

PANORAMA

CASPIAN PIPELINE CONSORTIUM



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IN-PROCESS

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UP CLOSE AND PERSONAL
WITH CPC

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SAVED

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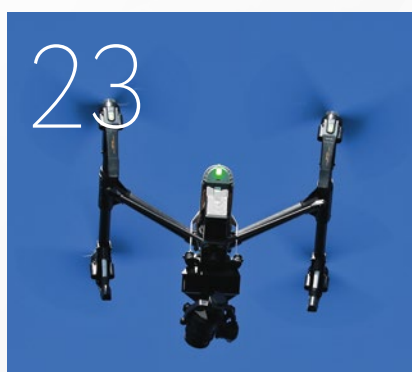
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DEAR COLLEAGUES, DEAR FRIENDS!

Allow me to express my most heartfelt and sincere wishes on the occasion of the coming year of 2020.

The outgoing year has seen many important business and corporate milestones reached. The upward trend has been maintained in the utilization of the CPC pipeline system: in 2019, as for many a year now, the Tengiz – Novorossiysk pipeline transported more crude oil than in the previous year. To date, the Consortium has loaded from Marine Terminal more than 6 thousand oil tankers with nearly 650 mln tonnes of black gold.

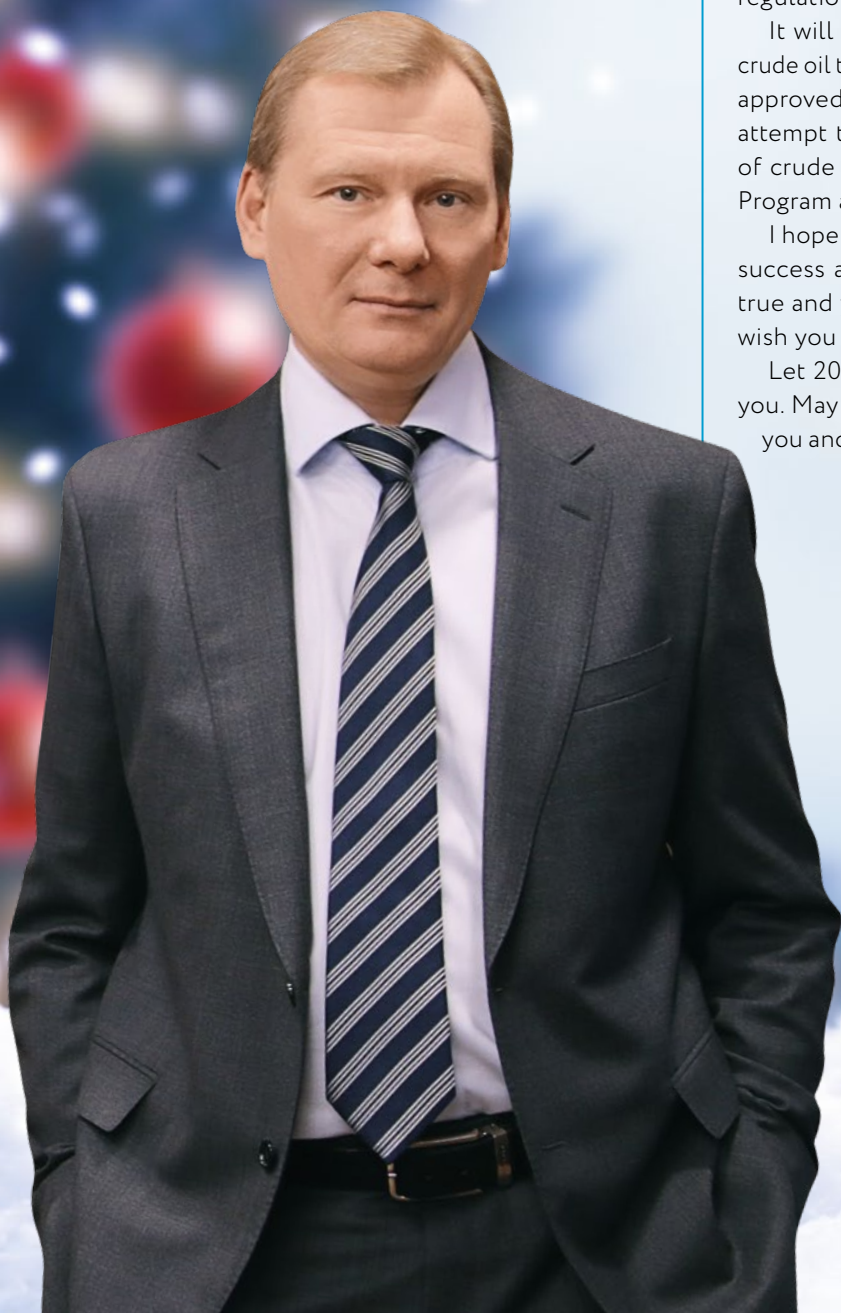
This is a major milestone for the CPC's entire close-knit and high-performance team operating crude oil transmission facilities from Tengiz to Novorossiysk. This milestone was reached: with integrity and accident-free, without incidents resulting in oil spills, and in full compliance with the HSE regulations.

It will not be long before we are exporting even more crude oil to the global markets. In May 2019 CPC shareholders approved the Debottlenecking Programme (DBNP) in an attempt to increase throughput to nearly 80 mln tonnes of crude oil per year. We have started implementing the Program and would like to note the positive dynamics.

I hope you ring in the New Year in high spirits. I wish you success and love. May all your dreams and wishes come true and you have all the good things in life that one can wish you in this wonderful holiday season.

Let 2020 be a year of joy and professional success for you. May you always have your near and dear ones around you and your home know happiness, love and prosperity.

N.N. GORBAN,
GENERAL DIRECTOR
CASPIAN PIPELINE CONSORTIUM



CPC PRESS SERVICE

AS PER PLAN

LARGE SCOPE COMPLETED AT CPC SITES DURING SCHEDULED SHUTDOWN OF OIL PIPELINE

Every year, CPC makes several scheduled shutdowns of the oil pipeline to do maintenance, repair and tie-in activities that are impossible to be done on an operating pipeline. During a shutdown of the Tengiz-Novorossiysk pipeline system scheduled for October 8-11, CPC personnel and contractors performed maintenance jobs on mechanical,

process, power and electrical equipment, measurement instrumentation and control systems at pump station sites. Specialists checked operation of emergency shutdown and unit protection systems.

While the oil pipeline was depressurized, two large diameter ball valves were replaced at the Tengiz pump station, one at the Atyrau pump station, and another two large-diameter ball

valves on a pig launcher/receiver at KP 204. Eight ball valves were replaced on the Astrakhan pump station meter and one large diameter ball valve on the KP 1031 pig launcher/receiver.

It is noteworthy that the ball valve pipeline replacement is being done by CPC as part of a long-term program. New equipment uses split-body valves, which will allow to simplify the



repair process looking forward and, if necessary, will allow to do repairs in the field using CPC maintenance contractor resources. Over 130 old-type ball valves have been replaced at CPC sites since 2012. Another almost 40 ball valves will be replaced in 2019-2020, including fulling replacing all valves in an oil quantity and quality

checks. As a part of a pipeline surge relief programme, specialists changed codes in the programmable logic controller, installed simulator-tested software, and checked operation of shutoff valves for protection against unauthorized closing.

In total, about 185 contractor personnel and 67 special equipment

CPC MANAGEMENT COMMENDED SMOOTH COORDINATION BETWEEN CPC'S AND CONTRACTORS' PERSONNEL

measurement system at the Astrakhan pump station.

Two linepipe sections of the oil pipeline were repaired by means of a modern composite sleeve technology. Ball valve maintenance was completed, including seasonal work activities, integrity checks, opening/closing, electric drive and control system

units were involved in work activities requiring pipeline integrity breach.

CPC management commended smooth coordination between CPC and contractor personnel, strict industrial safety compliance, and careful preparations. By now, crude oil transportation is resumed as per plan.

EVERY YEAR THE CPC CARRIES OUT TWO STOPS OF THE TENGIZ TC – NOVOROSIYSK – FOR MAINTENANCE, REPAIR AND CONNECTION OF FACILITIES. THEIR SAFE PERFORMANCE REQUIRES A COMPLETE SHUTDOWN OF OIL PUMPING. THIS NECESSITATES TAKING THE OIL PIPELINE DOWN



AUTHORS

DMITRY MEDVEDOVSKY,
DEPUTY DESIGN MANAGER

MIKHAIL MARTYNOV,
CHIEF PROJECT ENGINEER
FOR THE MARINE TERMINAL

IN-PROCESS

THE MAGAZINE'S LAST ISSUE DESCRIBED THE OVERARCHING STRATEGY FOR IMPLEMENTING THE DEBOTTLENECKING PROGRAMME (DBNP). THE NEW SERIES OF ARTICLES WILL COVER THE CURRENT AND FUTURE ISSUES ADDRESSED BY THE PROGRAMME

Today's article will cover the Marine Terminal's Onshore Facilities (MT OF), where it is planned to build new Lease Automatic Custody Transfer (LACT) units, a new pressure control unit (PCU), and a pressure dumping system (PDS) as well as to upgrade the existing PCUs. The purpose of this construction and upgrade project is to improve the reliability of the system's failsafe operation and to make it technically feasible to load oil via three Single Point Mooring (SPM) lines simultaneously.

DBNP'S MAIN CHALLENGE

Sitting directly on the shore of the Black Sea, this is beyond doubt the company's most scenic location and the main challenge for the upcoming DBNP in terms of design and further construction. The engineering solutions must factor in the complex mountain terrain (altitude variations directly within the MT OF area reach above 20 m) and the presence of hard rock. In view of the proximity of the developed areas and the Onshore Facilities'

equipment in operation, the rocky material needs to be removed using heavy construction machinery only, with no blasting, unlike the original MT OF construction project.

Also, there are unavailability of even minimal free space to arrange the facilities under design within the existing perimeter and hard constraints on the siting of the LACT units under design within the surrounding grounds. On two sides the CPC Marine Terminal borders forestry lands with rare plant species; on the third side, it adjoins fences of a settlement; in the south, it is limited by the sea. That is why it is necessary to keep in mind the need for construction and installation works at a facility in operation within a limited space with due regard to concurrent equipment maintenance operations conducted by the Operations Department's services.

SPACE OF OPTIONS

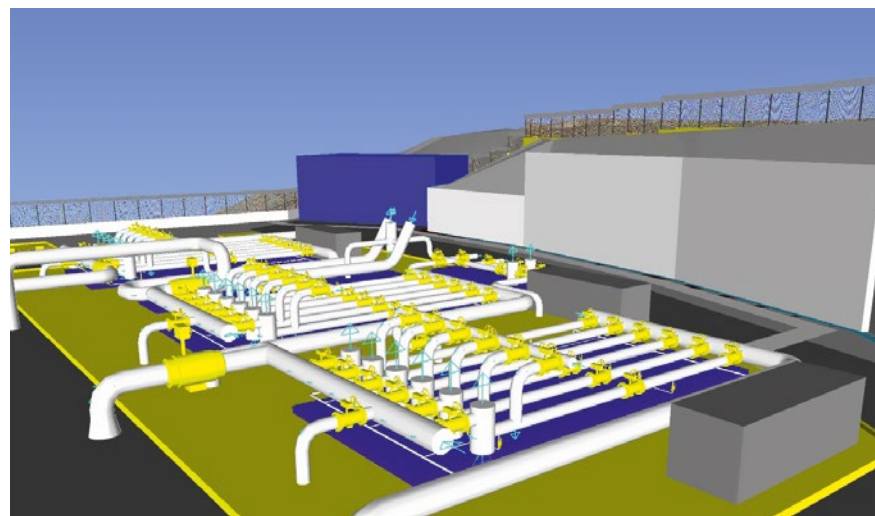
The target site for the LACT units under design was identified at the stage of Initial Data Collection (IDC) by the design institute—it will be a section of the area adjacent to the Onshore Facilities. However, the original decisions made at the Final Investment Decision (FID) and Initial Data Collection stages provided for the site to be recessed nearly 20 m into the rock, with the new site's level to be equalized with the existing structures of the MT OF and with process pipelines to be laid underground to the point of connection to the PCUs in place.

Despite the obvious advantages of single-level arrangement, such as absence of stairs and ease of movement for the operating personnel, the solution had a number of shortcomings: these included a substantial amount of earthwork and subsequent removal of rocky soil (more

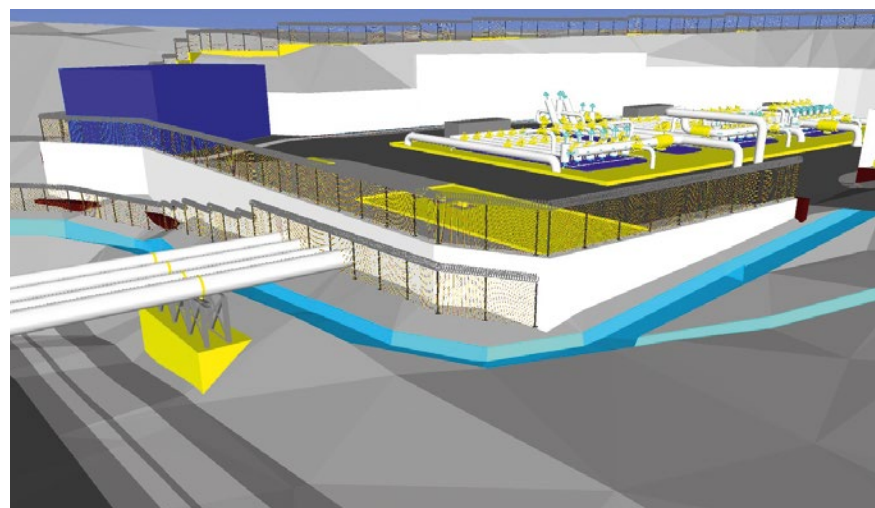
than 220 thousand m³); the height of concrete retaining walls along the LACT site perimeter, up to 17 m on all three sides; the need to build a fully serviceable underground tunnel under the existing on-site road and utilities of the MT OF. Also, the original decisions required the dismantling of some 150 m of the existing concrete gutter 5 m wide, which enabled drainage from all mountain slopes adjoining the MT OF area. A closer study showed that it was necessary to keep this gutter in place because of the environmental requirements; what is more, it needed to be kept outside the MT OF industrial site.

THE MARINE TERMINAL'S ONSHORE FACILITIES ARE THE CENTRAL CHALLENGE OF THE UPCOMING DBNP





3D MODELS OF A LACT (LEASE AUTOMATIC CUSTODY TRANSFER) UNIT BEING DESIGNED FOR THE MT OF ARE BEING DEVELOPED TO PROVIDE AS MUCH DETAIL IN PROJECT ENGINEERING AS POSSIBLE



in accomplishing the task assigned by the corporate management. The plan is to hold such field meetings with presentation of all design solutions and their in-depth review at the DBNP facilities under design with representatives of all the Operations Department services concerned on the permanent basis at 40% and 80% completion of the Detailed Design Documentation prior to its approval for construction.

Besides, the project group is looking into developing designs for difficult-to-implement projects (such as MT OF LACT construction project) in the 3D format to provide as much detail as possible in project engineering in order to designate all existing and planned utilities and to identify inconsistencies between different disciplines. The first design visualizations have already given a clear picture of the project scope and challenges.

Another promising area of focus being considered for the DBNP is the development of separate documentation packages with detailed step-by-step planning of the work scope for the building contractor at the pre-construction stage.

The design approach adopted will make it possible to obtain quality Detailed Design Documentation, incorporating, among other things, pre-construction input from the CPC-R stakeholders and to avoid many problems later, at the DBNP implementation stage. ●

DEEP DIVE

Because such issues are relevant to virtually all DBNP targets, the DBNP management decided to bring in a tool such as Deep Dive—operational field meetings immediately on the site of future construction, involving all DBNP stakeholders, the Operations Department and the design institute for an in-depth review of project issues and exploration of key engineering solutions to the satisfaction of all parties before embarking on the main design stage.

This approach has already delivered significant results. For instance, a MT OF field meeting attended by the management and responsible specialists of the Marine Terminal's Operations Department (OD) significantly optimized the design solutions adopted at the FID stage, and specifically, it managed to dramatically reduce the volume

of the rocky soil to be excavated from 220 thousand m³ to 138 thousand m³ (and counting) and the height of the retaining walls (now this figure varies from 0.5 m to 10.5 m instead of 17 m on all three sides). The entire gutter is kept; there is no need to build a serviceable tunnel—it will be replaced with an aerial crossing, which will be designed over the existing on-site road and utilities concurrently with the optimization of the process pipeline route.

PRE-CONSTRUCTION ACTIVITIES

Henceforth, as design works progress, similar field meetings with an in-depth review of project issues will be held at all DBNP key facilities in the Russian Federation and the Republic of Kazakhstan. And these are not the last effective tools to be used by the DBNP team

AUTHOR

ALEKSANDRA RABINOVICH
CHIEF COORDINATOR FOR DESIGNER SUPERVISION
AND ENGINEERING AND TECHNICAL SUPPORT

NEW, MODERN AND SAFE

ONE OF THE PROJECT & ENGINEERING
DEPARTMENT'S PROJECTS UNDER IMPLEMENTATION
IS A PROJECT TO BUILD A NEW ADMINISTRATIVE
OFFICE BLOCK, NO 3, AT THE CPC MARINE TERMINAL

As of this writing, engineering surveys have been completed and the Engineering Design Documentation developed. This construction project will deliver a three-storey building with a semi-basement and basement. The block will house private offices, the operations management HQ, a classroom, a canteen with a dining room, sanitary facilities and a first-aid station. All design solutions in the project have been adopted considering the land plot layout, geotechnical and geophysical survey data, and seismic rating requirements for the area of the city of Novorossiysk—8 points.

The building is designed for the accommodation of the Marine Terminal personnel; it is compliant with the requirements for civil defence and prevention of natural and man-made disasters and has a built-in bomb shelter on the basement floor as required by the Chief Directorate of the Ministry of the Russian Federation for Civil Defence, Emergency Management and Natural Disaster Response for Krasnodar Krai.



Public hearings were successfully completed on October 16, and permission was granted to build the CPC's office block in the Marine Terminal's territory with a higher number of storeys and a larger overall height (more than 2 storeys and higher than 15 m) than those specified in the Urban Land Use and

Development Rules for the Novorossiysk Municipal Entity.

The Engineering Design Documentation is under approval at the CPC departments, after which preparation of the Detailed Design Documentation will be completed, and the Consortium will issue invitations to bid to building contractors. ●

AUTHORS

G.K. NIKITIN,
GENERAL MAINTENANCE MANAGER, STARSTROY LLS

V.V. KARPOVSKY,

DEPUTY GENERAL DIRECTOR, CPC FACILITIES MAINTENANCE PROJECT MANAGE

REVIEWER

B.V. ZABULDIN,
GENERAL DIRECTOR OF STARSTROY LLC

EXPANSION PROJECT LEVERAGED AT DBNP TARGETS

THE BUSINESS RELATIONSHIP BETWEEN CPC-R AND STARSTROY IS
A SHINING EXAMPLE OF A LONG-TERM AND
SUCCESSFUL PARTNERSHIP



A distinctive feature of this relationship can be said to be CPC-R and STARSTROY's track record in meeting engineering challenges and dealing with unconventional problem areas in operations during the life of the CPC Oil Pipeline System Expansion Project from 2010 and until its completion.

2010 saw work completed on pipeline smart pigging (PSP) from the CPC-R Marine Terminal (MT) Shore Facilities to SPM-3. What was unusual about the work is that it involved recommissioning of the offshore pipeline's head at a depth of more than 5 m. The task was all the more difficult because the work had to be done at a place where there was a lot of equipment and which was next to the wall of the drainage surge pond of the Shore Facilities. The earthwork was planned and carried out exactly as the task required, safely, well and on a tight schedule, which made it possible to complete the PSP on the pipeline in a timely manner.

In the period between June and October 2012, a work package was completed jointly with Saipem S.p.A. to weld and cut a temporary test chamber for the offshore pipeline to/from SPM-3 at the MT Shore Facilities. The package included the delivery, installation, welding and subsequent cutting and removal of the chamber from the Shore Facilities. Despite the challenges involved in moving the oversized test chamber through the grounds of an asset in operation due to the complex terrain and space constraints and its subsequent installation and removal, the work was completed impeccably thanks to close coordination between CPC-R and STARSTROY professionals.

The period between 2012 and 2016 saw works for hooking up and bringing on stream the facilities constructed by Trust Koksokhimmontazh JSC at the Tank Farm (TF) and the CPC-R Marine Terminal Shore Facilities (SF). It was a package of construction and procurement works for the TF and SF Onshore Facilities as well as works

for connecting and filling six newly installed 100,000 m³ floating-roof vertical steel tanks (FRVST 100,000), including: complex installation of a tank junction assembly on the DN1400 process pipeline; connection of a new loading line at SPM-3 to the existing DN1000 lines; connection of new pipelines to the process pipelines in service, including the tank water-jet lines and closed-drainage lines; relocation of a section of the Tank Farm fire water main; and connection of a new fire water circuit to the lines in place. All those works were conducted while the site was in operation on a very tight schedule (during scheduled shutdowns and in between the tanker loading periods).

During 2015, working in coordination with the companies Siemens and Flowserve, within the CPC Oil Pipeline System Expansion Project, STARSTROY completed a package of works and services for upgrading

2015 saw the completion of work under the Programme of Replacing the Leaky Ball Valves at the PS and the Linear Portion of the CPC Oil Pipeline System.

We would like to single out the work for replacing the mainline pumps' pipes at A-PS-4A, A-PS-5A and PS-2 as performed by STARSTROY for Flowserve in 2016. Thanks to the expertise and experience of its specialists as well as its numerous state-of-the-art tools, STARSTROY succeeded in completing these works using mobile equipment for thermal treatment of metal in situ on the mainline pump (MP) units. This saved the customer extra expense and downtime, which could have occurred if the pumps had been sent to the manufacturer for repair.

As a part of increasing the throughput of Tengiz-Novorossiysk Oil Pipeline System, a unique project was implemented at the Astrakhanskaya

THANKS TO THE HIGH PROFESSIONALISM
OF ITS STAFF, STARSTROY SUCCEEDED IN
COMPLETING THE WORKS ON TIME AND
WITH HIGH QUALITY

the pumps and replacing the rotors at the Kropotkinskaya PS and the Komsomolskaya PS. Within this project, STARSTROY, by its own efforts, performed piping of mainline pumps at the Kropotkinskaya PS, including connection of suction and delivery headers. Thanks to the high professionalism and extensive experience of its technicians, STARSTROY succeeded in completing the works well and on time, achieving unparalleled accuracy, well above the requirements of the regulatory technical documentation applicable in Russia. To make sure the flanges were aligned and parallel, the Flowserve specialists used a micrometer and laser measuring instruments when accepting the works.

PS of the Central Region in 2017 to improve the housing's inner chamber on mainline pumps NM 7000/210 (A, B, C and D), as followed by the installation of higher-performance rotors (Q-9502 m³/hr) on mainline pumps B and D. The upgraded units successfully passed a trial run and were accepted into service.

The extensive practical experience at CPC's facilities and high qualification of STARSTROY's workers and engineering technicians were the decisive factors in selection of our company as a partner by enterprises, such as BÜCHEN LLC and LOTIS LLC, which perform FRVST 100,000 cleaning and degassing at the CPC Marine Terminal Tank Farm for retrofitting and upgrading.



STARSTROY STAFF IS
PERFORMING TASKS OF
ANY COMPLEXITY AT
CPC'S FACILITIES

Within the Expansion Project, our company executed a full package of commissioning and start-up works for new mechanical and electrical equipment, instrumentation and automated control systems. The works included logistic tasks, which were successfully completed within the prescribed time limits.

from Tengiz to Novorossiysk for a period no longer than 3 days. The works were performed at virtually all pump stations and the Marine Terminal around the clock, which necessitated the mobilization of all resources and manpower of our company. That was undoubtedly an all-out effort and trial by fire for all the

THE DESIGN OF CPC'S FACILITIES SUBJECT TO EXPANSION USED CUTTING-EDGE GLOBAL TECHNOLOGY

The design of CPC's facilities subject to expansion used cutting-edge global technology and equipment. To be sure, before commencing the commissioning and start-up, we had to provide additional training to personnel at the training centres of the equipment vendors. We also procured additional instruments and tools to configure the process equipment.

It should be noted that the sites were hooked up during the scheduled downtimes of the entire oil pipeline

personnel deployed. Leveraging the relevant expertise of our specialists, our company managed to complete construction, commissioning and start-up as well as the site connections well and on time, which was highly appreciated by the CPC management. For completing the works in a timely and quality manner, we were greatly commended by the CPC and Expansion Project management.

The jobs completed jointly by the CPC-R and STARSTROY specialists included, but were not limited to,

the following activities, which were planned, prepared and successfully carried out: cutting holes in the main pipeline with a wall thickness greater than the maximum listed in the manufacturer's cutting equipment specifications; arranging and carrying out the oil removal from the PS process pipelines with large contents of heavy oil deposits using mobile steam units (MSU) as well as preparing appliances to remove paraffin from hard-to-reach places; pumping out over 10,000 m³ of oil from a section of the Tengiz–Novorossiysk Oil Pipeline when PS-3 is brought on stream, using both in-house mobile pump units (MPUs) and MPUs made available by Transneft PJSC; using TDW isolation devices when connecting PS-5 and PS-2; arranging for oil to be dumped into lined ground sumps and into quick-erect tanks and then to be re-injected back into the pipeline; STARSTROY specialists' developing engineering solutions and arranging for improvements to be made by the manufacturer to sampling-device (SD) sealants designed for the pipeline leak-proofing in complicated sections; performing the re-piping of stainless steel drainage lines using argon-arc welding; and providing fast response

to compensate significant pipeline shifts after cuts.

Over the period of their involvement with the CPC's expansion project, our specialists mastered new solutions and equipment as well as state-of-the-art procedures in construction, commissioning and start-up with similar equipment. What is more, STARSTROY acquired good hands-on experience and knowledge that will help us provide maintenance for CPC expansion targets at a high level of professional excellence.

Besides the works related to the Expansion Project, STARSTROY was regularly engaged to perform complex construction and installation works at the PS and CPC MT sites in operation. The replacement of leaky ball valves at the gate valves of the MT Shore Facilities' loading lines can probably be considered to be the most shining example of those activities. The precision installation of oversized gate valves using a 200-tonne crane in confined spaces

on the site in operation and under time constraints while there is no tanker loading—the successful completion of the above works demonstrates once again STARSTROY's willingness to accept maintenance, repair and retrofitting tasks for CPC's facilities, whatever the challenges.

spill response facilities, and well-equipped workshops for repair of sophisticated mechanical process equipment. The hubs of the Tengiz–Novorossiysk Pipeline System have production support depots, which include, without being limited to, residential complexes.

STARSTROY TODAY IS A STRONG, INDEPENDENT AND SELF-SUFFICIENT ENTITY

STARSTROY today is a strong, independent and self-sufficient entity. All business units of STARSTROY have certified metrological and electrical laboratories, Emergency Response Centres fully manned with skilled personnel and fully furnished with state-of-the-art emergency

Taking into account the substantial experience gained by STARSTROY in carrying out tasks in the context of the CPC Expansion Project, STARSTROY is willing and prepared to take part in the implementation of the Debottlenecking Programme (DBNP) for the oil pipeline system of the Caspian Pipeline Consortium. ●



CPC PRESS SERVICE
THE CONTENT FROM THE NOVOROSSIYSKIY
RABOCHY [NOVOROSSIYSK WORKER]
NEWSPAPER IS USED

UP CLOSE AND PERSONAL WITH CPC

NOVOROSSIYSK ADMINISTRATION OFFICIALS, DEPUTIES OF THE STATE
AND CITY DUMA AND JOURNALISTS HAVE VISITED A CPC
MARINE TERMINAL

TO COMPLETE THE PICTURE

The guests were taken on a tour of the production facilities by the Consortium's General Director Nikolay Gorbunov himself. "This is not the first time that we have arranged such a tour because we believe that the locals should be

aware of our operation as well as CPC's procedures and equipment. After all, lack of information is fertile ground for fantasies and rumours," he said.

At the CPC Operations Control Centre, the guests were briefed on the operation of the Tengiz-Novorossiysk

oil pipeline and got acquainted with the SCADA system. 145 thousand sensors are used to monitor the parameters and to control all stages of oil transportation and loading processes.

The delegation also had a look at the Tank Farm of the Marine Terminal—CPC's

flagship field asset, sprawling over an area of 160 hectares of mountainous terrain. Ten oil storage tanks, 100 thousand m³ each, are installed with large process and seismic safety margins. The tanks have so-called floating roofs with a tight-fitting rigid secondary seal, which suppress 99 % of oil vapour emissions as compared with conventional fixed roofs.

"FURRY INSPECTORS"

The visitors commented that the locations were perfectly clean and there were no smells. CPC specialists said that they often see here "furry inspectors," such as hares, foxes, owls circling inside the tanks over the floating roofs, nesting swallows, and others. The fact that the wildlife is not afraid of living close to a major field asset speaks volumes.

In the course of the walkabout, the guests were told about the package of process solutions used by CPC, best practices in occupational health and safety, fire safety and environmental protection, and the Operational Environmental Monitoring Programme being implemented by the Company, which involves all types of monitoring over environmental components' quality, possible pollutants, the human and industrial impact on the ecosystem.

THE GUESTS WERE TAKEN ON A TOUR BY CPC GENERAL DIRECTOR NIKOLAY GORBAN HIMSELF

INTERNATIONAL RECOGNITION

Since the oil pipeline was brought on stream, the CPC Marine Terminal has been operating in full compliance with the health, safety and environmental laws applicable to such facilities. Built using state-of-the-art processes and equipment, it won the Oil Terminal international award for achievements of oil terminals in Russia, the CIS and Western Europe in the Grand Prix, Environmental Safety, Best Process Engineering, Reliable Partner and Stability categories.

CPC's outstanding environmental track record is evidenced by its high environmental responsibility ranking by the World Wide Fund for Nature (WWF). Based on its 2018 performance, CPC was named the No. 1 Russian oil and gas company in the Minimum Environmental Impact category.

GOOD PRACTICES

CPC closely monitors the environmental situation not only around its locations, but also across the company's footprint in general. That is why the Consortium today is funding the research and development projects to further improve the oil transportation and transshipment processes across the board, including the area of responsibility of its subcontractors—the oil loading fleet's representatives.

"At CPC, I was struck both by the scale and attention to detail in all crude transport processes. Novorossiysk is actively implementing standards for municipal services under the Smart City programme. We are at the starting point, and here everything is already in place. Such sharing of best practices is very important," said Svetlana Kalinina, First Deputy Mayor of Novorossiysk, after the tour.



AUTHOR
PAVEL KRETOV

THE OUTCOME OF MONUMENTAL WORK

ON DECEMBER 28, 2009, VLADIMIR PUTIN, THE CHAIRMAN OF THE GOVERNMENT OF THE RUSSIAN FEDERATION, LAUNCHED TRANSNEFT'S ESPO-1 IPS FACILITIES INTO OPERATION FROM THE DISPATCHER CONTROL PANEL AT THE KOZMINO PORT



Russian oil people were looking forward for commissioning of the first phase of the Eastern Siberia-Pacific Ocean Pipeline System (ESPO PS): Russian "black gold" got direct access to the Asia-Pacific markets.

"For the former Soviet Union, such a project would have been monumental... People worked under extremely difficult conditions: in impenetrable taiga, with no infrastructure, with no power supply. And now all of it has been made. It has been created by talent and labour of engineers and workers. A big day indeed... My congratulations to you! This is an excellent New Year's gift to Russia," said Vladimir Putin at the ESPO-1 PS launch ceremony.

NORTHERN TURN

According to the initial design, the oil pipeline should have passed along the Trans-Siberian Railway, around Lake Baikal, to emerge at the Perevoznaya Bay in the area of the city of Nakhodka. However, the Kozmina Bay was afterwards assigned to be the final point of the mainline. Factors that contributed to selection of the new place were the depth sufficient for mooring of vessels, the lack of islands or shallow waters, and the presence of two



high capes to protect the bay against southern and south-western winds.

The linepipe of the oil pipeline underwent even more drastic changes. In April 2006 at the meeting in Tomsk with heads of the regions of the Siberian Federal District, Vladimir Putin supported environmentalists and the public who advocated for transfer of the oil artery from Baikal.

This resulted in the route extension of almost 400 km—at its northernmost point the route reached Olyokminsk of Yakutiya and entered the territories little-developed by human, with severe climate, challenging logistics, and virtually total lack of roads and power transmission lines. Over a quarter of the entire route was occupied by hard rocks, and one fifth—by permafrost. The oil pipeline crossed over 530 water barriers, including the Ust-Ilimsk Reservoir and the Rivers Lena, Aldan, and Angara.

CHALLENGES OF THE PROJECT

The first joint of the ESPO PS was welded on April 28, 2006, in the area of the town of Tayshet in Irkutsk Oblast, in two days after the decision to change the route



CONSTRUCTION OF A TANK FARM
OF THE KOZMINO SPECIALIZED OIL
SEA PORT IN THE FAR EAST



NIKOLAY GORBAN,

GENERAL DIRECTOR OF CPC, IN 2007 TO 2009—DEPUTY GENERAL DIRECTOR OF CHERNOMORTRANSNEFT JSC:

« THE ESPO-1 PROJECT FOR THE CHERNOMORTRANSNEFT STAFF WAS A SERIOUS TEST FOR PROFESSIONALISM AND HUMAN QUALITIES. ALL PEOPLE WERE IN FULL VIEW—SOME ROLLED UP THEIR SLEEVES AND SET TO THE HARDEST WORK, SOME KEPT ON BEGGING TO GO HOME FROM THE VERY FIRST DAYS.

FOR ME, THE ESPO PROJECT STARTED IN THE TOWN OF ZHELEZNOGORSK IN IRKUTSK OBLAST AND CONTINUED IN THE MUTINO VILLAGE ON THE LENA RIVER, THE TOWN OF ALDAN, THE VILLAGES OF BOLSHOY NIMNYR AND BOLSHOY KHATYMI, THE TOWN OF NERYUNGRI, AND TYNDA. I REMEMBER WITH A SENSE OF GRATITUDE AND APPRECIATION ALL COLLEAGUES WHO WORKED SHOULDER TO SHOULDER AND PERFORMED THE SET TASKS, SOMETIMES IN EXTREMELY HARSH CLIMATIC CONDITIONS AND ON A TIGHT SCHEDULE



had been made. Not to waste time, surveyors were performing the re-routing in new sections simultaneously with construction works in sections unaffected by plan revisions (Tayshet–Ust-Kut and Tynda–Skovorodino).

Builders faced major hurdles in the territory of Yakutiya. Over 15 hundred km from Ust-Kut to Aldan were completely isolated from the outside world: equipment, vehicles,

and construction materials could be delivered here only by the River Lena in short navigation periods—only four months a year. The period from June to October 2007 saw a transport operation on an unprecedented scale, during which over 1.5 million tonnes of cargo was conveyed by the river to the place of construction and installation works. To do so, not only the entire local river fleet was launched, but vessels

put into preservation were urgently repaired as well. Barges made trips along the Lena's dredged channel around the clock, guided by luminous signs when in darkness.

The Transneft management carried out total inspection of the project at the end of 2007. Due to the identified deficiencies of construction companies, Transneft discontinued partnership with some contractors and mobilized its own subsidiaries.

VYACHESLAV SERGEYEV,

HEAD OF THE CPC QUALITY CONTROL SERVICE, IN 2007 TO 2009—DEPUTY HEAD OF THE KRASNODAR DISTRICT OIL PIPELINE MANAGEMENT OFFICE OF CHERNOMORTRANSNEFT JSC:

« TO THIS DAY, I REMEMBER THE EXACT DATE WHEN I FIRST ARRIVED AT CONSTRUCTION OF THE ESPO OIL PIPELINE—SEPTEMBER 4, 2007. I LEFT KRASNODAR WEARING A SHIRT WITH SHORT SLEEVES, WHILE IN YAKUTSK IT WAS COLD, WITH SNOW PELLETS FLYING AROUND. AT THE BEGINNING OF CONSTRUCTION, SO AS TO ASSIST THE OVERWHELMED RAILWAY PERSONNEL, TRANSNEFT'S SUBSIDIARIES HELPED TO DELIVER PIPES TO THE ROUTE, WHICH WERE ARRIVING BY SEA VIA THE PORT OF NAKHODKA AND FROM FACTORIES SITUATED IN THE WESTERN PART OF THE COUNTRY. A LOT OF PIPE TRUCKS WITH DRIVERS AND MECHANICS FROM OTHER REGIONS WERE MOBILIZED. WE ALSO HELPED TO STAFF THE VEHICLES WITH EXPERIENCED DRIVERS AT VOSTOKNEFTEPROVOD LLC, NEWLY ESTABLISHED AT THE TIME, WHICH WAS BRINGING SAND BY DUMP TRUCKS FROM PITS TO THE OIL PIPELINE ROUTE FOR ARRANGEMENT OF A SOFT BED FOR PIPES



Each of them was assigned a specific section of the ESPO route to its area of responsibility: engineers, transport workers, and employees of line operation, maintenance and repair services performed the work that contractors sometimes failed to do, making things right at the most critical moments. And it paid off: the builders managed to achieve the rate of 5.5 km of the oil pipeline per day!

LENA RIVER CROSSING

The Lena crossing became one of the most challenging facilities on the linepipe of the oil pipeline. Geological conditions required replacement of the initially planned tunnel laying method with the conventional one—trench laying. Because of the river's swift current, they decided to build the crossing in winter as pontoons with excavators installed thereon could be

just washed away in summer. The full-capacity trenching began at the end of November 2008 when ice on the Lena became strong. Excavators were equipped with special extended booms, 18 to 22 m each, made specifically for work at this underwater crossing.

The crossing was built using pipes made of extra-quality high-strength steel with a wall thickness of 29 mm and reinforced insulation. A 1600-metre culvert was installed through the Lena on April 1, 2009.

ALEKSEY PELIPENKO,

REGIONAL MANAGER OF THE CPC MARINE TERMINAL, IN 2009—DEPUTY MANAGER OF PUMP STATION 9 OF THE ESPO-1 PS:

« PS-9 IS SITUATED IN THE KIRENSKY DISTRICT OF IRKUTSK OBLAST, NOT FAR AWAY—BY NORTHERN STANDARDS—from the TALAKAN FIELD. THIS ISOLATED LOCATION DETERMINED THE STATION'S WORK UNDER A ROTATION SYSTEM: EMPLOYEES CAME HERE FROM ACROSS THE COUNTRY—from KRASNODAR TO IRKUTSK. CONSIDERING THE STAGE-BY-STAGE DRIVING OF THE PIPELINE SYSTEM UP TO THE RATED CAPACITY, THE ESPO-1 PS STATIONS HAD SOME DIFFERENCES IN THE EQUIPMENT COMPOSITION, THAT IS WHY, IN ORDER TO ASSIST THE "ROOKIES," A DIGEST WITH ALL CHARACTERISTICS AND DESCRIPTION WAS PLACED ON THE CORPORATE WEBSITE. BUT THE MOST MEMORABLE THING FOR ME WAS A SPECIAL ATTITUDE OF THE TRANSNEFT EMPLOYEES WHO OPERATED THE ESPO-1 PS TO THE SERVICE DRIVEWAY. THIS, SEEMINGLY NON-MAJOR, FACILITY WAS CARED ABOUT AS SERIOUSLY AS ABOUT THE MAIN EQUIPMENT. IN WINTER, IT WAS CLEARED OF SNOW; IN SUMMER, GRAVEL WAS ADDED TO SUBSIDED AREAS; IN SPRING, BRIDGES WERE SECURED AGAINST FLOATING ICE AND FLOOD. ESSENTIALLY, THE ESPO SERVICE DRIVEWAY WAS A REAL ROAD OF LIFE, WHICH PROVIDED SUPPLIES TO ALL PUMP STATIONS LOCATED IN THE HARD-TO-REACH AREA 25 HUNDRED KM LONG

**FROM ONE FACILITY TO ANOTHER ONE**

The first site facility commissioned within the ESPO project was Tayshet Source Pump Station in Irkutsk Oblast. It was fully ready in September 2008—benefiting from the favourable location of the construction site: close by passed a railroad that was used to deliver vehicles and equipment.

Much harsher were the conditions under which the Talakan PS situated in Yakutiya was built. The impassable period between seasons: communication with the outside world for most of the year was ensured by air transport; bitter cold in winter; dramatic temperature differentials in spring and in autumn. But against



SPECIAL EXCAVATORS WITH A BOOM LENGTH OF 18 TO 22 M EACH WERE USED IN CONSTRUCTION OF A LENA RIVER UNDERWATER CROSSING OF THE OIL PIPELINE



ROMAN IGNATENKO,
SHIFT SUPERVISOR OF THE KROPOTKINSKAYA PS, IN 2007 TO 2009—AN EMPLOYEE OF CONSTRUCTION SITE OFFICE NO. 2 OF THE ESPO-1 PS:

« I HAPPENED TO WORK AT CONSTRUCTION SITES FROM THE RIVER ALDAN TO THE TOWN OF NERYUNGRI. I TOOK PART IN ALL PACKAGES OF SUPERVISION OVER CONSTRUCTION AND INSTALLATION WORKS, INCLUDING WELDING AND INSTALLATION OPERATIONS ON THE LINEPIPE OF THE OIL PIPELINE, INCLUDING UNDERWATER CROSSINGS, LAYING OF CORDUROY ROADS, ARRANGEMENT OF SERVICE DRIVEWAYS, CONSTRUCTION OF OVERHEAD POWER LINES AND ANTENNA MAST STRUCTURES; I ALSO WAS INVOLVED IN HYDROSTATIC TESTS AND IN DETECTION AND ELIMINATION OF PIPELINE DEFECTS.

THE ENVIRONMENT WAS SEVERE—IN TAIGA AND MARSHES, IN RAIN, SNOWSTORMS, AND THE COLD DOWN TO MINUS 53 °C.

THE CONSTRUCTION PROJECT INVOLVED COLOSSAL HUMAN AND TECHNICAL RESOURCES, INCLUDING FOREIGN ORGANIZATIONS, WHICH WORKED AROUND THE CLOCK IN THE AREA FROM THE LENA RIVER TO THE SKOVORODINO VILLAGE. AND WE FELT AT ALL TIMES THAT EVERYONE IS ON THE SAME BIG TEAM



A RAILROAD RACK IN SKOVORODINO

all odds the station was commissioned on time—in autumn 2009.

A UNIQUE COMPLEX

The Far East saw deployment of another colossal construction

project from May 2008. On the shore of the Sea of Japan, Transneft was erecting the largest marine oil transshipment terminal in the region—the Kozmino specialized oil sea port.

Works were carried out at sites with challenging geology: rocky soil had to be blasted, drilled, and destroyed by special hydraulic breakers. Almost 2 million m³ of soil were moved during construction.

Sometimes, the works were performed in areas with a slope angle up to 45°, and then vehicles were secured against rollover with anchors.

The shore witnessed no fewer difficulties. For instance, in order to build shore facilities and to rig berths, hundreds of piles 1420 mm in diameter and up to 75 m long were driven into the bottom of the bay.

At the first stage, oil had to be delivered to the port by rail, which is why the Company also had to master the construction of the appropriate infrastructure. Skovorodino became a home to an oil loading station with a double-service railroad rack, where crude was transhipped to tank cars and dispatched to Kozmino. To receive rolling stocks, railroad loading racks and a fully fledged station, Gruzovaya, with 12 access ways were built 20 km from the oil port. Arrangement of tracks included grading operations over 26 km in total length.

Transneft finally obtained a one-of-a-kind facility: whatever can be faced in a pipeline transport system, from a railroad to marine berths, was concentrated at one site. Oil from the loading rack site is delivered to an oil tank farm via a 23-km pipelines and from there flows by gravity, without using pump units, due to a difference in elevations.

A ROUTE IN DEMAND

The oil port was completely built in record six months. Construction of the entire phase I of the Eastern Siberia–Pacific Ocean main oil pipeline, including the linepipe of 2,694 km from the Tayshet Source Pump Station to the Skovorodino PS with seven pump stations between them, was finished in 2009.

The launch and evolution of the pipeline system started active development of new oil fields in Irkutsk Oblast and in the Sakha Republic (Yakutiya). These are the Talakan, Verkhnechonskoye, Danilovskoye,

Markovo, Tersko-Kamovskoye, Dulisminskoye, Yarakta, Zapadno-Ayanskoye, Srednebotuobinskoye, and Taas-Yuryakh fields. In 2016, the ESPO-1 PS transported 58 million tonnes of oil, about a half of which was oil from the fields of Eastern Siberia.

WHILE ISSUE WAS IMPOSED

ON 27 NOVEMBER 2019, TRANSNEFT BROUGHT THE ESPO PIPELINE SYSTEM TO ITS MAXIMUM CAPACITY. AN OFFICIAL CEREMONY WAS HELD DURING A TRANSNEFT BOARD MEETING IN MOSCOW WITH A LIVE TV-LINKUP WITH BRATSK AND KHABAROVSK WHERE DISPATCHER CONTROL CENTERS OF PIPELINE SECTIONS ARE LOCATED AND THE PORT OF KOZMINO, THE TERMINAL POINT OF THE ESPO PIPELINE SYSTEM. RUSSIAN ENERGY MINISTER ALEXANDER NOVAK AND TRANSNEFT PRESIDENT NIKOLAY TOKAREV GAVE THE COMMAND TO START UP NEWLY-BUILT PUMP STATIONS, WHICH ALLOWED ESPO-1 TO BE BROUGHT TO THE MAXIMUM CAPACITY OF 80 MILLION TONS AND ESPO-2 TO 50 MILLION TONS OF CRUDE OIL PER ANNUM



AUTHOR
PAVEL KRETOV

SAFETY DRILL

CPC CONDUCTS AT LEAST 10 MAJOR
OIL SPILL RESPONSE AND FIRE
DRILLS EVERY YEAR

These large-scale drills make it possible to perform a comprehensive assessment of the preparedness of the CPC pipeline operation units, the repairmen, Safety and Security Function and the operations control personnel to respond to contingencies.

IN KALMYKIAN STEPPES...

At the end of August 2019, the Iki-Burul District witnessed a Comprehensive Joint Practical Exercise (CJPE) of the emergency response forces of CPC's Central Region and the Chief Directorate of the Ministry of Emergency Situations (EMERCOM) of the Russian Federation for the Republic of Kalmykia. The exercise was observed by Batu Khasikov, Acting Head of the Republic.

The exercise involved the personnel of CPC's Central Region, emergency

response contractors, the authorities, and the forces of the regional subsystem of the Unified State Emergency Prevention and Response System for the Republic of Kalmykia. In total, some 300 persons and over 60 vehicles were deployed.

CPC's plans for such drills always factor in the Russian environmental laws and regulations. A full-scale assessment of personnel readiness is predicated on a comprehensive range of worst-case emergency scenarios being simulated. For example, according to the drill protocol for Kalmykia, the PS-3 Shift Supervisor receives a main oil pipeline "leak" alert from the Supervisory Control and Data Acquisition (SCADA) System. An operator at the CPC Operations Control Centre in Novorossiysk simulated the shutdown of the pump stations, remotely

isolated the emergency mainline section presumed to be affected by the accident and sent out mobile units to the emergency area. Upon their arrival at the location, the response teams discovered an "oil slick spreading over the terrain towards the river Manych."

The incident was reported to the administration of the Republic of Kalmykia and those of the municipal entities, the CPC emergency response contractors, supervision authorities, etc.



THE EXERCISE IN KALMYKIA WAS OBSERVED BY BATU KHASIKOV, INTERIM HEAD OF THE REPUBLIC AT THE TIME



The republican Emergency Prevention and Response and Fire Safety Commission sprung into action.

Practical measures were worked out to stop the leak on the oil pipeline and to contain the oil spill, including by setting up containment booms, building embankments, and using temporary tanks, dikes, retaining walls, spaying sorbent, as well as to gather oil and contaminated soil. The exercise also included an operation to evacuate the "victims," to provide medical assistance to them, and to take and test soil samples for petroleum products.

"I am grateful to CPC that there has never been a real-life emergency like

that; this is evidence of the high professionalism and responsible attitude of CPC's team and its contractors," said Batu Khasikov.

"Thanks to the well-coordinated and concerted effort of the members of the international Consortium and the EMERCOM specialists, we have once

again made sure that all the necessary measures are in place as to protect the local community and the environment," said Anatoly Nosachyov, Deputy Head of the Chief Directorate of EMERCOM of Russia for the Republic of Kalmykia for the Public Fire Service, when commenting on the outcome of the exercise.

"We run drills every year either in the Republic of Kalmykia or in Astrakhan Oblast. All personnel know their roles well and have whatever machinery, equipment and tools they need

EXERCISES SIMULATE A COMPREHENSIVE RANGE OF CONTINGENCIES





to accomplish their tasks,” emphasized Pavel Pastushkov, Oil Pipeline’s Liner Portion Maintenance Manager for CPC’s Central Region.

...AND IN STAVROPOL KRAI

A major Comprehensive Joint Practical Exercise for the forces of CPC’s Western Region and EMERCOM of Russia for Stavropol Krai were held within the Trunov District of Stavropol Krai in September. The event involved some 150 specialists and nearly 50 vehicles, including a helicopter.

According to the drill protocol, CPC’s Supervisory Control and Data Acquisition (SCADA) System detected a steady depressurization in a section of the oil pipeline where it crosses the Yegorlyk River underwater. A CPC mobile security unit that reached the location discovered a simulated oil spill due to an illegal tap at km 1135 of the pipeline, “with a fire and a partial oil spill to the river.” According to the communication protocol in place, a report on the simulated emergency was transmitted to the Duty Officer at the Chief Directorate of EMERCOM

of Russia for the Stavropol Krai, to the regional and local governments, supervision authorities, and the police.

The exercise included practical oil spill response drills. The emergency response teams practised oil pipeline leak stopping procedures, simulating reinjection of oil into the pipeline system; laboratory specialists took soil samples and performed their rapid tests for petroleum and petroleum products.

Concurrently, the EMERCOM response team extinguished the simulated fire, and the officers of the Central Internal Affairs Directorate (GUVd) of Stavropol Krai apprehended the simulated criminals. The drill participants evacuated and provided medical assistance to the “victims.”

“We showed the capabilities of coordination between the company and the Unified State Emergency Prevention and Response System of Stavropol Krai in responding to an oil spill on land and water. CPC runs such major drills on an annual basis across its entire footprint,” commented the event Igor Ignatkin, Senior Engineer

WHEN HELD REGULARLY, CJPEs IMPROVE THE AVAILABILITY OF RESOURCES AND READINESS OF MANPOWER FOR EMERGENCIES



for Civil Defence, Emergencies, Oil Spill Response and Fire Safety.

Igor Kristalinsky, Head of the Fire Service at the Chief Directorate of EMERCOM of Russia for Stavropol Krai, said:

“Such drills improve the availability of resources and readiness of manpower for emergencies. We learn valuable lessons in emergency response and practise interagency coordination.”

“Occupational safety and safe equipment operation are key areas of focus for the Consortium,” summed up Aleksey Dmitryakov, Operation and Maintenance Manager in CPC’s Western Region. “And we do everything to confine any and all incidents to the protocol for our exercises and drills.” ●

AUTHORS

ELENA MEDVEDEVA,
CHIEF ECONOMIC SECURITY SPECIALIST- OF CPC SF
(SECURITY FUNCTION)

GRIGORY SENOYEDOV,
DEPUTY HEAD OF CPC SF

ALEKSANDR APARIN,
SECURITY SYSTEMS COORDINATOR OF CPC SF

TIME TO INNOVATE

SUCCESSFUL ACCOMPLISHMENT OF THE TASKS ASSIGNED
TO THE SECURITY FUNCTION IS DIRECTLY CONTINGENT
UPON THE EFFECTIVE USE OF INNOVATIVE APPROACHES AND
ADVANCED TECHNOLOGY

SMART SYSTEM

A year ago the economic unit of CPC SF announced the introduction of novel policies for contractor appraisal by implementing an Automated Contractor Appraisal System (AAS). The system is designed to improve the utilization of time and resources of auditors by processing a large data array as fast as possible and in real time and to minimize the human factor in decision-making and human error.

The philosophy behind the AAS calls for configuring the process of data exchange between different operating systems and software suites to maximize visualization of content and settings, including archives, for routine automated monitoring to give an early warning of risks and threats, as well as for rating performance of the CPC’s counterparties.

In October 2019, the CPC SF staff presented to the concerned

departments a stable version of the AAS developed in compliance with the company’s requirements and fully incorporating the contractor appraisal procedure in place. Interviews and batteries of tests were conducted to troubleshoot the system. The AAS processes are being configured and adjusted to bring it on line in a short time.

While reducing the contractor vetting period and cutting the





THE FULL FUNCTIONALITY OF THE SECURITY CCTV CAMERAS INSTALLED AT THE COMPANY'S FACILITIES, VIDEO FOOTAGE AND SECURITY ALARM AND ACCESS CONTROL EVENT LOG WILL BECOME AVAILABLE AND ACCESSIBLE AT THE CPC'S MOSCOW OFFICE



consumption of technical resources used in the procedure, the AAS will also make it possible to retire a large quantity of hardcopy records and go paperless in expert assessment. This will reduce paper consumption by at least 30 reams per year and email traffic by approximately 18 GB.

The number of audits is increasing steadily: 506, 841 and 911 contractors were audited in 2017, 2018 and 9 months of 2019 respectively. The launch of

DBNP is expected to increase the number of audits by at least 30%. This makes the AAS all the more relevant.

BOTH MONITORING AND MANAGEMENT

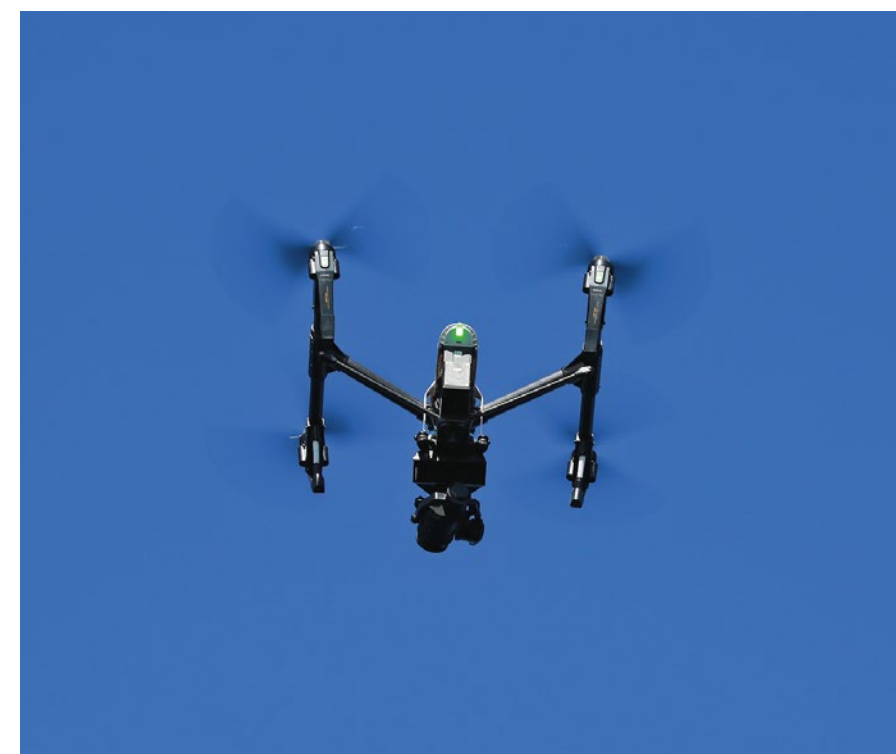
An innovative approach is also implemented in physical security and anti-terrorist protection of CPC's facilities. It enables to build an effective management decision-making

system. A real-time situation reporting by facilities and the line crude oil transmission pipeline is the primary stage of unbiased decision-making. All reports must be accurate and comprehensive.

A tool for meeting these requirements is expected to be provided by a Specialized monitoring centre tasked with collecting, processing and disclosing the necessary information in response to enquiries

from management. The security function is implementing a project to set up such a centre at CPC office in Moscow.

The project concept calls for an automated supervisory control and data acquisition system to be set up based on a special software and hardware package to source and visualize data. The system will comprise a core to run the monitoring centre's infrastructure and separate dedicated modules to



process information about various aspects of the company's in-house operations.

The primary module implemented concurrently with the core is designed to interface with the CPC's integrated oil pipeline security system (IOPSS). The module will give the Moscow office direct access to all feeds from

and make managerial decisions on safety and anti-terrorist security, while promptly responding to the current situation in real time.

ALONG THE WAY OF PROGRESS

Innovative approaches are also embraced in the Single Physical Security Contractor Adoption Strategy

IMPLEMENTATION OF ADVANCED PROCESS DESIGN SOLUTIONS IS ANTICIPATED

the security CCTV cameras in place at the CPC's facilities.

Display of graphics, texts and security camera feeds will be accessible through a user-friendly, intuitive interface. The main interface will feature interactive maps with HD site plans. Touchscreens will be available.

The monitoring centre will have workstations for IOPSS operators and users equipped with video consoles and videowalls. The company's management and authorized personnel will be able to use them to supervise the situation

and Physical Security Standard being developed by CPC SF. The Strategy provides for harmonization of the approaches implemented and use of best practices in physical security, optimization of physical security costs and release of some assets to explore new areas. Advanced process design solutions are anticipated to be implemented by introducing new safety/security systems, unmanned aerial vehicles, infrared thermography and other next-generation technologies, robotic systems and much more. ●

AUTHOR
PAVEL KRETOV

WHEN EVERYBODY IS A WINNER

IN MID-SEPTEMBER THE REPUBLIC OF
KALMYKIA HOSTED THE 8TH SAFETY DAY
OF THE CASPIAN PIPELINE CONSORTIUM



The events were attended by General Director of CPC Nikolay Gorban, Head of the Republic of Kalmykia Batu Khasikov, Chairman of the Government of the Republic Yuri Zaytsev, heads of regional ministries, representatives of the Consortium shareholders, and employees of the Company and its contractors.

UP TO GLOBAL STANDARDS

"The high Health, Safety and Environment performance of the Consortium shows that we are moving in the right direction, and we'll keep developing our systematic work in this area," said General Director of CPC Nikolay Gorban at the opening ceremony.

"Today is indeed a very important and bright festival, and I'm proud that we host it here, in Kalmykia. I want to thank our friends and partners—CPC—for giving pride of place to

such a crucial aspect as safety," noted Head of the Republic of Kalmykia Batu Khasikov in his speech.

Commercial Manager of Chevron Neftegaz LLC Nikolay Abdulov welcomed the Safety Day participants on behalf of the shareholders. He emphasized that all production successes of the Consortium are based on the highest standards and the world's best practices in industrial safety.

During the opening ceremony of the event, the audience was also addressed by other officials, including Oleg Kosyrev, President of the "Etalon" Association for the Advancement of Health and Occupational Safety. He reminded that CPC is a partner of the Russia Health and Safety Week (RHSW) and—on the instruction of the Minister of Labour and Social Protection of the Russian Federation Maksim Topilin—awarded Nikolay Gorban a diploma for the Company's active participation in the



RSHW, for its creativity, and high contribution to the cause of safety. Head of the Association called the CPC exhibition one of the best at the AROHSW.

"GAMES OF THE ELEMENTS"

The total number of participants and guests of the CPC Safety Day was some 450 persons. Representatives of global oil and gas leaders

THE TOTAL NUMBER OF
PARTICIPANTS AND GUESTS
OF THE CPC SAFETY DAY WAS
SOME

450
PERSONS

arrived in Kalmykia—Transneft PJSC, NC KazMunayGas JSC, Chevron, Eni, KazTransOil JSC, Shell, and others.

Major activities took place at an outdoor site in the area of the Lola Village situated 23 km from Elista—the capital city of the Republic. This event was named "Games of the Elements," and what made it unique was the ethnic motif—the invited guests and participants of the Safety Day had a chance to visit a real Kalmyk khibitka, to acquaint themselves with culture of the nomadic people, to ride camels, and even to master the Kalmyks' national art of archery.

Representatives of 10 teams demonstrated their knowledge, skill and preparedness level in occupational safety in the competitive form: CPC Eastern Region, CPC Central Region, CPC Western Region, CPC Marine Terminal, KazTransOil JSC, Starstroy LLC, Private Security Company Nachin LLC, Master-Servis LLC, Lotis LLP, and Velesstroy LLC.

Traditionally, contests were organized in such fields as environmental protection, road-traffic safety, fire-fighting, risk assessment for and prompt response to potentially hazardous situations, the use



CPC SAFETY DAY:
HOW IT WAS

of personal and collective protective equipment, first-aid delivery to “victims,” and “fire” suppression.

KNOWLEDGE AND SKILL

Technical Director of CPC Igor Lisin lifted the curtain of secrecy in the organizers’ “kitchen” in development of competition tasks.

“We strive for each participant of the Safety Day to remember or learn something new while performing theoretical tasks and to put this knowledge into practice.

For instance, it happens that an employee knows theoretically how to apply artificial respiration, but has never done it, and here, in the context of our event, we give him or her such an opportunity. Or a person knows how to extinguish a fire, but has never held a fire extinguisher in his or her hands, and thanks to the contest this person has a chance to reinforce this skill in practice. And in addition, the competitive format is an important team-building factor,” he told us.

By all accounts from the representatives of the participating teams, the Safety Day organizers reached the goals they had set.

“I’m proud of the opportunity to show the skill and knowledge at the event which becomes more fascinating and ambitious year by year. We were passionate about making preparations, and the team got strong support from the management of the Western Region,” said Mikhail Zolotov, an operator of the Kropotkinskaya PS, to correspondents of CPC Panorama.

“Being occupational health and safety specialists, we train the personnel at their workplaces all the time. The Safety Days allow us to see the results of our lessons,” confided Oleg Khlystov, Senior Health and Safety Engineer for CPC’s Central Region.

The CPC Marine Terminal team showed the best result in the fair and uncompromising competition. The CPC Western Region team was awarded the second place, and the Nachin team became the third prize

winner—Nachin is a contractor that guards the facilities and the linear portion of the CPC oil pipeline.

Simultaneously with the competition programme of the Safety Day for CPC’s and contractor’s employees, training courses on safety culture and risk assessment were held for the managerial staff. The objective of these training courses was to consolidate, to an even greater extent, efforts of all the project participants in order to achieve the zero-injury goal in CPC.

POSITIVE ATTITUDE

The representatives of the CPC shareholders who attended the event expressed appreciation of the event organization, noted professionalism of the Safety Day participants, and especially emphasized commitment of the international company and all its partners to achieving high goals in health, safety, and environment.

At the closing ceremony, Nikolay Gorban presented valuable gifts and prizes to the winners and noted that there could be no losers at such competitions because everybody benefited from knowledge and skill in occupational health and safety, and the general safety level at production facilities of the pipeline system therefore increased.

Having returned to their work teams, the Safety Day participants shared their new vivid and memorable experience with their colleagues.

AUTHOR
PAVEL KRETOV

MORE LIVES SAVED

FOR MANY YEARS THE CONSORTIUM HAS BEEN SPONSORING
MAJOR MEDICAL CENTRES IN ASTRAKHAN OBLAST

For instance, CPC has been making regular donations to the Aleksandro-Mariinskaya [Alexander and Maria] Regional Hospital, the Silishcheva Astrakhan Oblast Children's Hospital, the Regional Cardiology Centre and the Rus Social Rehabilitation Centre. This year's addition to the list is Municipal Clinical Hospital (MCH) No 3 named after S.M. Kirov.

FOR QUALITY MEDICAL CARE

The Kirov Hospital is a major multidisciplinary hospital, which provides emergency, elective and high-tech medical care and has 26 clinical units. The institution serves some 75 thousand people a year.

In September 2019, CPC donated to the hospital 10 lung ventilators with respiratory minute volume monitoring, 21 patient monitors for five vital signs (oxygen saturation, non-invasive blood pressure, electrocardiography, respiratory rate and body temperature), five anaesthetic machines with an automatic breathing system, a volumeter and a monitor for oxygen and carbon dioxide concentrations and breathing system leakage.

The ceremony of donation of equipment worth in total 33 million rubles was attended by Igor Babushkin, the governor of Astrakhan Oblast, and Nikolay Gorban, CPC General Director.

Bayram-Aji Yulushev, Chief Physician at MCH No 3, thanked the Consortium's management and shareholders on behalf of the hospital's entire team for their sponsorship.

"What you bought is not just equipment; it will save lives. For our part, we promise to give it our all and provide quality medical care to the local population," he said.

The new equipment helps the hospital's staff to effectively provide continuous emergency medical care to patients with severe damages of various aetiologies, including those with acute breathing disorders, as well as to monitor the multiple vital signs of patients during major medical interventions.

Out of the 10 lung ventilators donated by CPC, the hospital gave four to the intensive care unit and two to each of the neurosurgery, cardiology and neurology units.

"For our unit, this equipment is a great boon. Since the beginning of this year alone, the unit has processed 2.1 thousand people, and we have done 1.3 thousand surgeries. And to be sure, these numbers require adequate anaesthetic machines and prolonged mechanical ventilators that go easy on the human body. Our old equipment was badly worn out; it required a lot of maintenance and costly

repairs," said Adil Kazimagomedov, Chief of Purulent Surgery at MCH No 3.

SMART EQUIPMENT

This year has seen progress in CPC's sponsorship of the Rus Astrakhan Social Rehabilitation Centre. As you are probably aware, the Centre provides comprehensive medical and social rehabilitation to people with locomotor

pelvic disorders, among others. And the old washing machines were supplied way back in 2001 and have been on stream twice their service lives by whatever standard you use," says Sergey Berezin, Director of the Centre.

The laundry processes at least 150 sets of bed linen on a weekly basis and workwear, coats and accessories for kitchen and physiotherapy rooms on a daily basis.

For the laundry, the Consortium purchased one 40 kg washing machine, two 20 kg machines and one 15 kg machine. The new equipment is fully automated: before, an operator had to configure water intake, heating and discharge parameters; now, the machine does all of it itself. The automatic controls even take care of optimizing the laundry powder dosage.

"The equipment has an intuitive interface and is user-friendly. The machines come with 10 factory presets and 50 user-configurable presets," says Vyacheslav Sutyurin, a process equipment maintenance engineer.

The new equipment is much quieter in operation and has a wringing function, which the old washing machines lacked.

"To be sure, technology has made great strides in twenty years! The Consortium also purchased ironing equipment, high-capacity carts and racks, which made our work easier," said Lyudmila Krechinskaya, a washing machine operator.

The only thing that remains to be said is that the Caspian Pipeline Consortium donated some 160 million rubles to support the health care of Astrakhan Oblast only in 2014 through 2018.



33 MLN RUBLES

WORTH
OF EQUIPMENT

and nervous disorders. The international Consortium donated a state-of-the-art laundry package worth 4 million rubles to the Rus Centre.

To install the new equipment, the Centre's administration had fully refurbished the laundry room, installing electrical wiring and a ventilation system of a higher capacity. Prior to re-installation, in order to prevent the decommissioning of the old equipment from affecting the patient accommodation arrangements, the staff of the Rus Centre had laid in a three-week stock of clean linen beforehand.

"The laundry equipment is in great demand at our centre because we provide rehabilitation to disabled persons with



CPC PRESS SERVICE

GROWING TALENTS

ON 29 OCTOBER THE KVN PLANET MOSCOW YOUTH CENTRE HOSTED THE FINAL GALA CONCERT OF THE “CPC FOR TALENTED CHILDREN 2019” FESTIVAL

The ceremony of award presentation to the young competition winners was attended by Yevgeny Popov, Deputy General Director of CPC, Andrew McGrahan, Chairman of the CPC-R Board of Directors, and Kaigeldy Kaibuldin, Deputy General Director of

CPC-K for Government Relations in the Republic of Kazakhstan. Among the dignitaries were representatives from the Consortium shareholders, the Kazakhstan Embassy in Russia, and regional governments.

In 2019, the “CPC for Talented Children” Festival marked its jubilee.

For two decades, the competition has been facilitating the choice of future profession for many young talents and the preservation of distinctive cultures and folk traditions in art. Having originated in Krasnodar Krai, it gradually expanded across the entire CPC footprint in Russia.



In its jubilee year, the Festival has gone international, being joined by young talents from Kazakhstan.

The competition, which had three rounds, was entered by over 10 thousand gifted children and teenagers, who submitted some 3000 creative entries in various categories (singing, dancing, playing musical instruments, art of declamation).

The first, submission, round was entered by children's amateur performance groups and performers from Russian areas crossed by the CPC pipeline in Astrakhan Oblast, Kalmykia, Krasnodar Krai, and Stav-

ropol Krai as well as from the Atyrau, Aktobe, Mangistau and West Kazakhstan Regions in Kazakhstan.

The entrants' performances were judged by professionals—prominent art figures, merited artists of Russia and Kazakhstan, educators,

and winners of various international competitions. The competition's second round held a series of masterclasses in each region to improve the performance skills of young talents and share best practices with their teachers. The competition's final round was for the winners of regional rounds. For several days, the children and their teachers attended masterclasses and competed with each other in their categories. They were offered a bespoke entertainment programme, including a sightseeing tour of Moscow.

THE COMPETITION WAS ENTERED BY OVER 10 THOUSAND GIFTED CHILDREN AND TEENAGERS

The final gala concert marked a high point of the “CPC for Talented Children 2019” Festival. Many in the audience went wild and did not stint on applause in expressing their sincere support for the young performers.

The competition's final round was for the winners of regional rounds. For several days, the children and their teachers attended masterclasses and competed with each other in their categories. They were offered a bespoke entertainment programme, including a sightseeing tour of Moscow.



AUTHOR
MAKHAMBET SEMBIYEV

ON-SITE CYCLING

HAVING NOTED THE STATION'S GREEN LANDSCAPING,
A VISITOR TO THE ATYRAU PS WILL FOR SURE NOTICE A RATHER
UNUSUAL FACILITY – A BICYCLE PARK

The station is large in size (13 ha), so it occurred to its management to procure bicycles for the operating personnel in 2018. Time has shown the wisdom of that decision. Cycling has improved the working environment for the personnel and their response time to situations arising throughout the PS.

When taking photos of the bicycle park for the corporate magazine, I saw Kaidar Gizatov, an Instrumentation and autotomation technician at the Atyrau PS, approaching from the tank farm by bike. And I decided to interview the colleague on the spot.

Kaidar, please tell me how the introduction of bicycles changed the life of the operating personnel.

– I can only mention the pros because there are hardly any cons. It Moving around the station is now more comfortable. If need be, we can reach the farthest point of the station in a matter of minutes. Of course, we always



comply with all safety requirements when cycling, and observing the speed limit first of all. The rules also forbid riding when it rains, snows and ices, and require you to check serviceability of your bike. To make sure the bicycles are OK, we do maintenance on them from time to time. Another factor to consider is that, besides saving time, cycling is healthy.

Talking to Kaidar prompted me to research the subject. Indeed, studies show that regular cycling is good for your heart and circulatory system, reducing the risk of heart disease. It also halves the risk of a heart attack and improves your stamina. When pedalling (even at a leisurely rate), we put the heart through its paces, training it. Regular outdoor cycling does wonders: it fills your body with oxygen and encourages you to be physically active.

Another benefit of cycling is its anti-varix effect: your blood circulates faster and prevents you from developing varicose veins.

Your lungs also get a workout: when you are exercising, they pull in more air, which means they are working to capacity. Cycling is of great benefit to smokers. Their lungs get rid of nicotine and resins, and this is a step towards kicking the habit.

REGULAR CYCLING DOES WONDERS

The bicycle makes you keep your balance and train your vestibular system. In other words, it improves your coordination. Plus riding is very good for your eyesight; it gets better and is put through its paces because you need to monitor the road situation and pay attention to every detail while riding.

As for muscles, cyclists use nearly all of them, which makes them slim and athletic. Also, such rides give you a great appetite; this is a positive sign, evidence of improved metabolism and healthier body.

This will probably make colleagues from other regions envious in a good way of the Atyrau PS staff. Because they have bicycles, which save them time when going about their allotted tasks and thus improve performance. And they also benefit from riding in the open air, becoming fit and strong.

BICYCLES ARE BECOMING INCREASINGLY POPULAR AT ENERGY FACILITIES IN KAZAKHSTAN. 200 UNITS HAVE RECENTLY BEEN ADDED TO THE TWO-WHEELER FLEET OF THE ATYRAU REFINERY, WITH 40 BICYCLE PARKS SET UP FOR THEM ON THE CORPORATE PREMISES. THE PLAN IS TO MAKE GREEN TRANSPORT AVAILABLE TO ON-SITE CONTRACTORS ANPZ [ATYRAU OIL REFINERY (AOR)] AS WELL



AUTHOR
PAVEL KRETOV

FROM AN “OIL” DYNASTY

VLADIMIR GARKUSHA HAS BEEN WORKING AS SHIFT SUPERVISOR AT THE ASTRAKHANSKAYA PS FOR NEARLY A QUARTER OF A CENTURY NOW. THE STATION WAS BUILT IN THE 1980S BY HIS FATHER, VLADIMIR GARKUSHA SENIOR

“My father was the first manager of the PS, and in that capacity he accepted its facilities from the builders,” Vladimir Garkusha recalls.

His mother, Valentina Aleksandrovna, also worked in the oil and gas sector. The family relocated regularly, moving to wherever they were needed by the booming power generating industry: Siberia, Kazakhstan, Volgograd Oblast and Komi ASSR [Autonomous Soviet Socialist Republic].

“I was born in the Checheno-Ingush ASSR, then we moved to the North, and it was in Syktyvkar that I joined a kindergarten,” Vladimir recites.

In the 1990s, having completed his military service, Garkusha Junior himself took a job in the oil transportation industry. He started as a line inspector, then, having finished a

line pipefitting course, in August 1996 he got a job with an emergency crew at the Astrakhanskaya PS, which was then part of Chernomortransneft JSC.

It was a time of trouble: the situation in Chechnya and Dagestan

looked ready to explode. But oil transport people are not the kind to throw in the towel. As a part of his emergency crew, Garkusha refurbished the Dagestan section of the Baku–Novorossiysk oil pipeline and worked on the Sulak PS construction project.

In 1999, the Caspian Pipeline Consortium started building a new oil pipeline section from the Komsomolskaya PS to the Marine Terminal outside Novorossiysk and reconstructing the old section of the oil pipeline. And although no emergency crew was directly involved in reconstruction the linear portion, they prepared the site for the building contractors: they dug pits, removed the insulation, and rocked the pipeline so that the workers could install ball valves or other equipment.

“Those were hectic days. We had a lot more on our plate than before. We used to work for 8 hours; now we were expected to do 12,” Vladimir Garkusha recalls.

In 2001, the Tengiz–Novorossiysk oil pipeline project hit the home stretch. First, the completed pipeline was pressure tested with air; thereafter the air was replaced with water, and the latter, in turn—with oil.”

“To displace the water with oil, a spacer was pumped into the pipeline. From km 452, the origin point of the Astrakhan section of the oil pipeline, to km 940, that is, to the river Manych, which marks the battery limit of CPC’s Central Region, we joined forces with representatives of Starstroy LLC to monitor by ear the movement of the spacer through the valve assemblies. For 2.5 months we were walking across the steppe

following the pipeline stream,” says Vladimir Garkusha.

In October 2001, when the Consortium’s oil pumping stations came on stream full time, Vladimir transferred to the Astrakhanskaya PS as an operator. In that capacity he monitored the process equipment, made sure it remained serviceable and went off stream as planned for scheduled maintenance. In 2011, upon his graduation from the Samara State Technical University, Vladimir Garkusha was promoted to Shift Supervisor of the Astrakhanskaya PS.

“The station was upgraded and its throughput kept increasing throughout its service life. Following the Expansion Project, the operational personnel found their jobs easier, the doubling of the pipeline crude transportation rate notwithstanding,” Vladimir opines.

For example, the PS’s battery limits shrunk, once the new stations went on stream. Before, the Astrakhanskaya workers had to monitor 10 ball valves, now the number is down to four. The valves themselves received new motor-driven gearboxes, which make openings and closings much softer. The PS is technologically better off now that the metering unit has been replaced. Unlike the new ultrasonic flowmeters, the old turbine meters needed their filters cleaned on a regular basis.

“You had to clean fast and whenever necessary—because while some lines were taken off stream, the others picked up the slack. It was an uphill struggle as you can imagine because you had to unscrew 24 bolts by hand and to lift up a lid that weighed a lot. But practice makes perfect: by practising regularly, we learned to clean three lines in four hours,” says Vladimir.

Thus, the replacement of the metering unit not only boosted the PS’s throughput, but also freed the operators from manual labour, allowing them to fully



focus on monitoring of the equipment and contractors.

It is also important that the Expansion Project has given the CPC pipeline system a new and improved SCADA system.

It only takes the PS shift supervisor a few seconds to look at any trend in the performance, review current and past actions and all changes in the flow rate and

away from home for Vladimir Garkusha over the years of his service. And he is happy that the station is still evolving and upgrading. For instance, a water supply system reconstruction project has recently been completed; reconstruction on a fire water tank is in progress; and the auxiliary system shared by all mainline pumps is expected to be replaced with individual ones.

THE ASTRAKHANSKAYA PS BECAME A HOME AWAY FROM HOME FOR VLADIMIR GARKUSHA

pressure. The shift supervisor’s workstation has three monitors, which display everything that is needed for a quick review of the equipment status and performance: “green” means the equipment is in operation, “red” means it is down.

It’s no wonder that the Astrakhanskaya PS has become a home

It is important to note that Vladimir Garkusha has not only followed in his father’s steps, becoming a top-notch oilman, but has also mentored an oil and gas specialist himself. In 2019, his son Nikita has received his master’s degree with honours from the Astrakhan Oil and Gas Institute. ●

AUTHOR
AINA ZHETPISBAYEVA

WITH LOVE AND MERCY

TO BE A VOLUNTEER IS A PERSONAL CHOICE. BUT SOMETIMES COMPANIES MOTIVATE THEIR STAFF TO VOLUNTEER SETTING THE EXAMPLE

Being a good corporate citizen, the Consortium provides charity to those in need, which sets an example for its staff as well. The in-house volunteering is on the rise in the CPC's Eastern Region.

A FAMILY OF VOLUNTEERS

Among volunteering enthusiasts are Nazgul Khibasheva, a fixed asset accountant, and her family.

In April 2018, Leila, Nazgul's elder daughter, told her about a meeting with Yerlan Kumiskaliyev, a head of an Atyrau NGO called Small Country. He helps families with special needs children. His methods include a canine-assisted therapy (treatment and rehabilitation of disabled children using therapy dogs).

– And now Yerlan and his associates are building a racecourse for equine-assisted therapy for special needs children. He sounded so sincere speaking about his efforts, his volunteer work! And we, schoolchildren, can help such children. I believe him and would like to be involved in his

projects! – Those were the words of Nazgul's daughter, and our colleague endorsed her enthusiasm without a moment's hesitation.

Nazgul found out how to reach Yerlan and got in touch with him. And before long her elder children, Leila and Bakhyt (16 and 14 years old at that time), were giving free English lessons for healthy children from families with special needs children on weekends.

– The mothers in such families are often unemployed because they care for their special needs child, and the budget is spent mostly on treatment and rehabilitation, so commercial English courses are beyond their means, – explains Nazgul.

CHARITY DRIVE

Aware of how important it is to help underprivileged families, Nazgul used any opportunity to tell her colleagues about the project. One of such opportunities was a corporate outing, an annual event held by the CPC-K to mark Oilman Day.

– I told people from A-PS-3A, Tengiz and Atyrau PSs and their wives about the volunteering by the office staff. I showed them photos of the families we visit and help with clothes and food. The following day my phone never stopped ringing. Everybody wanted to help. Some offered clothes, others children's furniture, – recalls Nazgul.

The staff of A-PS-3A together with station managers Azamat Ibrayev and Serzhan Kabyldin, as well as the caring staff of the substation raised funds that were donated to Small Country Atyrau NGO.

BACK-TO-SCHOOL ARRANGEMENTS

With 1 September approaching, our volunteers, being well aware of all

the "delights" in store for parents in the run-up to school starting, raised 60,000 tenge for families with special needs children. The funds were used to buy backpacks and school supplies.

– Given the rather high cost of school clothing, footwear and other quality items for children, we, with the consent of the families in need, asked the staff to pitch in. This resulted in 6 families (with 2 to 4 children) being

help out. Well, and for us the best reward was the grateful smiles of our protégés. Many a kind word was said about the caring staff of CPC; such minutes are worth a lot! – says Nazgul smiling.

With the help of her two younger sons, Nazgul took the donations to the beneficiaries after office hours.

– One day I was late from work. Skipping supper, my sons and I started

THE VOLUNTEERS
RAISED

60

THOUSAND TENGE FOR
FAMILIES WITH SPECIAL
NEEDS CHILDREN



on our rounds. When visiting the last family to deliver the stuff, my children smelled fresh-baked bread... The lady of the house saw that they were hungry and offered us bread and salad. My son said later: "Listen, Mum, they need help themselves but share with us, though they have four children and live in a barracks." Those were

Aleksandr Antonov, Gulzada Kapakova, Yevgenia Mikheicheva, Asel Doszhanova, Akmaral Aytuarova, Zhanar Aytbayeva, Zhanar Kalmukhanova, Nelli Sarsengaliyeva, Zhanna Zhanaliyeva, Tatyana Bratanova, Ulmeken Akhmetova, Maya Aybusynova, Askhat Azerbayev, Maksot Rusayev, Gaukhar Alpamysova, Altai Batyrgaliyev, Myrzabek Serikov,

a fundraising for Small Country Atyrau NGO. They were joined by the staff of A-PS-4 and the substation. That resulted in significant donations.

One article cannot name all of them... The volunteer movement at CPC is growing wider setting an example for other companies too: the staff of the Consortium's contractors – LLP Lara Servis and JSC KazTransOil – also purchased paintings to help special needs children.

Yerlan Kumiskaliyev and his associates are moving forward with the project to build the racecourse that is eagerly anticipated by families with special needs children. The construction project is sponsored by the engaged residents of the Atyrau Oblast. The project was also joined by CPC employees who donated their time to build and wire the building. Vladimir Solodovnikov, Madi Ishchanov and Serik Chulakov helped with electrical wiring; they made rounds of shops and outdoor markets procuring materials and equipment. As a professional builder, Yerkin Mamyrbayev visited the site several times and advised on various aspects of the construction project. Also, he helped with a costing for a manège.

The CPC's office in Atyrau has a donation box for the racecourse. When opened, the box's contents are inventoried in the presence of representatives from the office and workers of CPC and the NGO. It contains both tenges

THE VOLUNTEER MOVEMENT AT CPC IS GROWING WIDER SETTING AN EXAMPLE FOR OTHER COMPANIES TOO

the lessons in kindness, empathy and compassion that my children learned on those visits, - says Nazgul.

FOR "SMALL COUNTRY"

CPC staff provide significant help to the charity project of Yerlan Kumiskaliyev by buying the paintings of professional artists who are volunteers. Some of the works acquired are on display at A-PS-3A, A-PS-4, Tengiz PS, Logistics Base, Tengiz PS laboratory and CPC office in Atyrau. Many bought paintings for their homes or as a gift for friends.

Paintings are frequently bought by Rafael Ualiyev, Sergey Praskov, Denis Pekshev, Manarbek Lukpanov, Rustem Islyamov, Altynbek Khayrov, Vladimir Solodovnikov, Zhazira Kudabayeva,

Daniyar Akhmetov, Yelena Smolina and other people who care. The most paintings were commissioned and bought by Ruslan Sultanov.

The charity project helped many of our employees discover their own talents too. For example, Gaukhar Shagirova, a quality engineer at the testing laboratory of Atyrau PS, and Yesen Kulshetov, senior HSE engineer, took up painting themselves in an effort to help the project.

Caring employees of Tengiz PS Salamat Altynaliyev, Aslan Bertleu, Aleksandr Vodenikov, Aleksandr Titov, Bagdagul Dzhubayeva, Shynar Kulgazyeva and others threw their weight behind the initiative of their colleagues from A-PS-3A and organized



and Russian roubles: our colleagues from Russia also make donations when visiting the office. Yerlan Kumiskaliyev brings and attaches to the box a receipt for funds credited to the transactional account of Small Country.

games. Together with gifts and art supplies, the children are also given nappies, which are a must for the establishment...

For the home's wildlife corner, CPC staff brought hens, which can

individuals, the CPC-K staff decided to do it out of pocket. In a mere few hours, the caring colleagues raised more than 200 thousand tenge – the exact amount the family needed to go and get treatment for the girl. Askar Shmanov, Almagul Kemalova and Aygul Sadykova delivered the money raised to the girl's mother, who accepted it and thanked them.

– What would you like to do if you could disregard money and other factors?

I am confident that many people would answer this question with one word:

– Charity!

Doing good is a natural inclination for people. That is why it is of great importance to talk and share information about good deeds done without any ulterior motive for the joy they bring. It is with such sincere actions inspiring admiration and respect that our volunteers set an example for their colleagues, friends and, most importantly, their children. Because a single good deed snowballs into more good deeds and changes human life for the better.

CPC-K EMPLOYEES HAVE VOLUNTEERED FOR VARIOUS CHARITY PROJECTS

JOY AS A GIFT

CPC-K employees have also volunteered for other charity projects. For instance, to mark International Children's Day on 1 June, Ulmeken Akhmetova and Saltanat Saparova have been organizing fundraisers for a second year now to enable the inmates of the Atyrau Oblast special needs children's home to have a celebration. The home has 105 inmates, some of whom are day patients. The special occasion will feature amateurs, who will organize competitions with dancing and fun

be looked after by the children and which can certainly lay eggs, a staple of a healthy diet. The funds raised were also used to buy flowers, which were planted around the home with the help of its inmates, and to change the curtains in the building.

DO GOOD

One day the company received a letter with a request to sponsor a treatment for a girl. Because the official Charity Policy makes it impossible to make donations for



AUTHOR
PAVEL KRETOV

TEAM GAME

IN MID-SEPTEMBER 2019 THE REPUBLIC OF KALMYKIA HOSTED A CPC FOOTBALL TOURNAMENT



It was the first time that this spectacular international sporting event had been included in the traditional annual events of the Consortium's Safety Day.

Before the tournament, the footballers were urged by Dordzhi Shikheyev, the Acting Minister of Sports and Youth Policy of the Republic, to compete in an honest and amicable manner.

"Football unites people across the planet. And so does the Consortium with professionals from many countries," he said.

recorded, and there has been no environmental damage," reminded Mr Yoss.

The tournament was held in the stadium of the Republican Children's Creativity Centre in the city of Elista. It was entered by 11 teams: CPC Moscow Office, CPC Eastern Region, CPC Central Region, CPC Western Region, CPC Marine Terminal, KazTransOil JSC, Starstroy LLC, Private Security Company Nachin LLC, Master-Servis LLC, Lotis LLP, and Velesstroy LLC.

As in everything it does, CPC cut no corners in safety or security

The teams were divided into four groups by draw. Group A consisted of the footballers of Starstroy, CPC Moscow Office, and CPC Eastern Region. Group B comprised Lotis, CPC Marine Terminal, and CPC Central Region. In Group C, the combined team of CPC Western Region stood at the same time against two teams of the Consortium's contractors—Nachin and Velesstroy. Group D only included two teams—KazTransOil and Masterservis. The group winners reserved spots in the tournament's premier league. The runners-up carried on in the first league.

During half time, a CPC Panorama journalist asked Kenneth

FOOTBALL UNITES PEOPLE ACROSS THE PLANET, AND SO DOES THE CONSORTIUM WITH PROFESSIONALS FROM MANY COUNTRIES

Kenneth Yoss, First Deputy General Director of CPC, wished the teams that they would play as safely as the Consortium operates the pipeline system.

"We are very successful: not a single industrial accident has been

when organizing the tournament: the futsal rules approved by the Russian Futsal Association (RFA) received an addition: a ban on such a dangerous technique as a slide tackle.



The memorable moments included bicycle kicks, excellent passings and tactical plays when players forced the opposing team to the other half of the pitch, while sending the ball the other way."

"You are based in Moscow. I will venture a guess that you're rooting for the team of the CPC Moscow Office?"

"I'm rooting for all the teams whose name starts with CPC. On the one hand, it would be great if they took over the entire podium. On the other hand, the CPC personnel operates the Tengiz–Novorossiysk pipeline system in close coordination with the contractors' representatives. They are our staunch partners and teammates; we are all pulling in the same direction. That

each, and when it seemed that the main trophy will have to be awarded by a series of penalty kicks KazTransOil succeeded in scoring the winner with only a few minutes remaining until the end of the match.

In the first league's semi-final, Moscow Office defeated Velesstroy, and CPC Marine Terminal knocked the Masterservis team out of gold medal contention in a penalty shootout. In the final, the winners played against each other. The scoring in that match was opened by Kasym Alibek, CPC Project and Planning Consultant. The footballers of CPC Marine Terminal wasted no time in attempting a revanche and had a chance to score, but Kasym's second kick on the money dispelled all questions about the winner. Incidentally, the scoring

Yoss, First Deputy General Director of CPC, a few quick questions.

"Mr Yoss, do you play association football yourself?"

"Personally, I've never had a chance to play in such a well-organized and high-level soccer tournament. I played soccer on school teams, but I was more successful in more American sports such as baseball, American football and cross country racing."

"Do you enjoy watching the teams play?"

"Yes, I really do. We saw very competitive matches with well-trained teams of talented players.

is why I sincerely wish the best of luck to them as well."

The supporters in the stands did not remain aloof. They were vocal in supporting teams, shouted "Score!" and chanted slogans they devised for the event.

Football events took a dramatic turn in the premier league. In the semi-finals played by Starstroy vs Nachin and CPC Central Region vs KazTransOil, KazTransOil and Nachin made it to the finals. Both teams played magnificently, demonstrating excellent physical training and will to win. The opponents scored once

kicks followed precise passes from Igor Storozhenko, Chief Manager for Government and Public Relations at CPC-R. Both players made a name for themselves as footballers in the past: Kasym Alibek used to play for the junior team of Almaty's Kairat, while Igor Storozhenko—for various teams in Leningrad championships.

The rest of the story is about the bronze medallists. In the premier league, the third line of the championship table was taken by the players from Starstroy. The first league's bronze went to the Velesstroy team.

CPC PRESS SERVICE

CPC THROUGH CHILDREN'S EYES

MANY OF OUR COLLEAGUES WILL REMEMBER THIS YEAR NOT ONLY FOR THE WORK ACHIEVEMENTS, BUT ALSO FOR THE MOMENTS OF CREATIVE INSPIRATION, IGNITED BY THE MANY CONTENTS THAT TOOK PLACE INSIDE THE COMPANY. AMONG THEM – THE CHILDREN'S DRAWING CONTEST FEATURING THE CHILDREN AND THE GRANDCHILDREN OF CPC EMPLOYEES

It's no secret that we cherish the success of our children much more than our own. The works of the young artists mirrored the purity and the immediacy of their outlook to the full extent. The assessment was

carried out by a professional jury that included the members of the Moscow Union of Artists and the participants in Russian and international exhibitions Ekaterina Smirnova and Irina Kolesnikova, as well as the member of the Creative

Union of Artists of Russia Vladimir Shmuratko.

ULTIMATELY, IT WAS A VICTORY OF EVERY PARTICIPANT OF THE CONTEST. WE OFFER OUR SINCERE CONGRATULATIONS TO EVERYONE!



GRAND PRIX in the age group of 7–11 years

ZEMLYAKOVA ZLATA (A Place I Wait My Dad to Come From)

GRAND PRIX in the age group of 12–16 years

TIMOSHENKO DARIA (The Safe Haven of CPC)

CATEGORY "OIL AT THE SERVICE OF PEOPLE"

IGNATENKO NIKITA, I place in the age group of 7–11 years (Tanker Loading Oil at Sea)

GAZIZOVA ALYONA, II place in the age group of 7–11 years (Fueling an Airplane)

MEDVEDEVA VERONICA, III place in the age group of 7–11 years (Safety of Works Above All)

CATEGORY "MY DAD/GRANDDAD WORKS AT CPC"

GRECHENKO KSENIA, I place in the age group of 7–11 years (At the Favorite Job)

MIKRYUKOVA DARIA, II place in the age group of 7–11 years (My Dad at Work)

SHEVNINA YULIA, III place in the age group of 7–11 years (My Granddad Works at CPC)



CATEGORY "CPC FACILITIES IN HARMONY WITH NATURE"

GLADKAYA CAROLINA, I place in the age group of 7-11 years (CPC in Harmony with Nature)

TIMOSHENKO DARIA, I place in the age group of 12-16 years (Loading of Tanker)

SHMANOVA INKAR, II place in the age group of 12-16 years (CPC and Dolphins)

KUDINOVA SOFIA, II place in the age group of 7-11 years (CPC Facilities in Harmony with Nature)

GAZIZOVA ALYONA, III place in the age group of 7-11 years (Bottlenoses)

CATEGORY "HOW I SEE THE FUTURE OF CPC"

GLADKAYA CAROLINA, I place in the age group of 7-11 years (CPC in 100 Years)

SHEVNIN DANIIL, I place in the age group of 12-16 years (CPC in the Distant Future)

GAZIZOVA ALYONA, II place in the age group of 7-11 years (Interplanetary Mission of CPC)

MIKRYUKOVA DARIA, III place in the age group of 7-11 years (By Land and By Air)

AS WELL AS:

PASHKULSKAYA DARIA received A SPECIAL NOMINATION "PERSPECTIVE IN PICTURE" for Oil Derrick

VIKLUSHKINA EKATERINA received A SPECIAL NOMINATION "STRETCH OF IMAGINATION" for Oil Beneath the Earth

OBOENKOV SEMYON received A SPECIAL NOMINATION "SYMBOLISM IN PICTURE" for The True Pipeline Path

KAZANTSEVA SOFIA received A SPECIAL NOMINATION "PHILOSOPHY IN PICTURE" for Clear Sky with CPC

VIKLUSHKINA ELENA received A SPECIAL NOMINATION "YOUNG TALENT" for CPC Guarding the Environment

WE WISH ALL THE CONTEST PARTICIPANTS TO REACH NEW LEVELS OF CREATIVE ACHIEVEMENTS



CPC PRESS SERVICE

“ALL AUTHORS HAVE DONE WELL!”

THE CPC TEAM IS RICH IN TALENT. MANY OF THE LITERARY-MINDED EMPLOYEES WILL REMEMBER THE OUTGOING YEAR FOR THE COMPETITION FOR THE BEST CONTRIBUTION TO THE CPC PANORAMA CORPORATE MAGAZINE

The competition offered a chance to try one's hand at writing for the following categories: “My Professional Life,” “A Story about a Colleague,” and “What I Enjoy Doing the Most / Family Traditions.” The presence of professional journalists and writers among the judges made it possible to evaluate the entries as objectively as possible. Apart from the 1st, 2nd, and 3rd places awarded in each category, the entrants were awarded [prizes] in two special categories: “Physicists vs Lyricists” and “For Originality.”

The authors received the respective certificates as well as literary gifts—signed books by panel members Aleksey Kuznetsov and Ekaterina Semina-MacFarlane.

“My congrats to the entrants! For many of them, it was probably not easy to take up the pen, but the result surpassed all expectations. Lovable characters, well-crafted stories, humour, and



interesting facts. All authors have done well! To the organizers: keep up the good work! A writing competition is a great idea,” said Ekaterina Semina-MacFarlane. Thanks to all those who responded and entered the competition, which,

among other things, promised to publish the best entries in the corporate magazine. Today we offer the readers the essays of the winners in various categories. The other short-listed entries will be featured in CPC Panorama next year.





AUTHOR
NIKITA ZOSIMOV,
DEPUTY MANAGER OF THE
KOMSOMOLSKAYA PS

THE ROADS WE CHOOSE

WINNER OF THE CONTEST FOR THE BEST
CONTRIBUTION TO CPC PANORAMA,
“A STORY ABOUT A COLLEAGUE”
CATEGORY

*WHEN SENDING OFF INTO THE WORLD
HER SONS, US MADMEN,
OUR GOOD FORTUNE
GIVES US GOLDEN DREAMS APLENTY*
Yevgeny Baratynsky



A STEPPE STATION

The steppes of Kalmykia are home to the largest pump station (PS) in CPC's Central Region — Komsomolskaya, which is located 70 km from the Caspian coast in Chernozemelsky District. It was originally a hub station on the Tengiz–Grozny oil pipeline project, but with the arrival of the CPC project, the wind of change turned the pipe towards Novorossiysk, and Komsomolskaya became the turning point; it is the point from which a new line was laid to a Black-Sea terminal in Yuzhnaya Ozereyevka. In the Engineering Design Documentation, the station is referred to as PS24 and serves as the geographical centre of Tengiz–Novorossiysk Main Oil Pipeline, sitting on the run at km 756. First oil flowed into the process pipelines on 8 November 2002, followed by the

start-up of mainline pumps in the test mode. The PS was named after the eponymous settlement, Komsomolsky, the administrative centre of the Chernozemelsky District. For the Central Region, the PS became the training ground, a source of manpower, and a role model.

particularly when seen against the background of the station's desert surroundings. And what is more, Komsomolskaya is famous for its hospitality and cordiality as well as delicious food, which tastes almost like home-cooked meals, at the local canteen. Coming here, you find

THE KOMSOMOLSKAYA PS OF CPC'S CENTRAL REGION IS FAMOUS FOR ITS HOSPITALITY AND CORDIALITY

PUPYSHEV STREET

The secondees who come to the PS for the first time are pleasantly surprised by the abundant greenery, landscaping and amenities,

yourself a part of a close-knit, hospitable family of fellow enthusiasts and aficionados of their work. Many visitors wonder: why is one of the streets in the PS station camp called



PUPYSHEV STREET? Who Pupyshev is and what he did to have won such honour is what I would like to tell you.

Vladimir Timofeyevich Pupyshev was the permanent manager of the Komsomolskaya PS between 2002 and 2014. Having taken charge of the facility during construction and equipment installation and adjustment, with technical problems galore and with no basic conveniences,

he and his associates organized the on-site work, study and operation of novel equipment and created a veritable blooming oasis in the middle of steppe. He was instrumental in putting in place a high corporate standard for accident-free PS operation for many years to come.

NORTHERN HARDINESS

Our hero was born in the town of Chernikovsk (now a district of Ufa) on 23 August 1948, graduated from the Ufa Petroleum College with a diploma in Oil and Gas Transportation and Storage. His first job was engine driver at the Ufa Synthetic Alcohol Factory. Then he did his military service, after which he

studied at the Ufa State Petroleum Technological University.

In 1979, the recent graduate leaves for the town of Uray to conquer the North. Having found a place and settled in, he brings his wife and little son to their new home.

Life is harsh in the North, and working in extreme conditions all the time, at the limit of human and equipment endurance, made the people strong both in character and mind. It is about them that the ballade seems to speak: “If we used such people to make nails, these would be the strongest nails in the world.” Discipline and self-organization enabled Vladimir Pupyshev to rise through the ranks to General Engineer at Transneft's Main Oil Pipeline Directorate in the town of Uray. He was involved in the construction and commissioning of 4 oil pipelines and 11 PSs. For these achievements, he was awarded the title of Distinguished Worker of the Ministry of Fuel and Energy.

TEAMWORK

Time passed, and his sons became adults. After 20 years of service in the North, it was time to look for new horizons. In 2000, the family council decided to move to the south, to the town of Gelendzhik, not least because at that time the execution of the Tengiz — Novorossiysk Main Oil Pipeline construction project began.

His competence, knowledge, organizer's talent, and, most importantly, wealth of experience gained in harsh lands could not have come at a better time for the young growing company. In 2002, Vladimir Pupyshev joined CPC as manager of the Komsomolskaya PS. It took a lot of effort to make the station the flagship that it is now.

Vladimir Pupyshev's success formula is hard work and knowledge. The team put together at Komsomolskaya is considered the best in the region for its skills. After all, the PS is a station with turbines as drives for main pump units.



PS power supply is also provided by on-site turbo-generators, and this puts great responsibility on the operational personnel.

Back then, imported Alstom turbines were a rare bird at Russian facilities. Nobody knew anything about their maintenance or repair. A turbine is a more sophisticated

arrival of the maintenance contractor's technicians: they cleaned and replaced burners, configured vibration monitoring sensors, and improved the performance of various systems of the turbo-generator sets. The operational personnel could teach foreign technicians a thing or two about doing repairs

THE KOMSOMOLSKAYA PS'S EMPLOYEES, WHO STARTED WORK IN 2001, ARE CALLED THE "OLD GUARD" BY THE YOUTH

piece of technology than an electric motor. When brought on stream in 2002, the turbines burned mostly diesel fuel; because it was of inferior quality in the early 2000s, the turbo-generator sets went down several times a week due to flame disruptions at burners and fuel system failures. At those critical moments, Pupyshev used his management skills to mobilize the PS personnel in order to minimize the downtime of pump units.

All operational personnel took part in studying and repairing the turbines without waiting for the

on turbine assemblies, which genuinely surprised the latter quite often. Everything was subordinated to reducing the rate of failures, making the equipment safe to operate, and preventing slumps in oil transportation.

Facing those challenges, the PS personnel evolved into a close-knit team. In 2004, a tap was built from the main oil pipeline and the Automatic Gas Let-Down Station, and the turbo generators were switched to gas fuel, which dramatically reduced the failure rate and the workload on the operational personnel.

SOURCE OF MANPOWER

With the launch of the Expansion Project in 2011, it was the Komsomolskaya PS that became the training provider for new PSs. Old hands on the operational staff who worked with Pupyshev, such as process unit operator K.M. Iskalov, electrician E.B. Sindikayev, and Oil Product Pumping Station (OPPS) operator A.A. Burlinov, had trained more than 10 apprentices in their fields within three years.

Now the employees who started work in 2001 are called the "old guard" by the youth. And this is a sign of deep respect for their experience and expertise.

The Komsomolskaya PS's trainees work at all stations in the Central Region and at many other CPC facilities. In the words of Vladimir Timofeyevich Pupyshev, the "komso-molets" are a family, and one should be proud to be a part of it; after all, when you are surrounded by worthy, skilled and wonderful people, it is a great honour.

Many senior executives in the Central Region and CPC in general got their first jobs at the Komsomolskaya PS. These are Manager of A-PS-5A A.N. Stepanenko, Deputy Manager of A-PS-5A O.V. Bobrov, Managers of PS-3 S.F. Sorokin and

N.Ye. Boykov, Deputy Head of PS-3 R.N. Irtuganov, Deputy Manager of PS-2 Yu.A. Gagayev, and Eastern Region Project Execution Group Leader A.L. Antonov, to name but a few. I am confident that all of them are grateful to Vladimir Pupyshev for shaping them into real oilmen as a part of the training provided by the station and for the milk of human kindness.

HIS PRESTIGE

As noted by his colleagues, Vladimir Pupyshev was a phenomenal hard worker — he was the first to arrive at work and the last to leave the station. When addressing the problems, he looked for the root cause, the reason why the equipment malfunctioned or failed. He was competent in many fields related to equipment operation. A jack of all trades—mechanic, instrumentation engineer, and electrician, he had a finger in every pie; after all, it was his PS, and it had to be the best. He was assisted in achieving this goal by his teammates, whom Pupyshev recalls with profound respect and love: these are V.A. Tokarev, V.N. Menshenin, and V.N. Arkanyuk.

The station had excellent recreational facilities for the CPC personnel and the contractors' staff, including an indoor tennis court, a gym, and a large sports ground used for volleyball, football and basketball tournaments. Most frequently competitions were held during the PS refurbishment. A large number of the contractors' staff deployed on the construction project, the CPC

AS NOTED BY HIS COLLEAGUES, VLADIMIR TIMOFEYEVICH PUPYSHEV WAS A PHENOMENAL HARD WORKER

staff involved in the Expansion Project and the operational personnel staged battles on the sports field after strenuous work hours. Supporters gathered around the field, and Vladimir Pupyshev was always asked to referee matches. He had unshakable authority, and nobody dared argue with a referee of such calibre. The hottest heads among them were cooled down with a witty repartee; controversies were resolved by replays. Laughter, joy, and excitement reigned supreme on the pitch. High spirits and batteries recharged for another working day were guaranteed.

WELL-DESERVED RETIREMENT

Having celebrated his 65th birthday, successfully completed the Expansion Project at Komsomolskaya, and received the Honoured Oil Worker title, in 2014 Vladimir Pupyshev decided to retire to give his time to his young grandchildren and favourite pastimes. Also, as years passed, it became difficult to commute between Gelendzhik and the PS, travelling 1000 km twice a month. And try as the Central Region management might to persuade him to stay and give it another couple of years, Vladimir Pupyshev said: "I'm leaving. This is the end of this road for me, and I need energy for other roads too." All the more so as he was succeeded by young professionals whom he had mentored and who could be safely entrusted with the station. O.I.

Dmitriyev and G.S. Kuzhuyev had learned their lessons well, and Komsomolskaya was now in safe hands.

In 2018 Vladimir Pupyshev turned 70; the Central Region sent a delegation to attend the birthday

celebration. The entire team wished him many happy returns. All those who worked with Vladimir Pupyshev made their contribution to the special occasion. The birthday boy is happy: years on, CPC still remembers and appreciates the contribution he made. Even these days, when talking to his mates on the phone, Vladimir Pupyshev would always enquire about issues with the main pumps, about the pumping conditions, and about the members of his "old guard." And his friends and colleagues, whenever they find themselves seconded to the Marine Terminal or passing through on personal business, try to visit the hospitable host at his house on the shore of the Blue Bay in Gelendzhik. How many thanks, warm words, and good wishes one wants to say at these rare meetings... and to listen to the conversations between old friends until late into the night!

DYNASTY

Following in their father's footsteps are his sons: the older one, Oleg, works as shift supervisor at A-PS-5A; the younger one, Aleksandr, works as Operations Control Centre dispatcher for the linear section. His grandchildren are growing, and, who knows, maybe they, too, will take their cue from their granddad to become engineers, and the familiar call sign "Pupyshev speaking" will be heard for many more years to come on the Tengiz–Novorossiysk Main Oil Pipeline of the Caspian Pipeline Consortium.

And we, the team of the Komsomolskaya PS, and all his workmates wish Vladimir Pupyshev a long and happy life surrounded by his great-grandchildren and great-great-grandchildren. We hope he will have energy for many long years to come! ●

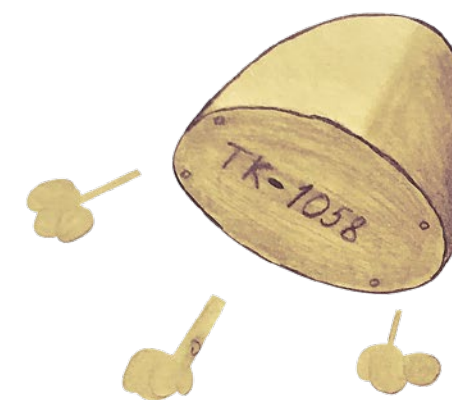
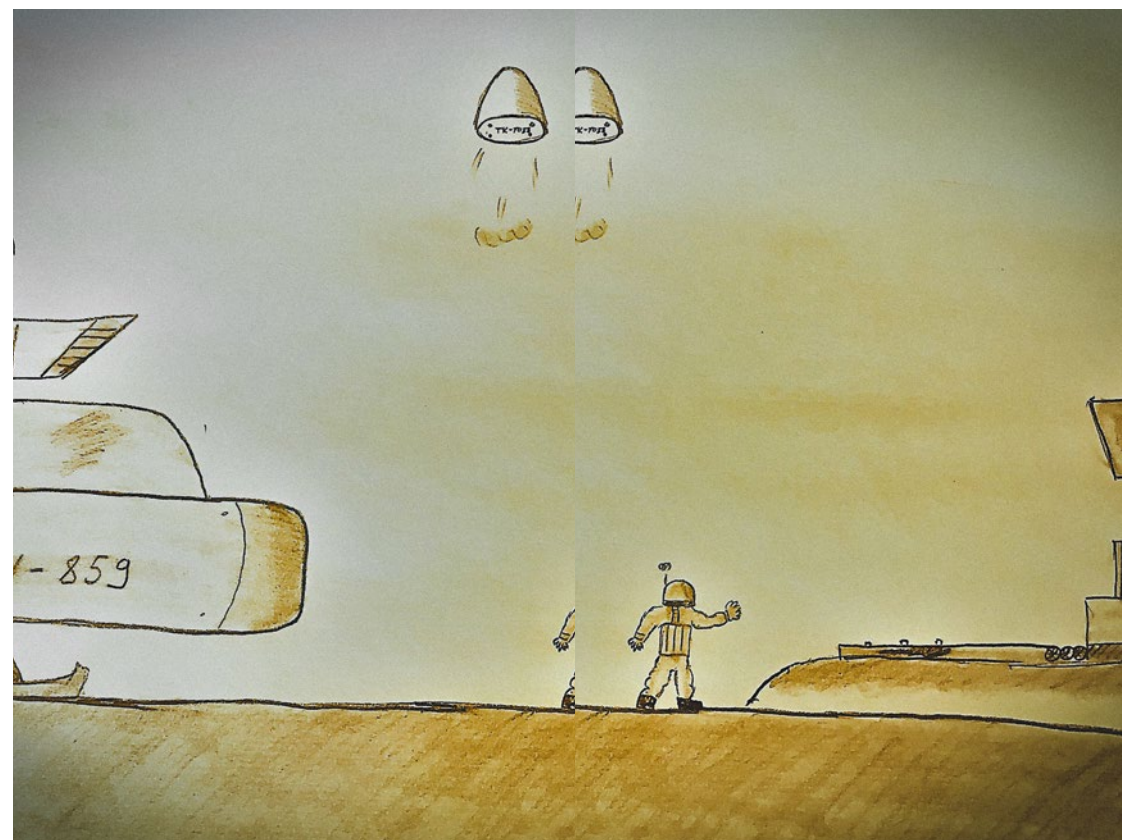




AUTHOR
NIKOLAY KRUPSKY,
PROCESS UNIT OPERATOR,
TANK FARM, MARINE TERMINAL
DRAWINGS BY THE AUTHOR

CPC TITAN

WINNER OF THE COMPETITION FOR THE
BEST CONTRIBUTION TO CPC PANORAMA
IN THE MY PROFESSIONAL LIFE CATEGORY



Nikolay broke off and left to join his colleagues at long last.

The next day came.

The wind subsided a little. The sky cleared up to some extent. Having had breakfast and briefing, the crew went about their duties. The duty hours flew by and brought no problems.

The cursor was blinking on the monitor where Nikolay Ilchin left off. A slight smile reflected his recollections:

"The outgoing watch gave us a warm welcome, which is likely to become a tradition on Titan. The entire crew is happy the new equipment that we took on board upon departure. It

was several clicks away. Coloured orange by the methane clouds, the sky blocked the stars.

Nikolay moved back to the monitor:

"The extreme weather puts us a little behind schedule, but we are making steady progress in develop-

NIKOLAY SENT THE MAIL AND LOOKED IN THE VIEWPORT, TAKING IN THE VAST VIEWS OF THE PLANET

Hikolay Ilchin was on the bridge of a space tug of the oil-producing platform designated CPC-NDP[OPP]-859. He was watching the monitors displaying the circuitry of components and assemblies of both the ship and the platform.

He was also watching the suit camera feeds of each of the crew members to monitor the process of unloading and installation of a new stand-alone producing unit. The voices coming from the radio speakers were music

duties, he finally managed to find time and sit down in front of his PC with a cup of coffee.

When he pressed his thumb to the scanner on the control panels, the PC in front of him came to life. Nikolay opened his email app, was thoughtful for a while, and then started writing:

"To: Mission Control Centre, CPC Earth.

From: Local Control Centre, CPC Titan."

watch before he was finally sitting in a chair, submersed in the daily activities.

"Subject: Titan watch.

Nikolay Ilchin, head of expedition, reporting.

Please be advised that the 7-strong watch, namely:

- Oleg Gladkov, senior platform operator;
- Nicolas Krunich, auxiliary system operator;
- Aleksandr Tronin, electrical engineer;
- Vladimir Kafeyev, instrumentation and automation engineer;
- Yelena Sorokina, chief medical officer;
- Olga Kafeyeva, paramedic;
- And myself, Nikolay Ilchin, manager of oil-producing platform on Titan, Saturn's moon

are all healthy and executing the installation and start-up of new equipment.

In response to your last enquiry, I report that since our arrival on Titan and taking over the watch, the stock

of victuals and materials has been used as per standards and is within the parameters. The other reports and updates were sent earlier."

Nikolay rolled back from his desk and pensively looked out of the window. The wind was lashing the body of the tug and the platform, which

ing the first field on Titan; this makes my colleagues as happy as receiving letters from home does."

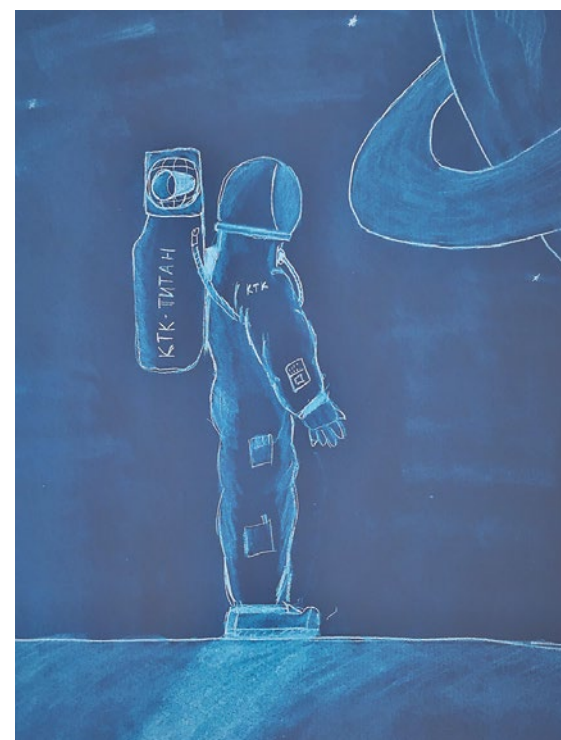
Oleg stepped on the bridge:

- Nikolay, the equipment is secured. Everything has been checked; we are ready for storm. The guys are tired; everyone is in the galley waiting on you.

- Good, I'll be down shortly, you can start without me.

When the operator left, Nikolay went back to his report, thinking back to what happened before.

"Altercations between colleagues cannot be avoided... But everybody understands that the weeks of our first watch in this remote field, in space, far from our families, must not significantly affect our Mission or our personal relationships. That is why our close-knit team can be said to rise to the challenge."



has been fully shaken down and all assemblies carefully checked. We will resume shipments to the Earth before long.

Yours sincerely,
Nikolay Ilchin,
Head of OPP-859"

Nikolay sent off the mail and looked in the viewport, taking in the vast views of the planet. A shipment was loading at full throttle. He headed for the airlock with his suit. He put it on and went out on the surface of Titan.

An empty tanker zooms overhead and lands on a loading platform; an operator is preparing it for loading. On a platform nearby, another shipment of hydrocarbons is being lifted by a tanker into orbit around Titan, from where a robotic flight will take it Earthside. Every tanker is numbered, and the tag number is clearly visible on the hemisphere flying skywards in a nimbus of navigation lights. ●

HE RECALLED HIS ONE MONTH, FIVE DAYS AND THREE HOURS IN A CRYOGENIC CAPSULE

in his ears, but not for a moment did his attention waver from the comms, and he kept occasionally instructing the operators. When it was already evening, having completed all his

He recalled his one month, five days and three hours in a cryogenic capsule. Another week passed after awakening, disembarkation and a detailed briefing by the outgoing



AUTHOR
TIMOUR JUSTE,
SENIOR TRANSLATOR,
CPC-R WESTERN REGION

ALL BY MYSELF

WINNER OF THE CONTEST FOR THE BEST CONTRIBUTION TO CPC PANORAMA IN THE "WHAT I ENJOY DOING THE MOST / FAMILY TRADITIONS" CATEGORY

same. The time would come for me to become a professional interpreter, but I did not know it back then.

Soundproofing in our Khrushchev-era apartment block left much to be desired; no wonder neighbors would also contribute to my musical education (especially at night when all the rest went to their beds).

Later on, at school, I would listen to Soviet pop idols, Didier Marouani & Space and Italo Disco stars' tapes on repeat and was always on a hunt for rare performances of various Western artists on the TV.

1986 was a Euro Disco time. However, it was back then when I first heard of some other music, a heavy and aggressive one (nothing like what I was used to). I haunted everyone I knew with questions; eventually, help came from my schoolteacher of Biology whose son was sort of a DJ at that time.

The jigsaw puzzle of bits and pieces of information and rumors started coming together: apart from having a hard time telling hard rock from heavy metal, I knew I was going somewhere.

In 1987, my Dad's friend opened a bootleg cassette store; this was the first time I got access to a real collection of records. This place was also a meeting point for experienced music lovers, and each of them had a record collection, too. I would spend a lot of time with them taping the records and writing down the lyrics by hand in

Let's make it clear: with a hobby like mine, my winning chances are pretty low ("I am a music lover" straight from an old song by "Alisa"). My hobby's not unique, nor is it picturesque. So, if I really want to win, I need a dramatic story. And drama needs a conflict, doesn't it? Say, a conflict between parents and child: back in 1986, I had a real chance to see AR-IA (a Soviet clone of IRON MAIDEN and JUDAS PRIEST) playing live in my hometown in the middle of nowhere (free of charge). However, my parents thought it was "too early": no wonder I ended up becoming a headbanger.

In all fairness, I have to admit that my parents took me to an AR-IA live show two years later. Alas, the bitter aftertaste is still there.

There were other conflicts, too (not big time, though). For some reason, it was my Mom who got into trouble the most. Actually, she was kind of "advanced" and had could tell Ozzy Osbourne from Freddy Mercury. However, my most innocent

behavior somehow triggered strong cognitive dissonance in her, so she would become truly upset when I greeted next-door kids with a devil horns gesture or idled around growling my favorite songs. My parents thought we had entered into sort of a "pact"; presumably, I was free to listen to whatever I felt like listening to as long as I kept the lowest profile possible.

Ok, one step at a time.

Probably, it was "Rasputin" by

AT THE AGE OF 14, I ALREADY KNEW THE
"JESUS CHRIST SUPERSTAR" LIBRETTO
BY HEART; THIS WAS WHEN I FIRST THOUGHT
OF BECOMING A TRANSLATOR

"Boney M" that had first hit me really deep. My parents and I did not know any English by that time, but I really wanted to sing along; my only option was to use Russian words that sounded more or less the

my notebook. Today, when information is virtually one click away, the romance of those days makes me feel nostalgic.

At the age of 14, I already knew the "Jesus Christ Superstar" libretto by



TIMOUR JUSTE AND
SVAVAR AUSTMANN (SÓLSTAFIR)

who showed me the path to the complex and mysterious world of classical music were actually local rock musicians who earned their living by playing in the symphonic orchestra. Before the concerts, my friends and I would mix with the musicians and sneak into the musical theater through the stage door. Nobody protested; on the contrary, they would encourage us to hurry up and get the best seats before the show.

My first big musical adventure was Jean-Michel Jarre's gig in front of the Moscow State University on the 850th anniversary of Moscow. When I arrived, the esplanade had already been blocked by police for safety reasons; according to the Mayor's Office, the gig was reported to have a three million audience. Never before or after did I manage to climb over a 2-meter fence in front of a mounted policeman.

Then was the Eurorock fest in Neerpelt, Belgium. All nearby hotels were booked, but I made friends with the management team. They found me a nice hotel room some 50 km away from the venue and would give me a lift to the festival and back. These guys are rumored

heart; this was when I first thought of becoming a translator.

The iron curtain started going up bit by bit, BBC was not jammed anymore, youth magazines featured extracts from rock encyclopedias and gig reports. I was even lucky to see a short piece of "Still Loving You" by SCORPIONS on the Soviet TV.

New Zeitgeist was represented by TV bridges and late-night TV shows such as "Vzglyad", "Musical Ring", "Jacob's Ladder" etc.: all of a sudden (surprise!) I found myself surrounded by a universe of information; I felt connected with the past and couldn't wait to see the future.

From my viewpoint, big bands and Rock-n-Roll were fossils; contemporary music started off somewhere around the 1960s, and I was sure the continuous progress would go on and on and never let me down.

If I only knew the continuity would soon become nothing but a memory. If I only knew the 1990s would start off as a crazy pilot project, only to degenerate into a (nearly) Fukuyama-esque end of the (musical) history...

Early 1990s saw musical culture undergoing tectonic shifts and I had to do my best to keep up with the changing trends. This was also when classical music came into my life. What's more, the ones

WITH THE HEJLUNG



to have taken all the money and disappeared later on, but this is another story.

In 2005, I failed to purchase the tickets for the Inferno Festival kick-off event in London and decided to go there at my own risk. Eventually, event manager put me on the guest list; a lesson of good old English humor came as a bonus ("If you're foolish enough to have come here without a ticket, you deserve a punishment, don't you?")

Another unforgettable experience was ANATHEMA's gig in Moscow in 2006. During the press conference, Vincent Cavanagh, the band's front man, said a few words in Russian that, if quoted here, would constitute a violation of the CPC Code of Business Conduct. Vincent and I became friends later; when ANATHEMA played a show down here in Krasnodar, he dedicated a very special song to my twin daughters.

Brutal Assault, Prophecy Fest and Roadburn fests are all on my list. However, there's one question I keep asking myself over and over again: why should I be stigmatized for being a headbanger in Russia?

I listen to all kinds of music. I've been to the Easter concerts of Divna Ljubović and the children's choir of the Vladimir Icon of the Mother of God Cathedral. I've been to numerous jazz festivals. I've seen Wagner's operas at the Mariinsky

WITH MIKAEL STANNE,
DARK TRANQUILITY



Theater. To crown it all, I've seen Psoy Korolenko's playing live.

When Swedish melodic death metal band AT THE GATES played a cover version of Philip Glass's Koyaanisqatsi featuring Anna von Hausswolff on keyboards, I knew what was going on as I had already heard Koyaanisqatsi played live by Philip Glass and his ensemble at the

TIMOUR JUSTE AND DAVID TIBET
(CURRENT 93)

more than another footnote on a postcard from nowhere, another chapter in the handbook for exercises in futility? (MGLA, Poland). Ok, I don't have to share someone's convictions. However, being honest with yourself deserves respect,

I DON'T HAVE TO SHARE SOMEONE'S
CONVICTIONS. HOWEVER, BEING HONEST
WITH YOURSELF DESERVES RESPECT,
DOESN'T IT?

one and only show at the Moscow House of Music. Same is true for Anna von Hausswolff.

However, every time I mention I am a headbanger, people look at me as if I were a prehistoric dinosaur or a Tom o' Bedlam, whatsoever. – As if all this was something

doesn't it? Extreme non-commercial music is winningly honest, sober-minded and disillusioned. That's what makes it so special.

In conclusion, I would like to quote my colleague and friend: "When I was a kid, metal was not music really popular. So, you're a headbanger? Welcome to loneliness. You'll get no support from anyone. That's what I like about metal. And getting thumbs down from people is not a problem. ●

AUTHOR
EKATERINA SUVOROVA

HER MAGICAL WORLDS

MY INTRODUCTION TO THE CREATIVE
OUTPUT OF IRINA AKHMETOVA WAS A
GENUINE REVELATION



One day at lunch, Administrative Assistant to the Head of the Russian Government Relations Department was showing her colleague photos of fantastic pictures taken with a phone. The incredible beauty spotted out of the corner of my eye made me ask whose works those were. "Mine," answered Irina modestly, rendering me speechless for a couple of seconds.

After a closer look at her art, I decided to talk about it in the corporate magazine. But persuading Irina herself to do it proved to be no mean task. "What, me an artist?" She wouldn't hear of it. Fortunately, my perseverance was successful: she agreed to do the interview.

In point of fact, Irina is an artist, and a very original one at that! Her works showed me the vastness of space and mysterious fragile life

making there its first steps, images of our home planet, and enigmatic inner worlds.





Her imagery stirs the imagination of the viewer, leaving no place for indifference.

"My pictures offer everyone something unique; don't even ask me what I meant there," says Irina

"The universe wants to express itself through you, which means that there will be people who will be able to read this message!"

"Everyone is a conduit for some ideas in this world. An artist once

EVERYONE IS A CONDUIT FOR SOME IDEAS IN THIS WORLD

smiling. "I am aware that this is not for everyone to understand and accept; some will feel a tug at their heartstrings, and others will feel nothing..."

told me: 'It is not a bad thing that your art is unformatted. This means it is free from constraints and dogmas.' People often ask me: 'Where do you come from with this?' I don't

know. It sprang up in me and wants out. So I have to sit down and draw."

"How do you come up with an idea for a future painting?"

"In different ways. Sometimes, I know right from the start what I want to depict. And sometimes, an image takes shape while I'm drawing. I need an outlet for my creativity. And what interests me here is the process rather than the end result. It is important to me to keep having experiences until I spill it all out in a drawing."

Irina did not get serious about drawing until after graduation. When she became a mum, she had to put her hobby on ice because she had no time for it. But her child is no longer a baby, and her pencils and paints are out once again. This is perhaps why her son showed an early aptitude for art, and he is now happily enrolled in a children's art school.

The first people to appreciate Irina's art were her parents. They look forward to and welcome with joy each new painting. The walls of the parental home are decorated with her miniature paintings.

"Dad draws himself and does embossing, so his interest is professional to some extent," says Irina.

"And why did you choose watercolour rather than anything else? This is the most challenging technique; watercolour forgives no mistakes..." I keep on pressing the artist.

"For some reason, oil has never appealed to me. I like what spreads and what creates halftones. Oil can also be used to create a halftone, but it is crude, while watercolour moves—it's alive..."

While remaining true to her artistic style, Irina is working on her technique: she takes lessons in academic drawing from a professional artist. Her teacher approves of and encourages her style of painting.

"What inspires you?"

"Nature's beauty and music," answers Irina. "I wait to start a drawing until I peak emotionally. I may feel sadness, anguish, grief or joy, love and happiness. I find that an artist



must feel rather than simply deciding 'it's time to draw.'"

After talking to Irina Akhmetova, for some reason I also felt like taking brushes and paints in my hands... Yes, you can catch a creative bug! Thousands of candles can be lighted from a single candle. But any attempt at dissecting creativity is doomed to failure. It only breaks

the whole down into its constituents and brings us not a step closer to understanding the true source of the talent that shines out of an artist.

"Each person has a talent," says Irina confidently. "Some sing, some dance, some draw... We usher into this world something one-of-a-kind and beautiful, and we must let the world know it through our art."



AUTHOR
MARZHAN DIAROVA

KUMYS

ON SCORCHING SUMMER DAYS, WITH A SPECIAL FEELING I RECALL PARTICIPATING IN KUMYS-MAKING (КҮМЫЗ [KYMYZ] IN KAZAKH)... IT'S IMPOSSIBLE TO TELL YOU ABOUT KUMYS WITHOUT DESCRIBING THE PLACES WHERE IT ALL HAPPENED



IN MY DEAR STEPPE

Я вл grew up in a rural area—the Karaganda Region, famous Saryarka [Kazakh Uplands], the splendour of which was glorified by Kurmangazy (Ed. Note: a renowned folk musician, an author of kyuis [pieces for dombra], 1818–1889) in his eponymous kyui. The beautiful steppe interlacing with hills and low mountains! How many kilometres I travelled on my bicycle in this steppe when I was a child and teenager! I recall speeding up on the earth road, climbing the top of a hill, guessing what colour the lowland is now, right there, on the left: most often it was white foam of silky needle grass, swaying and caressing, but once in a while it happened that needle grass met you with angry dark-green hissing instead of merry white aigrettes. And on the right of my track I should find fragrant small violet and yellow flowers...

You go down the hill, lost in admiration and joy that all of it is where you belong, and you want to sing songs of happiness! You are racing farther, to a stream, which merrily babbles in the thick osier bed in early summer and almost dries up in hot weather, and to think that its wild waters used to wash away the bridge in some springs! And now, several decades later, those are the moments of delight I recall, with regret that I'm no poet or artist: oh, how I would have glorified the beauty of this country, only if...

TIME OF KUMYS

We used to ride bicycles so as to gather tobylgy (тобыл ы in Kazakh)—it is small thorn bush with dark-red branches and scratchy tiny green leaves. We were taught from childhood how to collect it correctly, by carefully breaking off short twigs, lest we damage roots, otherwise it would not grow the next time!

The time of kumys is from late April or early May and throughout the summer until mid-September. A bit earlier, farmers hear from a horse herder about who have a litter, that is, foals have been born—and this means they'll have kumys! My granddad, until the



age of 80, used to mount his stallion and ride to the steppe by himself to check on his horses; he loved them very dearly and could talk about them for hours.

third day. Everything is done in no hurry, without the hustle and bustle, carefully and with love.

Early in the morning, the herd of horses comes back to the village; mares

THE TIME OF KUMYS IS FROM
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MID-SEPTEMBER

My granny prepared in advance a special vessel to make kumys—a kubi (күбі in Kazakh). It is a delicate tapered wooden barrel some 80 to 85 cm high. It is washed with warm water and left to dry a bit; then its inside walls are greased with home-made butter, after which it has to be cured by smoke. And this is when we need our tobylgy twigs. They are laid as for a little fire; they burn poorly. Dry birch bark is used to make them catch fire eventually. As soon as fire is caught, the barrel (kubi) is turned upside down and put on fire to be cured by smoke. The firing procedure is repeated several times during one hour. Such smoke curing of the barrel makes the taste of kumys so distinctive. The entire ceremony of kubi treatment is repeated on every

show the way to foals walking on their thin slim legs. At each yard they are met and taken under the shelter; foals are tethered separately. I remember that my granddad gave each mare a hug, putting a halter (но та [nokta] in Kazakh) on it and warned that every horse had its own halter—they must not be mixed up, because they know their own ones by smell and would snort if something was wrong.

Horses leave for the steppe in the evening to return in the morning full and ready to give their milk. Mares are milked 5 or 6 times, every hour and a half. A mare gives just a bit of milk at a time, which is why kumys-making houses normally keep 2 or 3 horses each. To break a mare to milking is special art too, because a horse is a restive



IN SEPTEMBER OF THIS YEAR, THE KARAGANDA REGION HOSTED A KUMYS FESTIVAL, WHERE SEVERAL HUNDREDS OF FARMERS WERE WORKING THE KUMYS AT THE SAME TIME. IT WAS A SIGHT TO BEHOLD! SO, 10 THOUSAND LITRES OF KUMYS WERE MADE

creature! Fresh mare milk—saumal—is considered to be a healing drink and is used to treat many illnesses of the gastrointestinal tract and to improve Immunity. Many Kazakhstan health resorts situated in horse-breeding regions offer saumal for the medicinal purpose. And already made kumys is an indispensable natural anti-tuberculosis agent.

BUSINESS WITH PLEASURE

The prepared barrel is filled with kumys fermentation starter, which is handed down from one grandmother to another. Then fresh milk—saumal—is added there. The kubi barrel goes with a wooden agitator (nicnek [pispek] in Kazakh)—it is a long stick with a cross-shaped tip, which is intended to mix fresh milk with fermentation starter.

In the evening, after the herd has left and all business of the day has been done (and the summer on a farm is a very busy time because once the horses



have left the cows return from pasture, and the farmer has to milk those too and to pass their milk through a separator, otherwise where would cream, smetana [sour cream], and butter come from?!), fun of kumys-working begins. I and my brother took 20-minute turns at our barrel, rhythmically beating the foamy mare milk.

A book was lying near us on a shelf, and we managed to read it aloud to each other because very late in the evening our granddad asked us what we had learned and what new we had found out that day. A special subject of our lessons with our granddad was Abai's poetry and The Book of Words. I and my brother knew them by heart. This was our way to mix business with pleasure! The kubi needs to be wrapped up for the night, to keep it warm. First, it's covered with gauze folded in four layers and then with something warm, lest the mare milk get sour. I remember that we put on it our granddad's short fur coat with his malakhai [fur cap] on top for fun.

In the morning, my grandmother unwrapped our barrel, stirred kumys for several more minutes while saying something again and again, and poured it into a deep bowl, leaving only fermentation starter at the very bottom. Small black spots floated on

the kumys surface—it was butter the barrel had been greased with. It was smoked, absorbed tobylgy's fragrance, and gave it to kumys.

TASTE OF CHILDHOOD

It was customary that nobody drank kumys without guests, so we waited for someone from among our relatives or neighbours to come. By that time, my granny had her hot home-made bread or bawyersaks [eastern cookies] ready. Later, kumys is being stirred once again for a long while, this time—in the deep bowl on the table, and then it is poured in pialas [tea bowls]. The morning kumys is the most delicious, having not been fermented enough. Hot bread with butter and a piala of kumys is an unforgettable taste of my childhood! Kumys continues fermenting throughout the day, and by the evening it is a strong drink already. Being not used to it, you may even get intoxicated if you drink too much.

The Kazakhs used to keep kumys in leather bags—saba. Such a container allowed easy transportation of kumys while riding on a horse or camel. Nowadays, Kazakh farmers produce kumys and sell it in bottles. However, to be sure, there's no comparison with the home-made product. ●





TO THE HIGHEST INTERNATIONAL STANDARDS



CPC was successfully recertified in 2019. The company's Health Safety and Environment Management System (HSEMS) proved to meet the requirements of ISO 14001:2015 international environment standard and OHSAS 18001:2007 international standard for occupational health and safety management systems.

The auditors highlighted a great number of good practices and safety excellence demonstrated by CPC.

The company's management expressed its thanks to the staff for their outstanding work and contributions to the audit and for their individual commitment to their own safety and that of their colleagues at CPC and the contractors.

CPC-R, MOSCOW OFFICE

Bldg. 1, 7 Pavlovskaya Str., Moscow, 115093
Russian Federation
tel.: +7 (495) 966 50 00
fax: +7 (495) 966 52 22
e-mail: Moscow.reception@cpcpipe.ru

CPC-R, WESTERN REGION

Budennogo Str., 117/2, Krasnodar, 350000,
Russian Federation
tel.: +7 (861) 216 60 00
fax: +7 (861) 216 60 90
e-mail: Krasnodar.reception@cpcpipe.ru

CPC-R, REPUBLIC OF KALMYKIYA

Suite 608, V.I. Lenina Str., 255a, Elista, 358000,
Russian Federation
tel.: +7 (84722) 4 13 89
e-mail: Elista.reception@cpcpipe.ru

CPC-R, NOVOROSIYSK

Vidova Str., 1a, Novorossiysk, Krasnodar Krai,
353900, Russian Federation
tel.: +7 (8617) 29 43 00
fax: +7 (8617) 29 40 09
e-mail: Novorossiysk.reception@cpcpipe.ru

CPC-R, STAVROPOL TERRITORY

Suite 208, Ryleeva Str., 7, Stavropol,
355000, Russian Federation

CPC-K, EASTERN REGION

Business center "Seven Stars", Satpaeva Str., 34a,
Atyrau, 060011, Kazakhstan
tel.: +7 (7122) 76 15 00, 76 15 00
fax: +7 (7122) 76 15 91
e-mail: Atyrau.reception@cpcpipe.ru

CPC-R MARINE TERMINAL

Marine Terminal Primorsky District Territory,
Novorossiysk, Krasnodar Krai, 353900,
Russian Federation
tel.: +7 (8617) 29 40 00
fax: +7 (8617) 29 40 09
e-mail: MarineTerminal.reception@cpcpipe.ru

CPC-R, CENTRAL REGION

Kuibyshev Str., 62,
Astrakhan, 414000, Russian Federation
tel.: +7 (8512) 31 14 00, 31 14 99
fax: +7 (8512) 31 14 91
e-mail: Astrakhan.reception@cpcpipe.ru

CPC-K, NUR-SULTAN

10th floor, Kunayev Str., 2, Nur-Sultan, 010000,
Kazakhstan
tel.: +7 (7172) 79 17 00
fax: +7 (7122) 76 15 91
e-mail: Astana.reception@cpcpipe.ru

ПАНОРАМА
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Editor: Ekaterina Suvorova. E-mail: Ekaterina.Suvorova@cpcpipe.ru; Pavel.Kretov@cpcpipe.ru.
Tel.: +7 (495) 966 50 00 (ext. 5327 and 5220)

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