throughout the country. How do you think the role of the individual and "team spirit" relate here?

Team interaction is a very important component! Of course, a team consisting of strong and experienced players has excellent prospects. But sometimes even the strongest expert, who for some reason does not fit into the team, can ruin the interaction, and the team will play even worse than without him. The main thing is that everyone should be comfortable in the team, and experience is something to be gained. The masters of "What? Where? When?» were not born outstanding experts right away, either.

Are there any authorities in this field for you, your colleagues in the hobby, «gurus», and whom you want to be equal to, whose success you want to repeat or surpass?

I try to learn from everyone. Everyone has their own strengths. For me personally, the most outstanding examples are Maxim Potashev, Elizaveta Ovdeenko and Balash Kasumov.

TV club master Alexander Druz once admitted that before every game he goes to the sauna with the team. Are there any similar traditions in your team?

We haven't gone to the sauna with the team yet. We try to see each other as often as possible. Three of us live in St. Petersburg, so it's not always possible to coordinate our plans. We go to away tournaments. Last year we went together in the summer to a tournament in Tyumen and to an intellectual camp in Anapa. And right before the games we usually go to dinner together at our "secret place".

Who, according to your observations, is more in "What? Where? When?", humanists or "techies"? Or are there some other categories and their ratio?

I used to think, "What? Where? When?» more suitable for humanists: philologists, historians. It often happens that knowledge of literature, history or quotes of famous people is needed. But, for example, there are four "techies" in my team, and this doesn't seem to interfere at all. I studied at a technical university, and there the intellectual direction was very developed. So the division into "physicists" and "lyricists" is hardly relevant here.

At what stage of development is the intellectual games in Russia today? What is its role in the social life of society and its prospects?

«What? Where? When?» is quite developed in Russia. In addition to the famous television club, there is also a sports version, when teams play simultaneously on the same questions and find out who is stronger. I think there are several tens of thousands of people actively playing. Almost every university and many schools have their own clubs. And now the corporate direction is also rapidly developing. Many companies have their own teams. In the fuel and energy sector alone, more than 100 corporate teams participated in the latest Oil Owl tournament. And besides "What? Where? When?» there are also so-called quizzes. This is generally a very popular story. There are already hundreds of thousands of active participants. Of course, a shared hobby unites people. Many become not just members of the same team or colleagues, but close friends. By engaging in intellectual games, people not only develop themselves, but also motivate each other and their loved ones to do the same.

THE SKILLS ACQUIRED IN THE GAME HELP YOU DEVELOP THE ABILITY TO COMMUNICATE WITH PEOPLE, MANAGE A TEAM, USE BRAINSTORMING TECHNIQUES AND OTHER USEFUL QUALITIES

After your team's success in the final game last year and winning the main prize for personal contribution to the victory — the "Diamond Owl" — what new horizons are opening up, and what goals do you set for yourself and the team?

Our team is at the peak of its form, but there is still a lot to learn. All the guys understand this, and it even inspires us. After winning the final of the year, we will be taken seriously. Staying at the top is always more difficult than getting to it. This is a new challenge for us. Especially since fortune was clearly on our side last year. We will strive to progress and go only forward and upward.

While the material was being prepared for publication, a group of CPC employees and intellectual game enthusiasts successfully participated in the 1st Championship of "What? Where? When?» among Russian companies, taking third place in the category "Oil, gas and energy sector".

AUTHOR
ILONA LATSUZHBA

TASTE OF VICTORY

FROM ASTRAKHAN, WHERE CPC SAFETY DAY WAS HELD, THE TEAM OF MASTER-SERVICE LLC BROUGHT THE WELL-DESERVED "SARMATIAN GOLD", BEATING ALL THE CONTRACTORS AND PARTNER ORGANIZATIONS OF THE CONSORTIUM IN THE CORRESPONDING CATEGORY. IT'S TIME TO INTRODUCE THE WINNERS

For more than 14 years, Master-Service has been providing comprehensive multilateral support for CPC facilities in Russian regions, allowing the Consortium's managers and specialists to work without being distracted by "everyday routine." This includes food for employees, landscaping, cleaning, repairs, maintenance of water, gas and electricity networks.

"The work practice and main task is customer focus", says Marina Kolomytskaya, deputy director of Master-Service LLC. "We always strive to do an excellent job. The customer sets us new tasks that require expanding the scope of our activities and acquiring new knowledge and skills. All this together requires a constant increase in the level of general competence of the organization, additional training of specialists, additional practices".

Competencies, practical skills, as well as erudition and endurance were also required in Astrakhan at the annual CPC Safety Day, where the Master-Service team arrived for the fourth time. Before that it was Kalmykia (2019), Kuban (2021) and Kazakhstan (2022). That the team has "arrived" is a rather conditional definition; out of 14 participants, only three live in the Krasnodar Krai and one in the Stavropol Krai. The rest are Astrakhan residents.

Since 2021, the team has been headed by Alexander Kirillov, Deputy Director for Cleaning and Operation of WR. A recognized leader with a solid record of military service, in the Western region he is actively developing the ideas of a Safe Work Culture. In Astrakhan, Alexander instructed and motivated his well-known motto "Not a step back...".

ALEXANDER KIRILLOV

The manager of CR facilities, Astrakhan resident Zainalbek Khaytaev participated in the Safety Day for the fourth time as part of the Master-Service team. With experience in industrial risk analysis, a medical background, and a passion for theater and karaoke, this athletic bearded man is deservedly considered one of the main figures on the battle board.

Another representative of the permanent staff of the Master-Service team since 2019 is Petr Eremin, manager of CR facilities. The experience of serving in the Armed Forces of Kazakhstan and the discipline and sense of responsibility "sewn into the DNA" perfectly characterize him both as an officer in general and as a chess officer, in this terminology also called a bishop, in general, as a representative of the "heavy cavalry", whose attack definitely brings victory.

It is characteristic that the captain in this team has a "XO" – HSE specialist Anna Belyavtseva. Her passion for racing and her culinary skills are harmoniously combined with her special talent for "shaping opinions and beliefs".

It's not so easy to associate the Beatles with photographs of a red telephone booth and zebra-marked asphalt. It is even harder to guess "The Last Supper" by Leonardo Da Vinci from the characteristic poses of bank clerks. The erudition of agronomist Aziz Khodzhankulov, as well as the wisdom of driver and film buff Alexander Arinin, helped the team successfully overcome a series of "intellectual" competitions.

Mechanic and tractor driver Andrei Ilyinov, with his unsurpassed experience in repairing everything that moves, guaranteed parity in the construction of the bridge (designed by the same Leonardo) and water supply system.

There were 24 competitions in total and they lasted the whole day, from dawn to dusk. The team was helped to survive by "father-battalion commander" Dmitry Tsynaev (during working hours – the administrator of PS-8, in the past – an officer of the Ministry of Internal Affairs), as well as a football fan and Zenit supporter, administrator of the CPC Astrakhan office Oleg Mamaev.

Lawyer Valentina Khodzhamkulova, administrator of the Kropotkinskaya PS Dmitry Alekseevsky, mechanic repairman of the same station Vasily Semykin, administrator of A-PS-4A Dmitry Trubenkov also did not sit on the bench, with each competition bringing their team closer to victory, with each victory raising them higher and above the team banner.

"We were not as experienced as the teams of CPC or STARSTROY LLC", admits captain Alexander Kirillov. "But when the top three had already been formed and all that remained was to beat the teams of STARSTROY and SMU-6 at the finish line, this gave new strength. The team demonstrated the most powerful spurt of the entire day, and this breakthrough led us to the first absolute victory in our category in all four years.

"It was unforgettable, everyone shouted "hurray," and I was the loudest" recalls Marina Kolomytskaya. "I would like to thank our champions by name and also not to ignore the inspirers (the management of Master-Service LLC) and the organizers – the CPC management. Always a welcome holiday, fair competition, victory deserved by the maximum concentration of skills and strength – what could be better for a professional!"

A WELCOME HOLIDAY, FAIR COMPETITION, WELL-DESERVED VICTORY – WHAT COULD BE BETTER FOR A PROFESSIONAL!

AUTHOR
DMITRY KONSTANTINOV

BY FAMILY TRADITION

ON OCTOBER 8, 2023, KONSTANTIN ALEKSEEVICH KOLYANKO, PS-2 MANAGER, CELEBRATED HIS 50TH BIRTHDAY. CONGRATULATING THE HERO OF THE DAY, WE FOUND OUT THAT THERE ARE NOT ONLY HEAD AND INTERMEDIATE PS, BUT ALSO "TEST" ONES

Konstantin Kolyanko was born in the village of Goragorsk, Nadterechny district of the Chechen Republic. Graduated from the Gorlovka branch of the Donetsk State Technical University (DSTU) and the Stavropol North Caucasus State Technical University (NKSTU).

"I decided to connect my life with the oil industry not by chance: it was started by my grandfather, who before the Great Patriotic War worked in the oil fields of the Gorskneft trust as an instrument operator, and continued by my father, who worked at the facilities of Grozneft and Chernomortransneft", says Konstantin Alekseevich.

In accordance with family tradition, Konstantin Kolyanko began his career as an operator at the Gorskneft oil and gas production department in 1990. Then he worked at Chernomortransneft OJSC, Volgogradneftegazstroy OJSC, STARSTROY LLC.

Konstantin Alekseevich came to the Caspian Pipeline Consortium in January 2003 and initially worked as part of a contracting organization. In 2011, he moved to the Komsomolskaya PS, where he works as a mechanical engineer. In 2016, he headed the new PS-2, which is still under construction as part of the Expansion Project in the Chernozemelsky region of the Republic of Kalmykia. Participates in commissioning works, equipment testing and in April 2018 puts the facility into operation in the presence of the Consortium management and representatives of shareholder companies.

"In my opinion, the Caspian Pipeline Consortium is the most modern of all enterprises in the Euro-Asian oil and gas segment", says Konstantin Kolyanko. "We use the most advanced technologies, software products and production process control systems. If we talk about the team, our company employs highly qualified professionals who know and love their job. Our team is friendly, united and responsive".

Today, the range of tasks for the PS Manager is quite extensive: developing and coordinating schedules for preventive maintenance of equipment, monitoring the timing and quality of maintenance, analyzing the operation and technical condition of station systems, developing measures to minimize equipment failures, monitoring their implementation, and more. As Konstantin Alekseevich believes, a structural approach helps to successfully and timely solve the entire scope of tasks.

Another area of responsibility for the head of pump station is the acceptance and commissioning of new equipment. A typical example of this kind of new products is variable frequency drives for electric drives of mainline pumps, installed at PS-2 in 2022 during the Debottlenecking Program. An advanced technical solution that reduces hydraulic resistance in the pipeline and avoids prolonged starts of mainline pumps was tested for the first time in Russia on 8.3 MW electric motors. We can say that the "double" with such engines became a testing ground not only for the CPC pipeline system, but also for the entire national energy sector.

"The process of construction and commissioning of the VFD was monitored daily non-stop, thanks to which we were able to complete all stages without accidents", notes Konstantin Kolyanko. "Now we are gradually transferring our experience to colleagues from PS-3, PS-4 and PS-5, where similar electric motors are installed".

It must be taken into account that a significant amount of work within the framework of the DBNP fell during the period of Covid restrictions. The schedule was not violated; at the end of 2022, mechanical readiness was ensured to increase pumping volumes by almost 25%. The management, "operatives" and contractors of PS-2 made a significant contribution to this indisputable achievement and such work is worthy of all respect, as well as its result.

It is worth noting that the station, headed by Konstantin Kolyanko, "exports" not only the experience of testing new equipment, but also solutions in the field of labor protection, industrial safety and environmental protection. These solutions are made at regular meetings of the plant Safe Work Culture Committee. According to the head of the Committee, PS-2 Manager, to date, such "know-how" as fencing devices in the SRS block box, removable railings on the FC block box and coordination measures regarding radio communication during fire fighting and tactical exercises have been replicated at other facilities of the CPC pipeline.

KONSTANTIN KOLYANKO CONSIDERS CPC THE MOST MODERN OF ALL ENTERPRISES IN THE EURO-ASIAN OIL AND GAS SEGMENT

"During the work of the Committee, the quality of feedback from specialists from the Moscow and regional offices has improved; we have an idea of what proposals are being implemented at other oil pumping stations in the region and the entire oil pipeline system", says Konstantin Alekseevich. "The PS team understands that the development of a Safe Work Culture in the company depends on their personal participation. Thanks to the training and activity of both the station's operational staff and contractor employees, the number and quality of initiative proposals is growing".

Nowadays, almost all of the PS-2 chief's free time from work is consumed by building a house. As he says himself, this is both his main hobby and his main goal for the coming years. As a person living in Astrakhan and working in Kalmykia, he can practically evaluate the Consortium's contribution to the development of infrastructure in two neighboring regions at once.

"CPC has always kept and is keeping abreast of socially significant problems in the Astrakhan Oblast and the Republic of Kalmykia, especially in education, medicine and public utilities", emphasizes Konstantin Kolyanko. "The amount of support is truly colossal and, of course, this activity can only be rated "excellent".

He also (like probably every Astrakhan resident) loves fishing and road trips with his family. Unfortunately, now it's rare for everyone to get together: in 2023, after school, his daughter entered the St. Petersburg Mining University at the Department of System Analysis and Management. The eldest son is a second-year student at the Astrakhan State Technical University in the Department of Oil and Gas Processing.

"I'm glad that children also decided to connect their future with the oil and gas sector and a new generation of oil workers is growing", says Konstantin Kolyanko.

AUTHOR
DMITRY KONSTANTINOV

PROTECTING THE PIPELINE

ON DECEMBER 31, 2023, OLEG ALEKSEEVICH ANDREEV, SENIOR ENGINEER, CATHODIC PROTECTION, CELEBRATED HIS 60TH BIRTHDAY. THE WORD "PROTECTION" USUALLY BRINGS TO MIND ASSOCIATIONS WITH ARMED GUARDS, FENCES, ALARMS AND VIDEO CAMERAS. BUT OIL PIPELINE SYSTEMS ALSO HAVE OTHER DEFENDERS, WHOSE WORK MAY BE LESS VISIBLE, BUT NO LESS EFFECTIVE

The main enemy of a steel pipeline laid underground is not secret lovers of unauthorized taps (although they are, of course, too), but corrosion – from groundwater, stray currents and chemical processes. Together with multilayer insulation, cathodic protection installations (technology developed back in the 19th century) extend the life of the oil pipeline, preventing the formation of corrosion.

More than one and a half thousand kilometers of the CPC oil pipeline system are divided not only into regions and stages between pump stations, but also into electrochemical protection areas. Cathodic Protection Senior Engineer Oleg Andreev is responsible for the 952–1495 km distance.

Oleg Alekseevich was born in Omsk, graduated from school in this city and, in 1991, from the Omsk Polytechnic Institute. He taught for four years, in 1995 he moved to the Omsk Transport Institute (later the Omsk Academy of Railways, then the Omsk State University of Transport), where he entered the postgraduate program.

"I have been working in oil pipeline transportation since 2000", recalls Oleg Andreev. "That year Transsibneft OJSC came, now it is Transneft – Western Siberia JSC. In 2003, without interruption from work, I defended my PhD in the postgraduate program of the Moscow Institute of Transport Engineers (MIIT, currently the Russian University of Transport)".

In January 2005, Ph.D. O. A. Andreev began working at the Caspian Pipeline Consortium. Today, in addition to the already mentioned section of the linear part, which runs practically through the entire Stavropol Krai and the entire Kuban to the Black Sea coast, his area of expertise includes the technological pipeline bundling of the PS-4, PS-5, Kropotkinskaya PS, PS-7, PS-8 and the tank farm of Kropotkinskaya PS.

"WORKING IN SUCH A COMPANY IS AN HONOR AND A GREAT RESPONSIBILITY"

"The scale is considerable and, it should be noted, diverse in terms of the pipeline's location: there are rocks, sandstones, and underwater passages", says Oleg Alekseevich. "Providing protection against electrochemical corrosion at all sites is not an easy production task, but it is solved by a friendly and responsive team.

A typical example of such a difficult production task is the replacement of the cathodic protection system at the Kropotkinskaya PS tanks, which CPC Panorama wrote about in May 2023.

"Among industry enterprises, CPC is a leader in terms of technical equipment and technological capabilities", Oleg Andreev believes. "Ensuring the level of HSE and Safe Work Culture in the Consortium meets the best international standards. Working in such a company is an honor and a great responsibility".

As Oleg Alekseevich believes, every place of work (especially exotic ones) opens up space for new hobbies. As a swimming enthusiast, his work at Transneft gave him the opportunity to "try" all the rivers along the route of the West Siberian Oil Pipeline – From Omsk to Irkutsk. And Baikal, of course.

"Now I regularly swim in the Black Sea", says Oleg Andreev. "Whenever possible, I go hiking in the Krasnodar Krai and the North Caucasus. I love to travel, and over the past 10 years I have visited Norway, Great Britain, Serbia, Hungary, Slovakia, Greece, Turkey, Egypt. I try to be a versatile person".

AUTHOR
PAVEL KRETOV

CLASS WORK

STAVROPOL IS FAMOUS FOR ITS NATURAL ATTRACTIONS: PICTURESQUE VALLEYS, CRYSTAL CLEAR RIVERS, SNOWY RANGES AND MINERAL SPRINGS. THE HISTORY OF LOCAL HEALTH RESORTS GOES BACK MANY CENTURIES. OLD-TIMERS SAY THAT ONE OF THE IMPORTANT FACTORS IS STRONG WINDS, THANKS TO THEM NO ILLNESS LAYS HERE

The regional Ministry of Natural Resources and Environmental Protection carries out a lot of systematic work to ensure that Stavropol remains a health resort and breadbasket not only in our time, but also for future generations. The scale of activities to preserve a favorable environmental situation and maintain biological diversity is eloquently illustrated by the following figures: in the region there are 108 protected areas, occupying a total area of 108 thousand hectares, rich in historical heritage and natural diversity. The water resources of the Stavropol Krai include 225 rivers and 82 reservoirs.

"Cooperation between the ministry and subordinate institutions with the Caspian Pipeline Consortium is developing fruitfully", says Roman Kovryga, Minister of Natural Resources and Environmental Protection of the Stavropol Krai. "Over the past few years, the company has taken part in increasing the population of rare deer species, purchased special equipment to counter poachers, as well as fire-fighting equipment to protect our protected areas".

Unlike nature reserves, according to Federal Law No. 33-FZ of March 14, 1995, visiting specially protected natural areas (SPNA) is not prohibited. In addition, a regional feature of the Stavropol Krai is that many of the protected areas are adjacent, or even directly located within the boundaries of populated areas. Therefore, control and prevention of violations are the most important tasks of the Directorate of Specially Protected Natural Areas.

Every year, Stavropol inspectors identify more than 100 cases of poaching. Only in 2022, and only in the Russian Forest reserve, five facts of poaching were revealed: the illegal hunting of three wild boars, one roe deer and two sika deer. From 2020 to 2022, about a hundred cases of poaching were identified related to the collection of rare plant species listed in the Red Book of the Stavropol Krai.

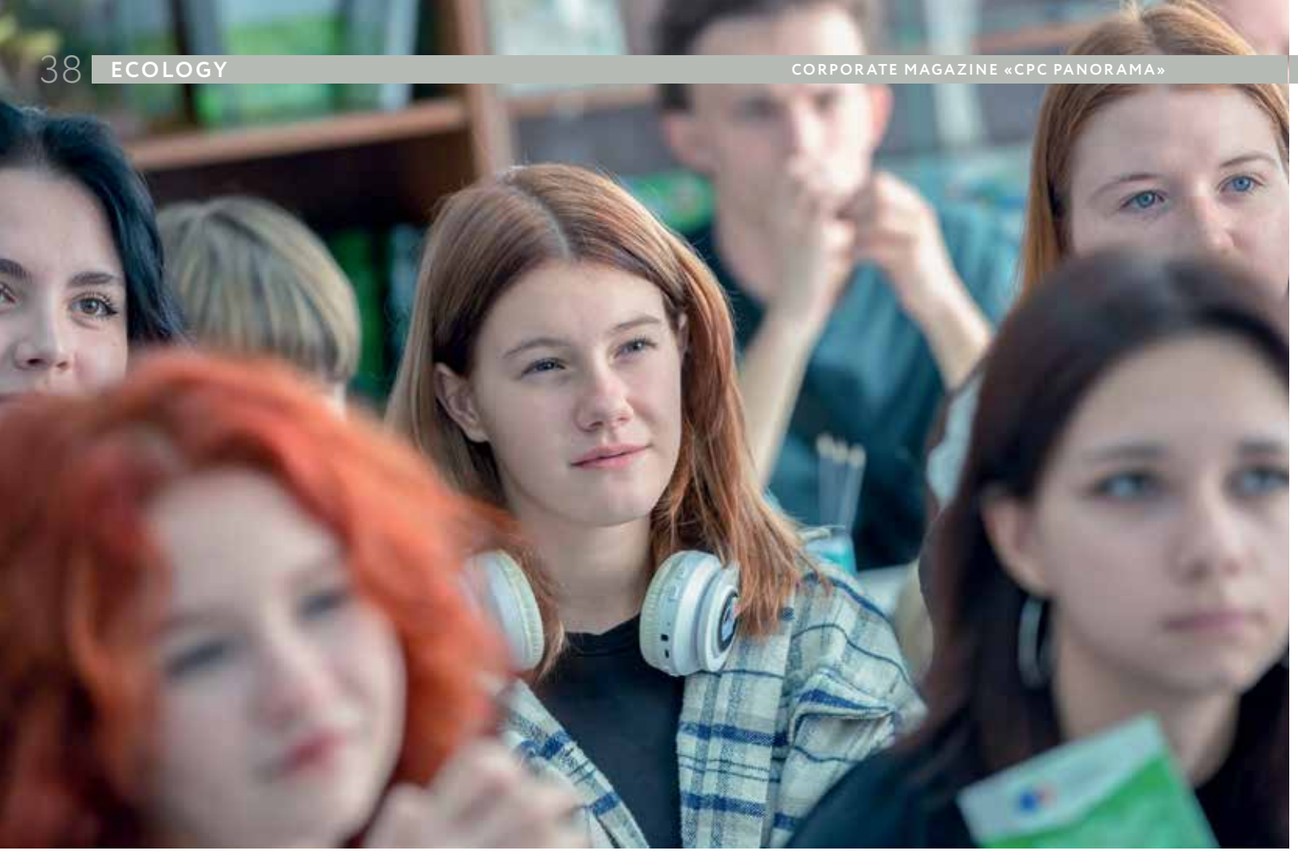
ROMAN KOVRYGA

"The equipment purchased with CPC funds – a camera trap, a thermal imager, a video recorder, a telescopic lens for photo and video recording – help representatives of environmental protection structures to record poaching facts day and night, from a great distance and in any weather, and to create a proof of violations for the judicial authorities. This means increasing the efficiency of inspectors, especially in winter, when there are more cases of illegal hunting", says Maya Medvedeva, head of the Directorate of Specially Protected Natural Areas of the Stavropol Krai.

ABOUT **130** LESSONS PER YEAR ARE CONDUCTED WITH SCHOOLCHILDREN AND STUDENTS

Camera traps are installed within the boundaries of several reserves – Strizhament, Beshtaugorsky, Irgaklinsky, Alexandrovsky. The latter is a large forest area of 30 thousand hectares. The equipment is used to keep track of the sika deer is recorded and monitor predator activity.

Camera traps regularly provide interesting photo and video materials for observers. Among



the recent "trophies" are rare shots of a vulture, little foxes emerging from their burrows, and other interesting films. The materials are used not only for scientific research, but also in the work of a special classroom, equipped in 2022 with CPC funds in the Directorate of Specially Protected Natural Areas.

THE TASK OF THE ECO-CLASS IS TO TEST A UNIQUE PEDAGOGICAL MODEL

In addition to attracting more people to the side of environmentalists, the task of the class is to test a unique pedagogical model "environmental education of children for environmental education of adults". "I think that we are one of the first in Russia to organize the work of such a methodological center at the regional level and absolutely the first among the subjects of the North Caucasus Federal District", notes the head of the department for the development of ecological tourism and eco-education of the "Directorate of Specially Protected Natural Areas of the Stavropol Krai" Oksana Moskaluk.

On the basis of the class, only within the framework of the joint environmental educational project "Protect Nature of Our Native Land" with CPC, about 130 lessons per year are conducted with schoolchildren and students. No less important is working with teachers of municipal educational institutions – specialists in the field of environmental education help them develop educational programs and share relevant information and literature.

MAYA MEDVEDEVA

Higher education students who plan to work in the field of environmental protection in the future are not neglected either.

Of course, such activities were carried out before the creation of the eco-class, but, you see, it is much more convenient to conduct classes in a room equipped with multimedia equipment and visual materials, where a lot is presented – from a collection of fossils of ancient animals to an arsenal of funds seized from poachers.

In turn, the presence of such a class does not interfere with the established practice of traveling lessons and exhibitions. Now, for example, children are shown the film "Reserved Stavropol Krai", created with CPC funds and telling about all the specially protected areas of the region, and an environmental photo exhibition is also exhibited around the region. This exhibition was first shown during the Interregional Scientific and Practical Conference "Preservation of Natural Heritage and Environmental Strategy of Industrial Enterprises", organized with the participation of CPC in Stavropol in October 2023.

"This was the first time such a conference was held in our region, so we carefully called it interregional", says Minister of Natural Resources and Environmental Protection Roman Kovryga. "But in reality, it immediately turned out to be all-Russian: taking into account online connections, we had about 300 participants from various parts of the country". The conference organizers deliberately abandoned the traditional round tables for such events, so that all speakers and guests had the opportunity to hear each other: scientists could listen to production workers, workers of reserves and protected areas – to scientists, ecologists – to teachers, etc. Among the important issues raised were environmental education, scientific methods for assessing environmental impact and designing eco-routes developed by agricultural universities, and sharing experience in organizational work.

Representatives of the region's environmental community highly appreciated both the results of the conference and the achieved level of interaction on environmental issues between the ministry and local residents.

"We have come a long way in 10 years. The Ministry, the directorate of protected areas and people have become closer to each other – many communication channels have been organized, including digital ones, through which you can contact officials for assistance in the field of environmental protection. All signals are promptly processed. It feels like nature has a careful owner", comments Vladimir Emelyanov, chairman of the regional branch of the All-Russian public organization for environmental protection "Public Environmental Control of Russia" in the Stavropol Krai.

OKSANA MOSKALUK

AUTHOR
PAVEL KRETOV

FOUNDERS OF NOVOROSSIYSK

ON THE FORUMNAYA SQUARE OF NOVOROSSIYSK THERE IS A REMARKABLE MONUMENT TO THE FOUNDING FATHERS OF THE CITY: THREE MILITARY LEADERS IN PARTY UNIFORM OF OFFICERS OF THE RUSSIAN EMPIRE. ADMIRAL LAZAR SEREBRYAKOV IS SITTING IN THE FRONT, WITH HIS RIGHT HAND ON THE MAP OF TSEMESSKAYA BAY. BEHIND HIM STAND ADMIRAL MIKHAIL LAZAREV WITH A NAVAL TELESCOPE AND GENERAL NIKOLAY RAEVSKY, GESTURING TOWARD THE CITY

Not every capital city can boast that its founding was attended by personalities of such magnitude. The military exploits of the Raevsky family left a bright mark on several centuries of Russian history. The first representative of the family came to the Grand Duchy of Moscow from Lithuania in the 16th century as part of the retinue of Elena Glinskaya, the future wife of Tsar Vasily III. Since then, not a single important battle took place without the contribution of the Raevskys – from Poltava to Izmail.

And the future founder of Novorossiysk, Nikolay Nikolaevich Jr., despite his young age, took part in the War of 1812. The boy was only 11 years old when, together with his father Nikolay Nikolaevich Sr. and his 17-year-old brother, at the decisive moment of the battle they stood in front of the Smolensk regiment, storming the French positions near Saltanovka. The daring pressure of the Russians convinced the enemy that they were opposed by at least no less forces. This saved not only Raevsky's 7th Infantry Corps itself from destruction, but also allowed the 2nd Russian Army under the command of Bagration to retreat to Smolensk in full order, eliminating dangerous flank attacks when crossing the Dnieper.

And although after the war, Nikolay Nikolaevich Sr., out of modesty, created a historical intrigue, denying the direct participation of his children in the battle of Saltanovka, but, firstly, a letter sent to his wife immediately after the battle was preserved: "Alexander has become known to the entire army, he will go far... Nikolay, who was in the most intense fire, was only joking. This boy will not be ordinary". Secondly, the general's grandson Nikolay Orlov also shared his family memories: "At the moment of the decisive attack on the French batteries, he took them with him at the head of the column of the Smolensk regiment, and he led the smaller one, Nikolay, by the hand, and Alexander, grabbing the banner that lay next to the killed in one of the previous attacks of our lieutenant, he carried him in front of the troops".

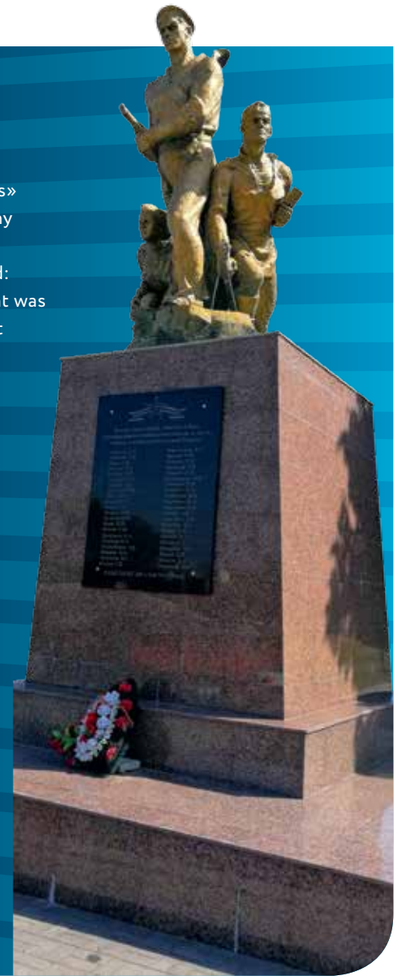
In the battle for Smolensk, Napoleon was especially close to the goal of forcing a general battle on the Russians under unfavorable conditions. His rapid attack on the city was a complete surprise for our commanders. Only the already familiar 7th Infantry Corps was close to Smolensk. And then the entire elite of the French troops suddenly went against him: Marshals Mortier, Murat, Davout and Ney, who had gained the glory of being invincible. And with them 180 thousand soldiers – 10 times more than Raevsky had. At the same time, the city itself is not suitable for defense. The local governor was generally promised that the enemies would not reach here, so he showed no zeal.

NOT EVERY CAPITAL CITY CAN BOAST THAT ITS FOUNDING WAS ATTENDED BY PERSONALITIES OF SUCH MAGNITUDE

Of the three days of the battle, the first was the most critical: to compensate for the lack of people, even the wounded from hospitals were called to the walls of the fortress. According to the testimony of a direct participant in the events, the poet Denis Davydov, in endless bayonet attacks, the confrontation lasted from six in the morning until nine in the evening. And only at midnight the city's defenders received the first reinforcements from the Russian troops retreating to the east.

Raevsky was a little talkative not only about Saltanovka, but also in his memories about Borodino. Most likely, the reason is the heavy losses and almost complete destruction of the corps. From the first minutes the enemy took the assault on the Kurgan Heights defended by him seriously: the junction of the positions of the 1st and 2nd Russian armies became the epicenter of a fierce battle.

A PEAKLESS ON THE WAVE



In early February, in the hero city of Novorossiysk, the 81st anniversary of the landing of Caesar Kunikov was traditionally marked by the «Peakless» campaign. On the night of February 4, 1943, an amphibious detachment of 250 people under the command of Major Caesar Kunikov landed on Malaya Zemlya in the Stanichka area (30 km from Yuzhnaya Ozereika, where 1,450 people landed). Kunikov's landing party was considered auxiliary, but during the fighting it became the main one. Sailors and soldiers held the defense of the bridgehead until the arrival of reinforcements for 225 days. During the first day of the landing on the bridgehead, the «kunikovtsy» repulsed 18 enemy attacks. This heroic battle on the western shore of Tsemesskaya Bay was the beginning of the liberation of Novorossiysk, affecting the course of the Great Patriotic War. The CPC Panorama wrote more about this event in the February 2022 issue in the article «Brotherhood of Those who Despised Death». The «Peakless» campaign has been held for many years, but it was in 2024 that «historical justice» was restored: the culminating part of the event was timed to coincide with the exact time of the landing of Caesar Kunikov — at 1:40 a.m. Before that, at 23:00, two torches were lit from the fire of Eternal Glory on Heroes Square. One of them, along with a peakless, traditionally went to the village of Yuzhnaya Ozereevka, where the main marine landing force landed in 1943. The second capless and torch were carried to Malaya Zemlya by residents and guests of the hero city. Then a theatrical performance in honor of the heroes of the Black Sea took place at the memorial «Malaya Zemlya». After its completion, the sailor's cap was solemnly launched for the 56th time.

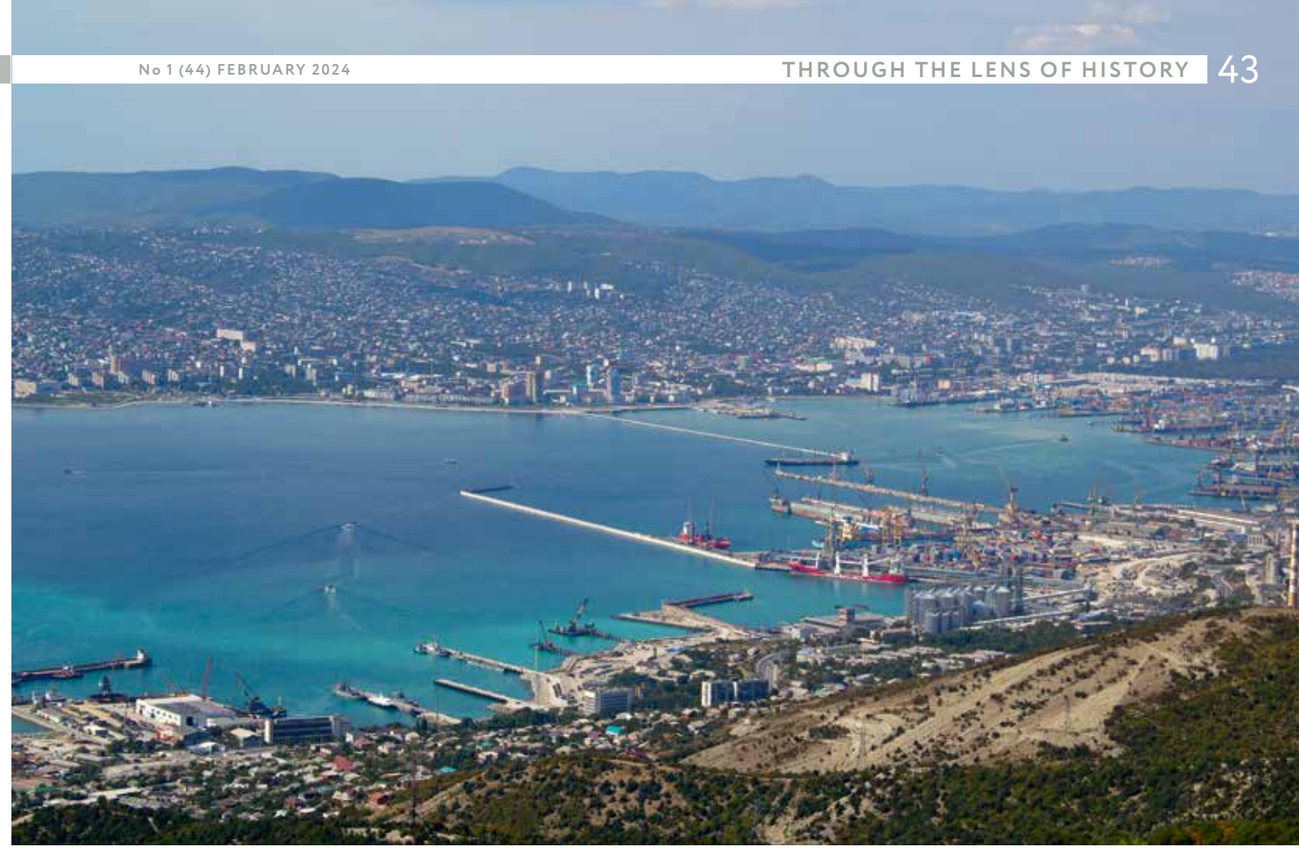
However, the French also paid an exorbitant price. They called Raevsky's battery a fatal redoubt, a gateway to hell and a cavalry cemetery. For five of their generals, the task of taking the height was the last in their lives; the sixth was captured.

The rest is well known. Leaving Moscow to the enemy, but retaining the army in 1812, in 1814 the Russians, together with their allies, would take Paris. The corps, one of which was commanded by Raevsky, will occupy all the dominant heights around, raising artillery to the top, after which the enemy envoys will be told: "If you don't surrender the city, by the evening no one will recognize the place where the French capital once was". The war will end.

When Emperor Alexander I offered to grant the general the title of count for his military exploits, he replied: "But I'm already Raevsky!"

The son, also Nikolay Nikolaevich, as his father predicted, had a remarkable military career: he served to the rank of lieutenant general, founding a number of Black Sea fortresses, including Novorossiysk. According to official correspondence, it was Raevsky's opinion that became decisive in determining the Sudzhuk Bay for the construction of the most important fortress on the entire coastline. On September 12, 1838, Russian troops landed in the bay. The squadron of 11 ships was commanded by Mikhail Petrovich Lazarev.

Before founding Novorossiysk, Admiral Lazarev made a discovery of truly planetary scale: in 1820, in an expedition under the command of Thaddeus Bellingshausen, he discovered and explored Antarctica. Geographers of the Renaissance claimed that such a continent existed; they even came up with the name Terra Australia incognita ("Unknown Southern Continent"). Practical attempts to find it began in the second half of the 18th century. After several failures of French and English expeditions in these countries, it was decided that all searches were pointless. But Russian sailors set to work with enthusiasm and continued to explore the vastness of the World Ocean.



BEFORE FOUNDING NOVOROSSIYSK, ADMIRAL LAZAREV MADE A DISCOVERY OF TRULY PLANETARY SCALE

The ships of Bellingshausen and Lazarev left Kronstadt in the summer of 1819 with a vaguely formulated goal — to make discoveries "in the possible vicinity of the Antarctic Pole." Contemporaries recalled that Vostok and Mirny were poorly suited for a round-the-world expedition: they behaved unstably, had poor lining and leaky hatches. They always had to repair and improve something. Correction of shortcomings, for example, of the sloop Vostok converted from an auxiliary vessel, continued on the way. The rocking was reduced by removing the cannons in the hold, but the water coming through the slots was scooped out during the whole journey. It is difficult to imagine how, after going through many storms, the Vostok and Mirny reached the Antarctic latitudes, where they were constantly threatened by icebergs and ice floes.

On January 28, 1820, the expedition ships reached 69 degrees 25 minutes south latitude, where their crews saw an ice wall. As Lazarev wrote, the sailors "met solid ice of extreme height... it extended as far as vision could reach". Moving further to the east and whenever possible trying to turn south, the researchers always encountered an "ice continent." In 110 years, the Norwegians will call this place Princess Martha Coast.

In 751 days, the expeditions of Bellingshausen and Lazarev discovered not only Antarctica, but also 29 islands, while losing only three sailors.

There are now five year-round Russian scientific stations operating in Antarctica. For the southernmost station, the Vostok inland station, founded in 1957, a new spacious modern complex with laboratories, a cinema hall, a gym, a medical unit and a powerful power plant was recently built. In January 2024, the presidents of Russia and Belarus Vladimir Putin and Alexander Lukashenko took part in the opening ceremony of the building via video link from the Northern capital.

Lazar Markovich Serebryakov — combat admiral, diplomat, member of the Imperial Russian Geographical Society, participant in the Russian-Turkish, Caucasian and Crimean wars. In 1839, he was appointed commander of the 1st department of the Black Sea coastline and head of the Novorossiysk port, where he was engaged in large-scale construction work. Under him, the fortified military camp in Sudzhuk Bay turned into a real city with hospitals and a library.

AUTHOR
PAVEL KRETOV

EUROPEAN OIL CROSSROADS

COMMERCIAL TRANSPORTATION OF OIL AND PETROLEUM PRODUCTS THROUGH PIPELINES IN WESTERN EUROPE BEGAN IN THE MID-20TH CENTURY

The first pipelines were built from terminals on the North Sea along a short route to major consumers. Then oil pipelines leading from the Mediterranean coast began to appear. They carried oil delivered by tankers from the Persian Gulf and North Africa.

The development of oil pipeline transport in this part of the world was determined in some directions by the limited capacity of other types of transportation. For example, on the Rhine alone, oil accounted for a quarter of all cargo turnover. To handle annual volumes of 8 million tons, river workers switched to the use of spacious, push-type tank barges. In turn, road carriers have introduced larger capacity tank trailers. Similar innovations have spread to railway workers.

Between 1957 and 1967, European oil companies invested $725 million in the construction of oil pipelines, which made it possible to create a network with a total capacity of 170 million tons per year. In 1958, the North-West Oil Pipeline was put into operation, laid from Wilhelmshaven to Cologne with a length of almost 400 km. Thanks to this steel artery, the port, designed to accommodate large-tonnage tankers, became the second largest in terms of cargo turnover in Germany. The oil pipeline supplied raw materials to several large refineries located along its route.

In 1960, the Rotterdam-Rhine oil pipeline was put into operation. The pipeline, which began in a Dutch port with a throughput capacity of 36 million tons of oil per year, reached the German Frankfurt am Main. By the 1960s, three pipelines transported oil from Mediterranean ports. The longest of them – the Southern European – connected the French L'Avera with Karlsruhe. From this German border «capital of law» two branches approached Mannheim and Speyer, the third reached the industrial Saar region, the fourth ended near Metz in France. The Southern European Oil Pipeline supplied eight refineries: three in France, four in Germany and one in Switzerland.

Until the early 70s, the steel artery had a capacity of 35 million tons of oil per year. Then two more lines were built in parallel, which made it possible to increase transportation volumes to 90 million tons of oil per year. Half of these volumes were oil from the Near and Middle East.

The Central European Oil Pipeline, commissioned in 1960, began in the Italian port of Genoa. On its way to Germany and Switzerland, the pipeline rose to a height of 2 thousand meters above sea level. Many new technical methods were used to lay the pipeline in the mountains through rocky soils. Helicopters were widely used to deliver materials and equipment to hard-to-reach places. To prevent risks associated with erosion of trenches due to flooding of mountain rivers, special bridges were built during their crossing. Particularly difficult for builders were areas where pipes with a small bending radius were required. Standard pipe bending machines could not do this on the route. Pipes with the required bend were manufactured at the factory and delivered by air.

The Transalpine Oil Pipeline also has its own interesting history. Its creation was necessitated by the rapid growth of industrial centers of Central Europe in the middle of the 20th century. Construction of the 753-kilometer pipeline began in 1961, but the process was suspended due to high economic costs and protests from environmentalists. The pipeline was commissioned only in 1966.

Starting from the marine terminal in Trieste, Italy, the pipeline crosses the Alps, crossing the central ridge through three 7-kilometer tunnels. Then the pipeline passes through Austria and in Germany it is divided into two branches. One of them ends in Karlsruhe, the other in Neustadt. Thanks to the construction of bridges with other European pipeline systems, such as Adria – Vienna, raw materials from the Transalpine oil pipeline were supplied even to the largest Austrian refinery in Schwechat near Vienna and to Czechoslovak plants north of Prague. The oil pipeline's throughput capacity is 45 million tons per year. To deliver such an amount of oil by road, it would be necessary to use 10 thousand tank trucks daily – imagine such a "convoy" on Alpine serpentines and German autobahns, which are not so multi-lane.

It remains to add that by 1980, the main oil pipelines of Western Europe began to form a single system. This type of transport of hydrocarbon resources was most developed in France, Germany, Italy, Great Britain and the Netherlands.

TRANSALPINE OIL PIPELINE SCHEME

AP/East News

MARINE TERMINAL OF THE TRANSALPINE PIPELINE

BETWEEN 1957 AND 1967, EUROPEAN OIL COMPANIES INVESTED

725

MILLION DOLLARS IN THE CONSTRUCTION OF OIL PIPELINES

THE PIPELINE SECTION BETWEEN KARLSRUHE AND INGOLSTADT PREPARING FOR WELDING, 1963.

akg-images/East News

SOUTH EUROPEAN OIL PIPELINE SCHEME

Photos and book materials used: Bakhtizin R.N., Mastobaev B.N., Soshchenko A.E., Makarenko O.A. Development of the global oil pipeline transport system. – M.: Nedra Publishing House LLC, 2018

AUTHOR
DMITRY KONSTANTINOV

THE AGE OF DISCOVERY

A COLORFUL GALA CONCERT ON THE STAGE OF THE STATE THEATER "RUSSIAN SONG" ON DECEMBER 4, 2023 IN MOSCOW CONCLUDED THE INTERNATIONAL COMPETITION "CPC FOR TALENTED CHILDREN". THIS YEAR THE FESTIVAL TOOK PLACE FOR THE 25TH TIME, DEMONSTRATING AN INTERESTING GENESIS IN A NUMBER OF AREAS AT ONCE

Year after year, the International Competition for Children and Youth Creativity "CPC for Talented Children" breaks its own statistical records. In 2023, the number of participants in the first qualifying stage from the Astrakhan Oblast, the Republic of Kalmykia, Stavropol Krai and Krasnodar Krai exceeded 19 thousand. The jury reviewed over five thousand applications. More than nine thousand contestants successfully qualified for the second stage. A total of 140 master classes were organized for them, conducted by famous cultural figures and teachers.

"The kids have come a long and difficult path with interest and enthusiasm", the competition expert, Honorary Artist of Moscow, Alexander Koltsov, told a correspondent of the Rossiya TV channel during the Moscow gala concert. "The preparation process took six months and now you can see how effective it all turned out to be".

The third competitive stage took place in September and early October in regional capitals: Astrakhan, Elista, Stavropol, Krasnodar, Novorossiysk. The laureates and winners were determined here – about 300 people in total. In November, this "combined team", together with their mentors, went to the International Cultural Unifying Forum "Moscow Meets Friends". They were joined by laureates of the Jas Tolquin competition from four regions of the Republic of Kazakhstan: Atyrau, West Kazakhstan, Mangistau and Aktobe.

"CPC has a special mission in the regions of its presence – a responsible attitude towards those who will live in our country tomorrow", noted Gilana Boskhomdzhieva, Chairman of the Government of the Republic of Kalmykia, in her greeting to the participants of the gala concert. "In the "Decade of Childhood," announced by the President of the Russian Federation, the Consortium is implementing an active policy of supporting the younger generation, educating and developing young talents. Every year, about 2,000 children in Kalmykia participate in the CPC competition, and hundreds become winners. Awards, diplomas, gifts – all this is also important, but the main thing is that children get a unique opportunity to express themselves, gain confidence in their abilities, talent, and relevance. And such a pen test will remain in their hearts forever.

In Moscow, laureates and winners of regional stages took part in master classes organized by












teachers from leading universities, artists from capital theaters. Young guests of the Moscow Forum also had the opportunity to explore the capital's attractions, take part in excursions and cultural programs.

"The value of master classes is not only that they "pull up" professionally", Alexey Akimov, a member of the Astrakhan brass and percussion orchestra The Color Brass, commented on the classes. "From teachers you learn interesting things that you didn't know before, and you are charged with special energy, which is so important for performing on the Big Stage".

This year, the creative team of the gala concert decided on an interesting (and, as it turned out, successful) experiment, shifting the steering wheel of the plot concept control a couple of points from formal logic towards some surrealism. If during the 2022 performance "Journey for a Dream" the contestants more or less successfully illustrated various historical eras with their performances, then the theatrical and musical show "Mysterious Island", which became the basis of the 2023 gala concert, gave them definitely more room for maneuver.

Generously rich in characters (kings, pirates, sirens, Ivan Tsarevich, Sadko the Rich Guest, Leonardo da Vinci, Firebird etc.) the plot allowed musical numbers of almost any genre to look organic on stage. The technical level of visual effects was truly "Hollywood" and not only advanced projection technology played a role here, but also the human factor. And one more important detail distinguished the 2023 gala concert from all previous ones – the live musical accompaniment was provided by musicians of the CPC Orchestra – a group assembled by conductor and competition expert Nikolai Kozhin from among the best participants of previous festivals.

"All children are different, each has their own approach to performance, their own degree of excitement, artistry, technique, and focus on the stage", explained Nikolai Kozhin, pianist, conductor, teacher, laureate of international competitions, member of the Russian Musical Union, during intermission. "Participation in such a large-scale production is not an easy task for children, but at the same time it is an invaluable experience. The more the guys are interested in the master classes, the more new knowledge they gain there. An interesting dialogue is built, an exchange of impressions and emotions is built – and this is also useful for teachers. This is when true progress is made in learning".

Contrary to custom, there were no awards given on "The Mysterious Island"; the show ended with the anthem "CPC for Talented Children," performed on stage by all participants. Perhaps the previously expressed idea has materialized: before Moscow it is a competition, struggle and prizes, and in Moscow it is a festival, equal communication and exchange of experience.

"To my delight, today several of my students stood on stage at once: Stepan Podayko, who played the main role of Ivan Tsarevich, Miroslava Lavrus, who played the role of the siren Orpheus, and the junior group of our theater and variety studio, involved in the prologue and epilogue. I am satisfied as a teacher, as a participant, as a spectator. Thank you for this opportunity, for the fireworks of talent and emotions", director Alena Osipenko shared her impressions.

"Behind the desire of large companies such as CPC to invest not only in production, but also in the younger generation, lies the future of the entire country and each of its regions", Vice-Governor and Chairman of the Government of the Astrakhan Region Oleg Knyazev emphasized at the Forum. "The consortium has established a good tradition of inspiring and motivating young talents every year and bringing the best of them to Moscow, which is worthy of universal respect. As we congratulate the 2023 winners, we are already looking ahead, waiting for new talents in the new year".

Reminiscent of the Age of Great Geographical Discovery with every fiber of the plot, the anniversary gala concert was remembered for many performances. Time will tell whether there will be more of them next year, whether they will be brighter. By the way, there isn't much left until the start of the next competition, and it's time to think about recording an application video now.

"The festival "CPC for Talented Children" was born 25 years ago. Every year, it opens the way to the big stage for young talents from the regions where the Caspian Pipeline Consortium operates", CPC General Director Nikolay Gorban noted in his greeting to the 2023 laureates. "It's surprising, but now the children of those who appeared on stage at our very first festivals are participating in the competition. This continuity of generations shows, first of all, that the "CPC for Talented Children" competition has taken deep roots over 25 years, become an integral part of cultural life, an expected and joyful event for everyone".

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TEA PARTY

COFFEE OR TEA — EACH DRINK HAS ITS FANS AND EXPERTS. CPC PANORAMA HAS ALREADY PUBLISHED A STUDY ON COFFEE IN 2021, NOW IT'S TEA'S TURN

For most of us, tea is the first drink we are introduced to in childhood. All over the world, drinking tea is not just a routine action, but an event, a ritual, an occasion for a meeting of everyone at home, accompanied by a leisurely conversation, exchange of news, and summing up the results of the day. In other words, this is, in a simplified sense, what is called a tea ceremony — a certain established order and rhythm of actions with its own circle of participants.

They drank tea everywhere: at home, at a party, outdoors, on a hike. In my childhood it was mainly strong black tea from India or Sri Lanka or Krasnodar tea. A little later, Chinese and Japanese tea appeared on the table.

As a child, tea drinking was always accompanied by something tasty: homemade jam, pancakes, sandwiches, sweets. I remember adding sugar and lemon, and sometimes milk. Having grown up, we began to drink tea for the sake of tea itself, carefully preparing the water and tea leaves, choosing dishes, savoring the varietal shades of taste and enjoying the color and aroma.

I also went through a passion for coffee and therefore I can competently say: this drink and tea have two different roles, two functionalities. Coffee is a body starter before the start of the working day and during breaks. And tea is a mood, relaxation, a drink that is associated with returning to the comfort of home and the family hearth. It seems to me that each of these drinks has firmly taken its place in our lives and does not compete.

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ORIGIN OF SPECIES

Tea is a rather capacious term, referring both to the original plant, the Chinese camellia, and to the beverage brewed from its leaves and buds. Camellia is best known for its beautifully flowered ornamental variety, Camellia japonica. But tea is not made from it, but from other types of camellias, such as China (shrub) and Assam (upright tree). These evergreens live long and bear fruit for 100 years or more.

The word "tea" ("chai" in Russian) comes from the Chinese language, from where other peoples borrowed it and reproduced it in their own way. It is noteworthy that in different provinces of the Celestial Empire this word was pronounced differently. In Northern China, where tea was historically imported to Russia, the word "ch'a" meant "young leaf," a leaf from a tea bush that has not yet undergone factory processing. The finished dry black tea was called "u-cha", and the drink made from it was called "ch'a-i". This is how the word "tea" ("chai") appeared in Russian language.

Tea was brought to India, Pakistan and Bangladesh from Western China, where it is called "chhay" or "jai". In Central Asia, "chai" or "choi" became commonly used. Tea came to Mongolia from Tibet and there it is called "tsai". In Kalmykia they use the word "tsya". Japan and Korea are adjacent to Eastern China, so tea there is pronounced "tya". Most European peoples were introduced to tea through Southeast China, hence the name "ti/tea" or "te".

JIANG HONGYAN/Shutterstock/FOTODOM

According to a number of sources, tea as a drink first appeared in China more than 4,700 years ago. However, discoveries of wild or feral tea bushes in India and the countries of Indochina make the version of the Chinese origin of tea not so clear-cut. But wherever the camellia appeared first, the Chinese tea ceremony had a huge influence on the formation of global traditions.

There are many approaches to classifying tea varieties. The most common is based on the degree of fermentation. This term refers to the fermentation of the juice of tea leaves as a result of interaction with oxygen and under the influence of microorganisms located on the surface of the leaf. To speed up the fermentation process, the leaves are often subjected to mechanical stress: twisted or crushed. The fermentation process is affected by humidity, temperature and time, so tea production remains a sacrament and an art to this day. It is thanks to fermentation and different production technologies that different types of finished tea can be obtained from the same bush. According to legend, only in the middle of the 19th century (and that was thanks to spies) did they learn in Europe that green and black tea were collected from the same bush.

According to the degree of fermentation, black (red) and green tea are distinguished. Black tea is when the leaves undergo a long fermentation process (several weeks to a month), resulting in a dark color and an orange to dark red infusion. Fermentation gives this tea honey and floral notes in the aroma and a characteristic astringency in the taste.

Green tea is unoxidized or slightly fermented (no more than two days) green leaves with an infusion ranging from dim yellow to greenish. The aroma of such a leaf has a distinct herbaceous quality (especially in Japanese sencha) and astringency or sweetness in taste. Fermentation is stopped by quickly heating the leaves or roasting them.

White tea is collected from tips (leaf buds), sometimes adding leaves that do not curl. The color of dry tea leaves is whitish-green, sometimes light yellow. Yellow tea undergoes a simmering process during the fermentation process.

Oolong tea is a type of semi-fermented tea whose leaves are twisted. Oolongs vary in the degree of fermentation, so their color varies from light green to reddish-brown. The aroma has many floral shades, and the taste is sweetish without astringency.

A distinctive feature of pu-erh is its long fermentation. Natural aging of tea is carried out over several years, so young and old pu-erh are distinguished.

In addition to classification by degree of oxidation and fermentation, there are many other classifications, for example, by shape. The familiar bai tea means «loose tea» as opposed to pressed tea. There are also classifications by leaf type, so on the packaging of Indian tea you can read: flowery peko, orange pekoe, pekoe, pekoe souchong and others.

CEREMONIAL ETIQUETTE

The centuries-old history of tea drinking in China has formed its own traditions, which have left their mark in literature and visual art. An example of such a historical heritage is the Treatise on Tea, written in the 8th century by the poet and scientist

Fine Art Images/FOTODOM. Б.М. Кустодиев «Купчиха за чаем», 1918 г., Государственный Русский Музей

Lu Yu. In addition to the classification of tea and methods of preparing it, the book gives recommendations on the choice of utensils, as well as sources of the "correct" water for preparing the drink.

In China, tea traditions cover almost all life circumstances, from everyday to ritual. For example, there is a special schedule: dawn, morning, afternoon, evening and night tea.

An invitation to tea can serve as a sign of respect when older relatives gather at a restaurant. Tea drinking in the family circle is a kind of ritual of restoring or supporting family ties, a sign of apology or reconciliation, introducing parents to the bride or groom.

Among Chinese tea ceremonies, Gongfu Cha (the art of tea) occupies a special place. The provinces of Fujian and Gaundong are considered the birthplace of this tradition. Chinese monks who traveled throughout the regions and glorified Buddhism, relating the teachings and traditions of tea drinking, did a lot for the development and popularization of Gongfu Cha. As a matter of fact, society owes the term "ceremony" to monasteries and palaces, where they first began to drink tea and discuss high and eternal topics.

Oolong tea is traditionally used for Gongfu Cha. The ceremony involves a large number of tea utensils: teapots made of Yixing clay, tea pairs from high narrow (Wen Xiang Bei) and low wide (Ping Ming Bei) bowls to get acquainted with the aroma and taste, the Cha He bowl, the "sea of tea" or "bowl of justice" for even distribution of infusion strength, tea table «chaban», as well as other devices and tools.

Before the ceremony, the master warms up the tea ware. This is followed by a demonstration of tea leaves. The tea is poured into the teapot and shaken slightly, then boiling water is poured to the top. The first water is not drunk; it is used to water the leaves and remove dust. The water is poured into tea bowls and then onto the kettle for additional heating. The second brew lasts 20–50 seconds, the master chooses the optimal time based on the aroma of oolong.

The brewed infusion is poured into a high bowl, from which guests inhale the aroma while drinking tea from a low bowl in small sips. Good tea should leave a deep, enveloping aftertaste. The master opens the lid of the teapot and introduces the aroma of the leaves. The process is then repeated with increasing brewing interval.

The second and third brews bring out the best flavor of oolong tea, which can be brewed 3-8 times. At the end of the ceremony, the leaves are removed from the teapot and shown to the guests. You can appreciate the size of the opened leaves, appreciate their aroma and express respect for the tea and the tea master. After the ceremony is over, all dishes are thoroughly washed and dried on the chaban.

Chinese tea traditions have spread widely throughout the world and have formed a number of ceremonies "with a local accent". An example is the Japanese tea ceremony. Having penetrated into the Land of the Rising Sun along with Buddhist monks in the 8th century, the ceremony was significantly transformed under the influence of the traditional principles of "wabi-sabi": harmony, respect, purity and silence. Tea houses appeared in gardens with stone paths, the behavior of the participants during the ceremony became theatrical – every movement is conscious, attention is focused on the spiritual interaction of the tea master and guests.

The set of rules for the Japanese tea ceremony is described in detail by the monk Sen-no Rikyu in The Book of Tea. For the first time, simple dishes began to be used to show the naturalness and hidden beauty of things. There are 37 types of such dishes, and I met one of them – Raku – at the Pushkin State Museum of Fine Arts in 2015. The style of ceramics maximally embodies the ideas of Sen-no Rikyu – "simplicity and artlessness". Bowls and teapots are made by hand without using a potter's wheel, the shape and color of each item is individual.

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TEAHOUSE VS TAVERN

It is believed that the first tea was brought to Russia in 1634 from Mongolia as a gift to Tsar Mikhail Romanov. By the end of the 17th century, tea was traded on Red Square, exported from China via Siberia. Delivery took from six months and was a dangerous business: merchants were often robbed along the way. Mass tea culture was the first to emerge in Russia in Belokamennaya, where by the middle of the 19th century there were over 100 tea houses. The price of tea becomes more and more affordable over time; they begin to sell it at fairs in Nizhny Novgorod, Tula and St. Petersburg.

The distribution of tea in Russia was supported at the state level. Tea establishments were provided with tax benefits, and counterfeiting was strictly punished. Statistics showed that where teahouses arose, the number of taverns decreased. Tea houses started working from five in the morning, serving cabmen, bakers, shopkeepers and janitors. As a rule, such an establishment consisted of three rooms with large tables covered with tablecloths and benches. In addition to tea, you could buy dairy products, bagels, pies and sugar. Tea was brewed in teapots that were placed on samovars. Samovars provided boiling water and at the same time heated the rooms.

Wealthy townspeople and nobility had the opportunity to buy high-quality green and black Chinese tea: selected pearl, imperial liangxing, yungfago with flowers, Chinese tea with jasmine. The teahouses served black tea of the cheapest varieties, sometimes with the addition of fireweed. The Russian tea ceremony is best illustrated by Boris Kustodiev's painting "The Merchant's Wife at Tea" from 1918. A table covered with a tablecloth, laden with various kinds of treats, mostly sweet. Tea is traditionally drunk with something sweet, otherwise it is "empty". On the table there are rolls, bagels and dried bread, and according to the season – fruits and berries and (or) jams. The teapot is heated on the samovar; for wealthy people, together with the sugar bowl, milk jug and cups, it forms a single elegantly painted service, sometimes even with portraits. A special tea towel was selected to match the tablecloth – to wipe off the heated forehead and cheeks of the process.

In the families of generals with experience of the Turkish campaign, tea is sometimes drunk from glass in silver cup holders. The gastro-historian William Pokhlebkin traces the roots of the Russian romance tradition in the tea feast. People sit at the table for a long time, drinking up to 10 cups in a row, someone inevitably takes up a guitar. Among the aristocracy, a spoon dipped into an empty cup is considered a sign of reluctance to drink tea anymore. In such cases, the peasantry and the proletariat simply turn the cup upside down.

Since the end of the 19th century in Russia, tea has been included in army allowances. By this time, both the navy and the railway started their own tea traditions. As the same Pokhlebkin notes, by the beginning of the twentieth century, the Russian Empire became the most tea-consuming country in the world with its traditions, plantations, factory production of tea, dishes and samovars.

The story of tea does not end here; it inevitably requires continuation, since there is still a lot to tell. About "close relatives", such as mate and masala, about tea tours to China, Sri Lanka and other countries. Therefore, it should be continued, but for today I would like to end with the Russian folk proverb "Drinking tea is a pleasant life". ●

Elena_E/Shutterstock/FOTODOM

Book materials used:
Pokhlebkin V.V. "Tea. Its types, properties, use". M., 2019
Vinogrodsky B.B. "The Way of Tea". M., 2018

TEA CEREMONY AT HOME:

VARIETY SELECTION. My current preferences: Chinese Red Dian Hong Sun Zhen, Lapsang Souchong, Gaba Alishan Redhei and Japanese Green Fried Hojicha.

WATER. SOFTENED WATER FROM THE FILTER, NO HARSH TASTE.

TEMPERATURE. Different teas require different water temperatures. Do not bring to a long strong boil and do not boil again. I follow Chinese terminology. "Crab eye" – when small air bubbles begin to rise along the walls of the kettle. "Fish-eye" – the rise of bubbles becomes rapid, the water becomes slightly cloudy and then turns white. At this point it's time to take the kettle off the heat. "The sound of the wind in the pines" is a violent boil with bubbles bursting on the surface. Such water is called "old man's water" or "gray water", and it is not suitable for brewing.

UTENSILS. You can get delicious tea without an expensive and varied set of dishes. At a minimum, you need a good ceramic teapot with a strainer, or a gaiwan if you prefer traditional, or a modern glass teapot with a button. Teapot allows you to pour water through the tea leaves several times, better preserving the aroma of the leaves and acts as a kind of "cup of justice." allowing you to get a balanced taste of the drink and not overdo the brewing strength.

PACE. Take your time! Like the service of the Muses, making tea does not tolerate fuss. The essence of the ceremony is to set you up for a certain rhythm and distract you from your daily routine.










ABSOLUTELY FULL DRIVE

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THE STORY OF ONE HOBBY THAT AROSE FROM A PLEASANT LITTLE THING, BUT GREATLY CHANGED LEISURE TIME AND THE WHOLE LIFE, CONTRIBUTED TO THE DEVELOPMENT OF NEW ROUTES AND SPECIALTIES, AND, AT THE SAME TIME, ALLOWED TO MAKE INTERESTING ACQUAINTANCES AND GET MANY STRONG FEELINGS FROM LIFE

A cute puppy appears, which then grows into a huge dog, beautiful and friendly. Then, "to keep the boredom at bay", there are two dogs. Big dogs are cramped in the yard, they need somewhere to run free, but, fortunately, around the "concrete jungle" there are still forests, fields and mountains. In order to get there unhindered, a family council decides to buy a SUV. The choice fell on the Land Rover Defender, the same English UAZ, middle-aged, but still strong and reliable. If only he knew what was in store for him...

Quite quickly, all the surroundings are explored, simple forest roads are mastered, and the soul asks for something more interesting. This turns out to be off-road competitions: sprint, trophy raid, trial. Different rules, different conditions. Geography — surroundings of Novorossiysk, Krasnodar, Abinsk, Goryachy Klyuch. But, as it turns out, competitions lead to breakdowns, and breakdowns end in expensive repairs. This is how a project began (jointly with Alexander Savich, Lead Network Infrastructure Analyst) to build a sports car on the basis of Niva.

Of course, there is not much left from Niva — the Audi suspension, a safety cage in the cabin, sports seats with four-point belts, a winch in the base, a pneumatic system for activating locks separately in the front and rear gearboxes and much more. Competitions are becoming more difficult. In 2023, we took part in the Shakhanbash daily race — a well-deserved 4th place, not a prize, but still a reason for pride. Serious rivals, very unfavorable weather conditions, breakdowns, repairs in the forest — each such detail deserves a separate story.

6 LIFEHACKS FROM AN EXPERIENCED JEEPER

- A shovel, a jack, a set of tools — the minimum that you should always take with you into the forest.
- A winch is more important than locks and off-road tires.
- Common sense prevails. It is better to find a detour if possible, rather than dive into a deep puddle.
- Navigator, preferably two! Be sure to download area maps in advance. There is no internet in the forest.
- Communication! If the trip is carried out by several cars, it is important to acquire walkie-talkies and it is desirable to find out the channel used by local jeepers.
- The most important rule is not to litter in the forest! And, if a winch is used, a bark protection strap is required so as not to damage the trees.





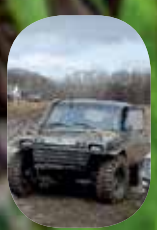









As much as I can, I try to capture all the most interesting things on my Internet channel, for this I have to learn new professions of cameraman and editor... And also an auto mechanic. And a welder. And more recently, a lathe operator. We have grandiose plans ahead — to move to another category in competitions — TR3. To do this, Alexander and I want to build a prototype — a car of our own design. Work is underway. I hope that in 2024 we will open the competition season on the new "monster".

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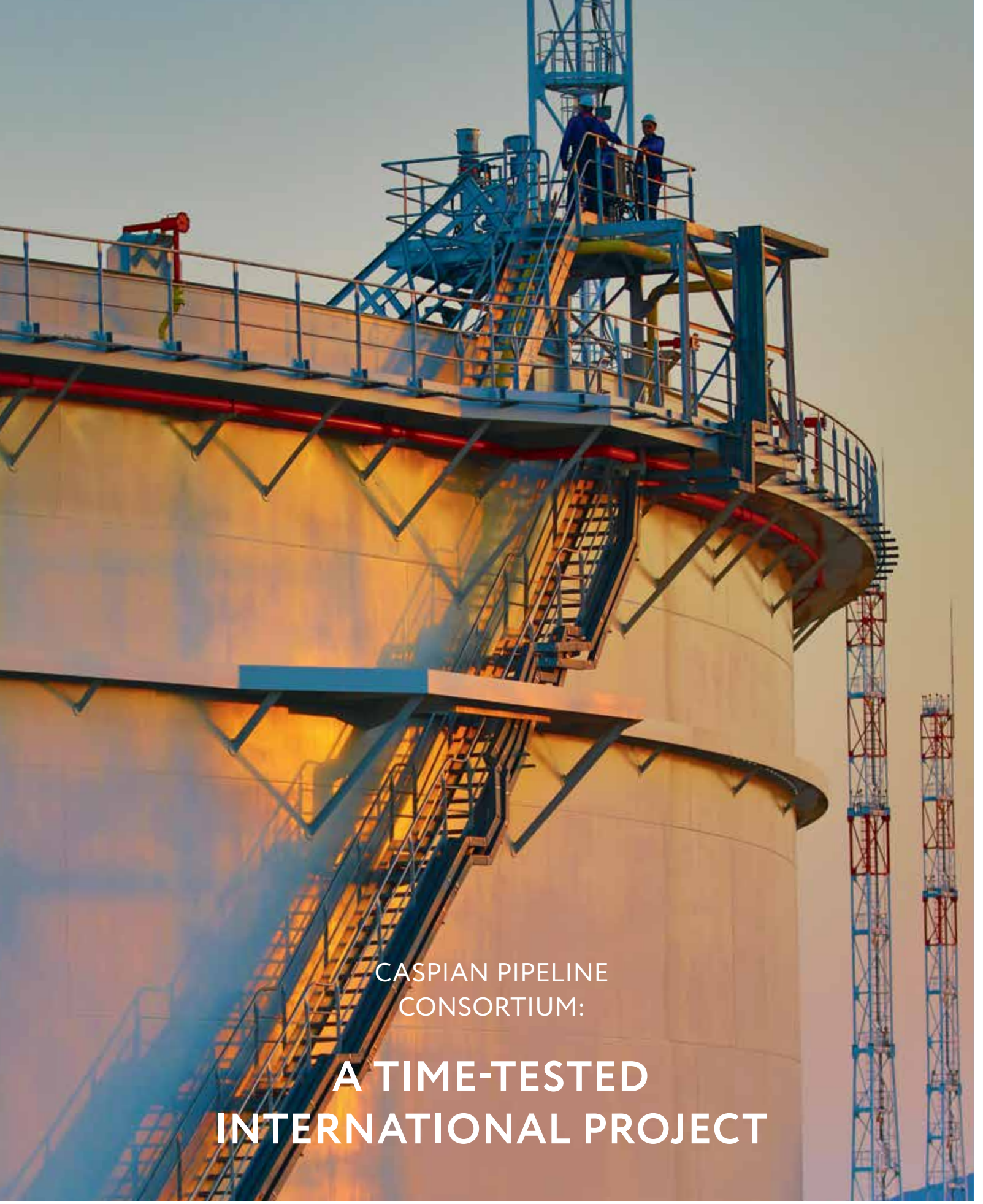

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