



AVK JSC

Reliable Russian partner with
expert service for oil and gas
processing and chemical industry

MOSCOW, 2025



GENERAL INFORMATION



The main activity of the AVK company is the development, production, and sale of industrial and special chemical products.

1

AVK started its operations in 2009 and since then has been creating solutions for refining, chemical, and petrochemical industries for 16 years, leveraging its extensive and distinctive expertise.

2

Since 2024, AVK Group has included the Samara Catalyst Plant, which produces vanadium catalysts for the production of sulfuric acid.

3

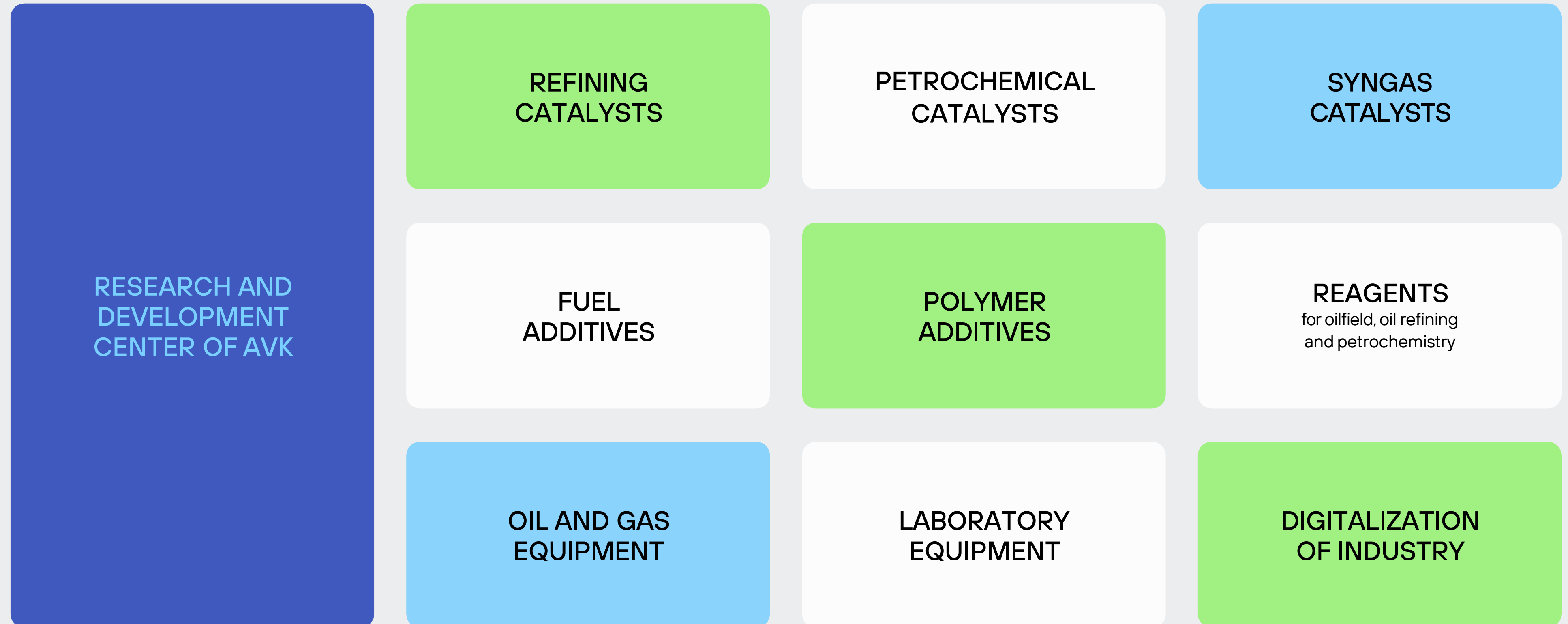
Today, the AVK Group has representative offices and production sites in 9 countries (Russia, Belarus, Kazakhstan, Kyrgyzstan, China, Turkey, UAE, Austria, Lithuania).

4

The quality management system of AVK is certified to ISO 9001:2015.



BUSINESS UNITS



WHY CUSTOMERS CHOOSE AVK



AVK is trusted by industry leaders

Unique long-term experience of completed projects for major customers: LUKOIL, Gazprom neft, Rosneft, SIBUR, FortInvest and others. AVK reference list is available upon request.

R&D Center AVK

A team of 9 PhDs and ScDs, senior technologists and engineers, R&D laboratories and scientific partnership with leading institutes ensure product development and optimization for changing customer needs.

Rapid adaptation of materials to meet your specific needs

We quickly adapt our materials to changes in your raw materials, technology or the development of your products thanks to our own laboratory and the efforts of our specialists.

Reliable fulfillment of obligations due to a stable financial position

The stable financial position of AVK ensures uninterrupted supplies and fulfillment of all obligations.

Confidence in the result with the AVK team of industry experts

Strong industry experts in the team with many years of experience in both Russian and international companies. The high level of expertise and competence ensures predictable results at every stage of the project.



R&D CENTER OF AVK



AVK's engineering laboratory is equipped with modern equipment and has a staff of technical experts.

Main R&D Center functions

- Development of chemical materials for oil refining and petrochemical, as well as technologies for their production
- Analysis of fuel and additive properties; development of additive formulations
- Implementation of technologies and solutions in the field of industrial chemistry
- Design and prototyping of industrial solutions
- Re-engineering, equipment production in the Russian Federation

Completed and ongoing projects

- Development of technology for the synthesis of cyclic peroxides (polymerization initiators)
- Development of a device for dispensing bulk materials (catalysts, additives)
- Development of technology for the construction of high-resource winter temporary road ice surfaces
- Development and implementation of mobile robotic technological complexes
- Development of a laser system for surface cleaning without compromising the integrity of the protective coating
- Development of machine quality control systems for work performed
- Localization of an industrial painting and cathodic electrodeposition (CED) line in Russia

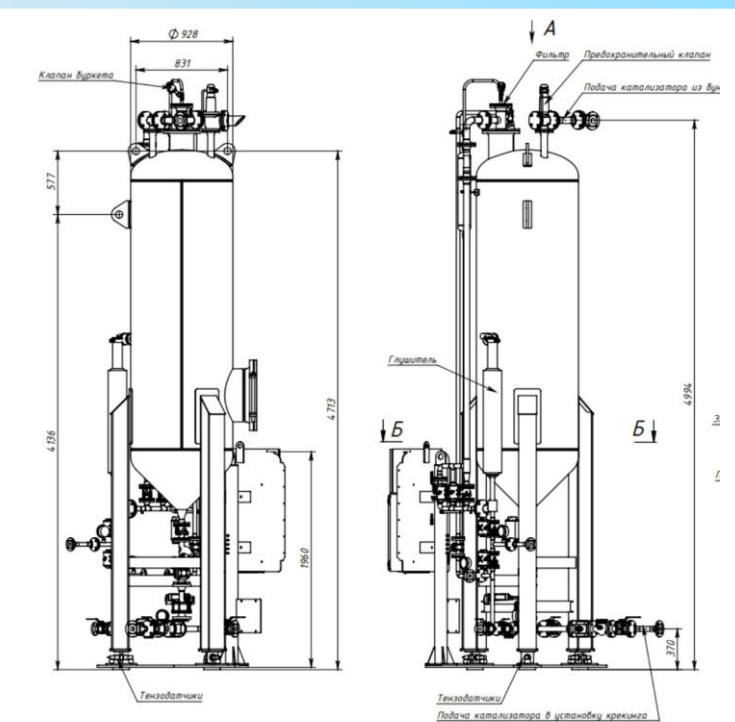
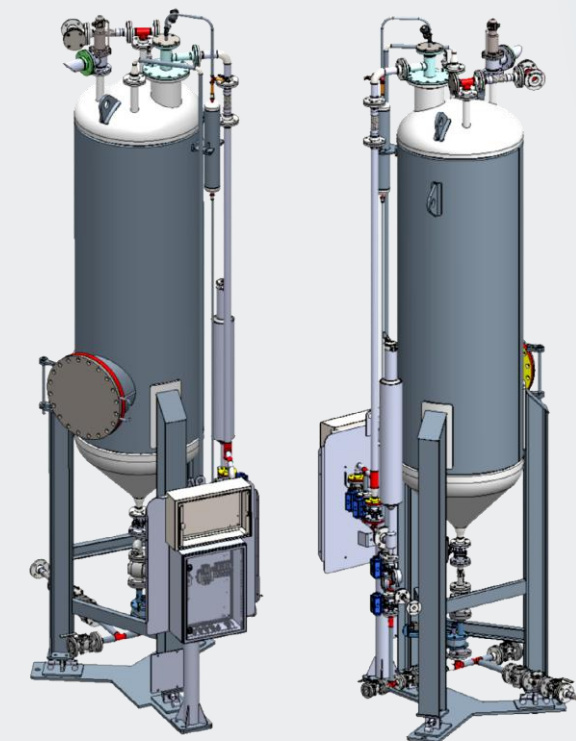
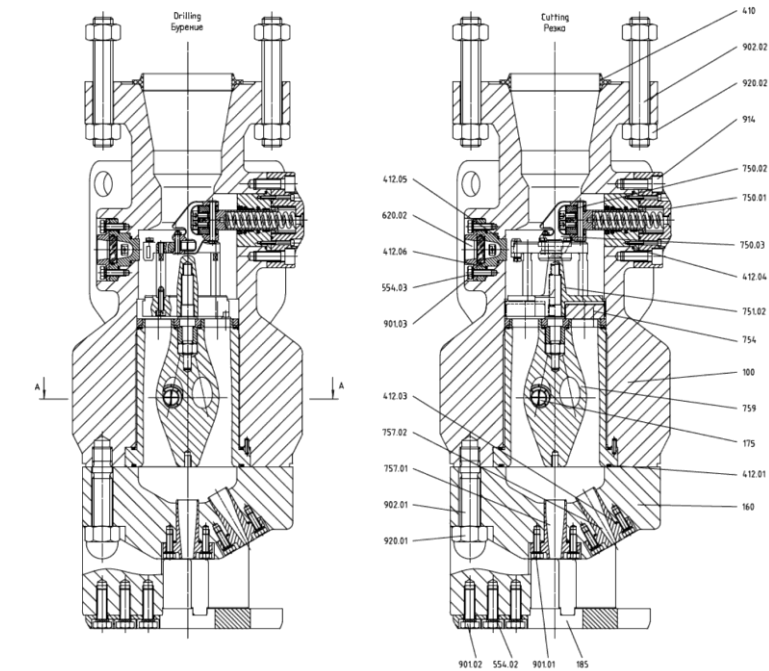


DESIGNING INDUSTRIAL SOLUTIONS

In the context of the sanctions regime, supplying devices and spare parts is a particularly acute problem. This challenge is being successfully resolved by our technical experts from the industrial equipment division.

In addition to equipment supplies, the main tasks of the division are:

- Engineering
- Reverse engineering
- Preparation of working documentation
- Design of details, assemblies
- Design and programming of microcontrollers, electrical circuits
- Development of centralized industrial automation systems
- Development of multifunctional robotic platforms for industrial applications



ADDITIVES FOR FUELS AND LUBRICANTS



1

The high quality of AVK materials is a direct result of 16 years of experience in developing, producing, and selling additives for fuels and lubricants.

Production site capacity is

18000 t/y

2

Our employees have extensive experience in the fuel additives sector, gained from working at major Russian and international chemical companies.

Production area is

1263 sq m

3

We develop the appropriate formulations tailored to individual customer requirements, taking into account specific characteristics of raw materials and processing technologies.

Additive supplies in 2024 totaled

14100 t



RANGE OF ADDITIVES FOR FUELS



Greenflo®

Cold Flow Improvers
for diesel fuels (CFI).

Greenflo®

Pour Point Depressant (PPD)
for heavy and residual fuels.

Greenpur®

Fuel Performance Packages
for automobile gasoline (GPP).

Greenpur DT®

Fuel Performance Packages
for diesel fuels (DPP).

Greencet®

Cetane improver
for diesel fuels.

Greenlub®

Lubricity improver
for diesel fuels.

Greencorr®

Corrosion inhibitors
for liquefied petroleum gas.

Greenfine®

Hydrogen sulfide
H₂S scavengers.

TECHNICAL SERVICE



Our technical service team supports current supplies:

1

Collection of base fuel on a permanent basis to monitor changes in composition and modification or development of the product in accordance with the Customer's requirements.

2

Providing timely technical support in emergency situations/incidents at production facilities.

3

Technical visits of AVK specialists as per Customers orders.

4

Development of new formulations and optimization of existing recipes.

5

Monitoring of the effectiveness of additives and adjusting dosages during fuel production.

6

Exclusion of antagonistic effects of additives when used in combination.



CATALYSTS AND ADSORBENTS FOR OIL REFINING PROCESS



By understanding the needs of Russian refineries and the capabilities of Russian and Chinese manufacturers, our company selects reliable, efficient, and profitable catalytic solutions for oil refining.

Our key products are:

- Catalysts for catalytic cracking (FCC)
- Catalysts for hydrotreating and hydrocracking (HTC, HCC)
- Catalysts for catalytic reforming (SRR, CCR)
- Catalysts for sulfur production and tail gas treatment (Claus)
- Catalysts for sulfuric acid production (WSA)
- Catalysts for hydrogen production processes
- Adsorbents for the purification and drying of hydrocarbon gases and petroleum products
- Short-cycle adsorption adsorbents
- Inert materials

In 2024, our supply of catalysts and adsorbents for oil refining reached:

5 100_t



CATALYSTS AND ADSORBENTS FOR PETROCHEMICAL PROCESSES

An extensive global partner network allows the division's employees to select the most cost-effective solutions for clients, paying special attention to the characteristics of the final products.

Our main products include:

- Polymerization catalysts
- Hydrogenation catalysts
- Oxidation catalysts
- Solutions and adsorbents for the fine purification of monomers
- Solutions and adsorbents for the fine purification of butene-1, hexene-1, and olefins

The volume of supply of catalysts and adsorbents for petrochemical industry in 2024 amounted to:

130_t



CATALYSTS AND ADSORBENTS

SAMARA CATALYST PLANT

Samara Catalyst Plant produces vanadium SO_2 conversion catalyst for sulfuric acid production, as well as a catalyst for the production of high-octane gasoline or aromatic hydrocarbons from refined petroleum products.

Production development:

In 2005, Samara Catalyst Plant underwent production reconstruction with an increase in production capacity and a complete upgrade of equipment. This made it possible to expand the range of SO_2 conversion catalysts of any standard sizes and international quality standards.

Currently, SCP is conducting research and development work to further improve the operational characteristics of catalysts, production technologies, and create new types of catalysts.



CATALYSTS FOR SYNGAS, AMMONIA AND METHANOL SYNTHESIS

Expertise, knowledge and understanding of market specifics, and the availability of a complete package of products for the industry are the foundations that allow us to offer our customers/partners the most technologically advanced and effective solutions.

Our key products are:

- Hydrogenation catalyst
- Catalysts for sulfur and chlorine removal
- Pre-reforming catalysts, reforming catalysts (primary, secondary)
- Low-temperature CO conversion catalyst (LTC)
- Medium-temperature CO conversion catalyst (MTC)
- Methanation catalyst
- Ammonia synthesis catalysts
- Methanol synthesis catalyst



CATALYSTS AND ADSORBENTS: TECHNICAL SERVICE

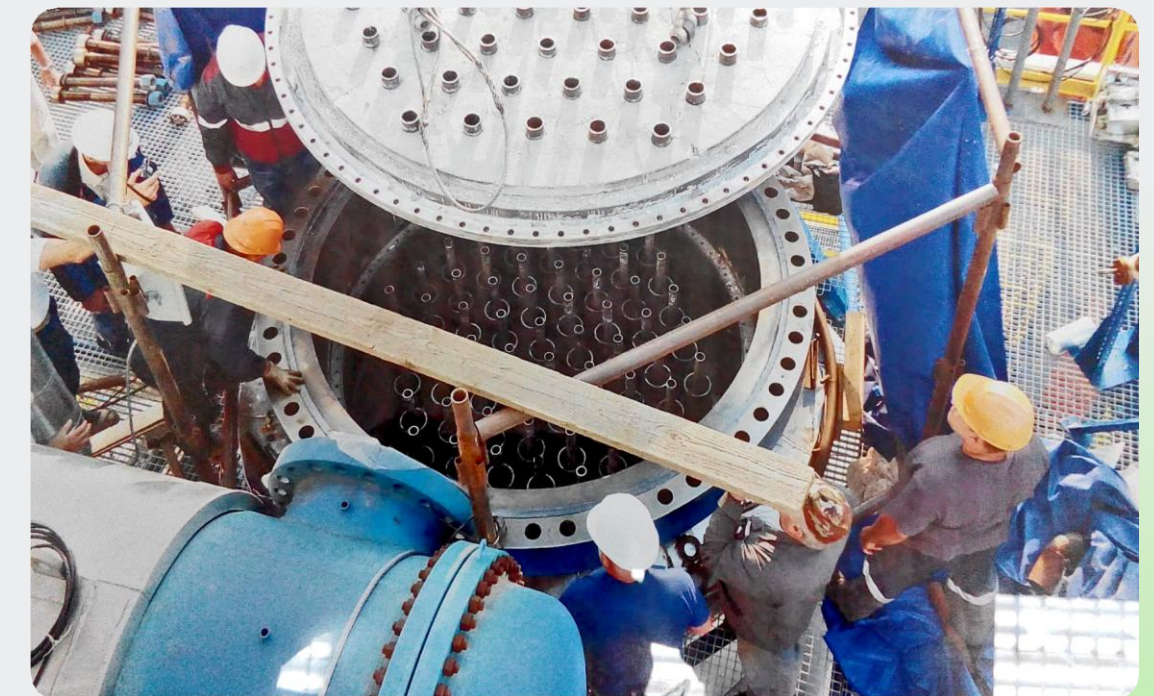
Our technical service team is trained by the product manufacturers and provides the whole cycle of technical support of the supplied products:

1

Selection of analogs of Western catalysts and adsorbents, including assistance in laboratory testing of catalyst and adsorbent samples on the customer's raw materials.

2

Support of loading, activation and commissioning of catalytic systems.



3

Monitoring of catalyst and adsorbent performance.

4

Assistance in optimization and troubleshooting of catalysts and adsorbents.

5

Sample analysis and recommendations on the feasibility of catalyst regeneration and reuse.



REAGENTS



Specialists of the reagents department pay significant attention to the development and implementation of modern chemical reagents that increase the efficiency of oil extraction and refining.

Main products of the department:

- Packages of reagent for chemical-technical protection of primary oil processing equipment from corrosion;
- Reagents for protecting equipment in secondary oil refining processes;
- Packages of reagents for reducing coke formation for tar visbreaking units;
- Reagents for processing industrial water;
- Adaptive gel for increasing oil recovery of wells and limiting water inflow.

The priority direction of our company is engineering and service support of supplied reagents: 24/7 technical support, commissioning, quarterly and annual reports, personnel training, optimization and other services.

The reagents are used at most large factories in Russia and the CIS countries.



POLYMER ADDITIVES



The Polymer additives division has many years of experience in implementation and supply of various additives for polymer production both for producers of basic polymers and rubbers and for processors.

The accumulated experience and competencies allow us to select additives for solving various technological tasks, both as individual components and as customer blends or super concentrates.

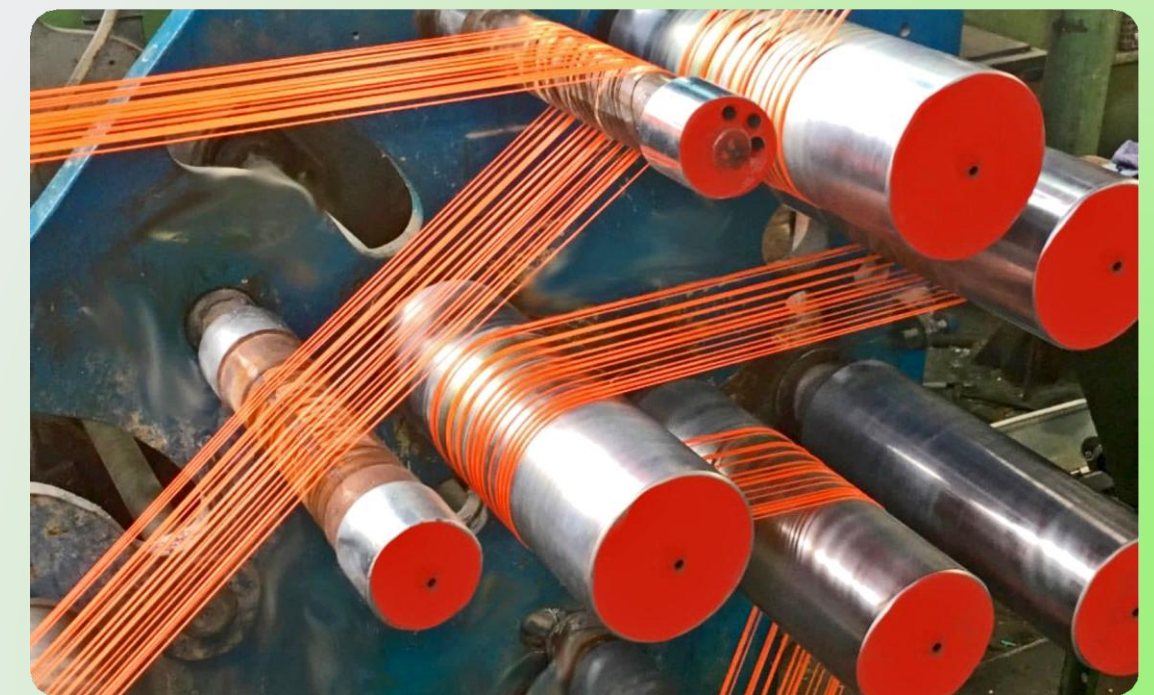
Excellent knowledge of the markets of raw materials producers and consumers allows to carry out fast and professional selection of analogs of raw materials of the companies that left Russia (BASF, CRODA, SONGWON, Nouryon, etc.).

The volume of supplies
of polymer additives
in 2024 amounted to:

2 200 t

Our main products are:

- Stabilizers/antioxidants (phenolic, phosphite, thioethers).
- Customer Specific Blends (CSB)
- Peroxides/polymerization initiators
- Co-catalysts/aluminum alkyls (TEAL, TNLAL, DEAC, EASCH, DEAL, TIBAL)
- Donors for polymerization
- Metal stearates
- Hexene-1
- Hexane
- Isopentane
- Nucleators
- Antistatics
- Anti-block/slip additives
- Bleaching agents for polymers
- Additives for synthetic fiber production
- Hydrotalcite/halogen neutralizer



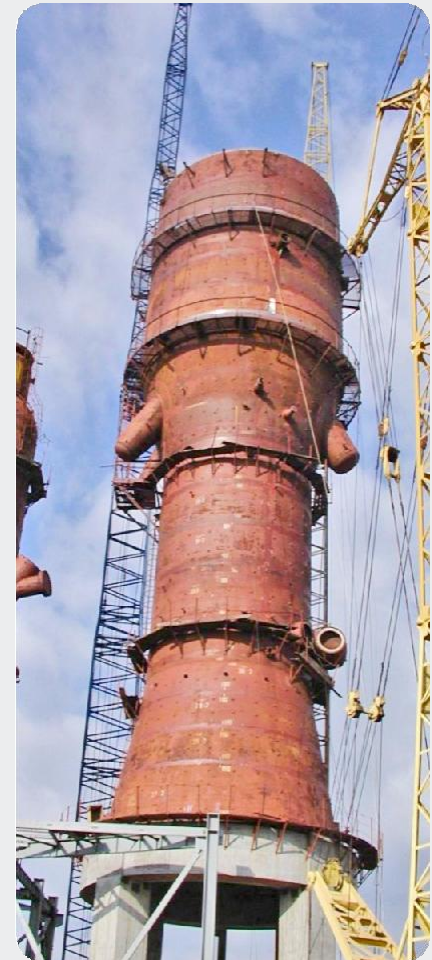
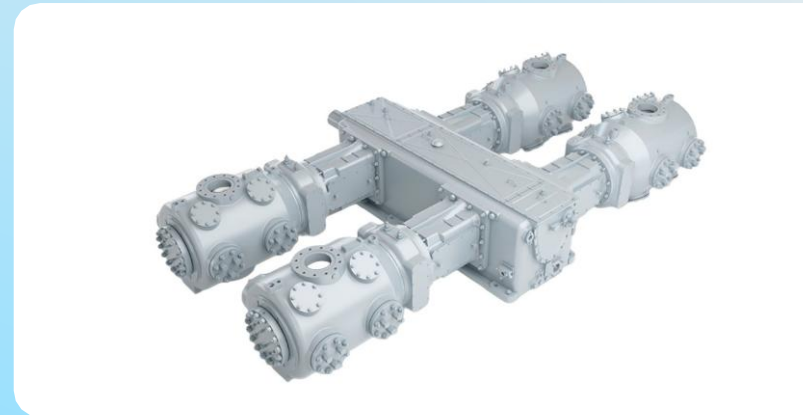
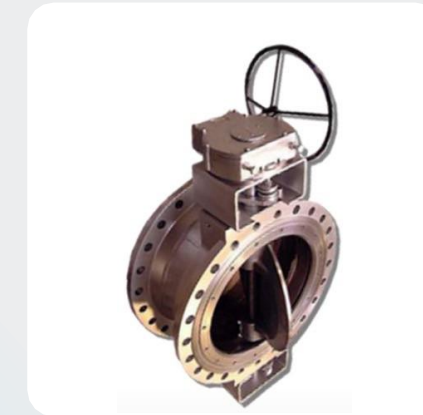
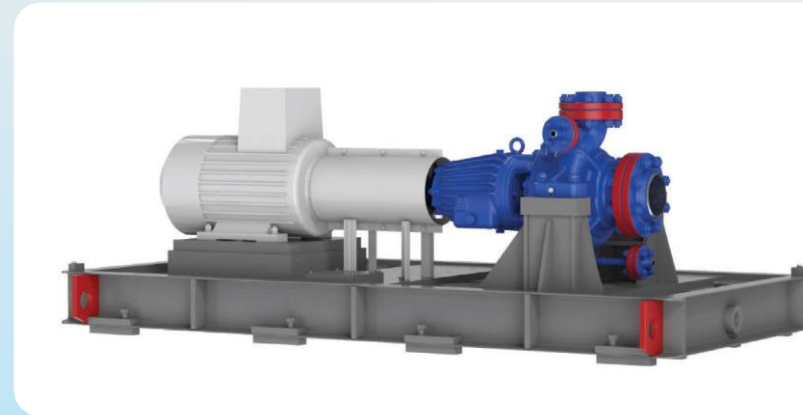
TECHNOLOGICAL EQUIPMENT FOR PETROCHEMICAL AND REFINING INDUSTRY



Our company has established itself as a reliable supplier of catalysts, adsorbents, additives and other chemical reagents for the oil and gas refining and petrochemical industry.

Today we are ready to offer you our supply services:

- reactors, columns and internal devices;
- heat-exchange equipment;
- pressure vessels and apparatus;
- pumping and compression equipment;
- valves and shut-off and regulating fittings.
- Spare parts for turbines and compressors of foreign production (Dresser Rand, Elliott, Cooper compression, Coppus, Siemens etc.).
- Spare parts (including original) for pumps Grundfos, DAB, Willo, lowara, Pedrollo, Sundyne.



LABORATORY EQUIPMENT



The laboratory equipment division specialists help clients with the search for components for engineering and testing equipment, full technical equipment of laboratories, technical support, service maintenance, repair and provision of spare details and consumable equipment for oil industry enterprises.

Our main types of supplied equipment are:

- **General laboratory equipment** (water and sand baths, flask heaters, aqua-distillers, laboratory furniture, samplers, extractors, etc.).
- **Analyzers of oil and oil products** (elemental analyzers, chromatographs, spectrophotometers, colorimeters, density meters, moisture meters, viscometers, gas analyzers, etc.).
- **Testing equipment** (temperature control equipment, testing of materials, cements and drilling muds, determination of flash point, low-temperature properties of fuels and oil products, determination of fractional composition, etc.)
- **Equipment for analyzing core properties** (core testing, sawing of samples)



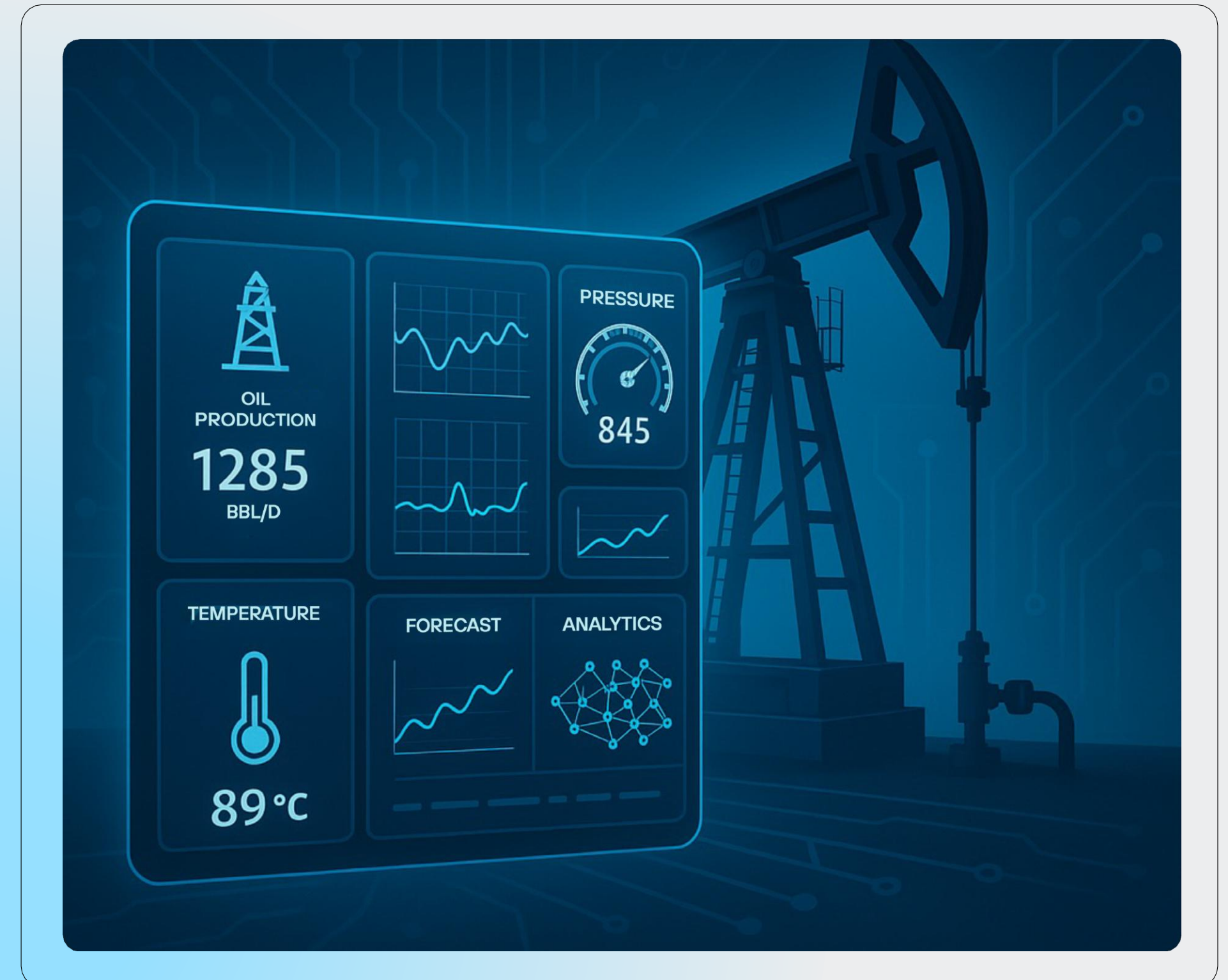
DIGITALIZATION OF INDUSTRY



In order to increase the efficiency, security and sustainability of customers' businesses, the Industrial Digitalization division develops, implements and supports different software solutions.

Digitalization areas:

- APCS (Automated Process Control System)
- Implement data analytics, automation, and digital platforms to make informed decisions and quickly adapt to market changes.
- **Environmental monitoring systems** — emissions analysis and automated reports for compliance with ESG standards
- ERP — the whole enterprise management system
- BPMS is an enterprise business process management system
- CRM — customer relationship management system
- HRM — personnel management system



OUR CLIENTS





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