



# STANDARD

FIRST PERSON

## Igor Malykhin: «We are ready to international collaboration»



**THE** Mirrico Group firmly holds its position among the leading companies of Russia and CIS. Striving to expand our operations further and desiring to try our capabilities in the new projects we turn our eyes to the foreign countries.

During years of work, we have built a portfolio of products and services capable to compete on global markets.

Among them — corrosion inhibitors that can be used in the oil industry and petroleum refining as well as various additives: depressing and dispersing, lubricating, drag reducing.

We see increasing demand for the robotic cleaning of vertical stock tanks from oil sludge patented by the Mirrico Group. The increasing number of requests from Russian and foreign companies is driven by a number of indisputable advantages of the technology — from operations safety to economic benefits, as well as tightened environmental safety requirements. Starting from this year, we do not only provide the tank cleaning service but we also manufacture the equipment by order with servicing warranty included.

Within the framework of our export program, we currently undertake steps to penetrate the markets of the Middle East (Oman, Kuwait, Saudi Arabia): our employees get training before they start trac-

er tests on the sites of Petroleum Development Oman (a compulsory condition for access); at the same time we are participating in the tender procedures for other types of services and keep improving our operations, taking them to the level of international standards (we have certified our OPU-30 plant to meet ISO 14001:2015 and OHSAS 18001:2007 international standards).

The Mirrico Group is ready to expand horizons and actively works on this task.



**MARTin robot has entered the Top 25 technological projects of Russia**

The ranking is done by the experts of Russian Tech Tour

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**Dewaxol (Mirrico Group) — the first Russian coking inhibitor**

Demonstrates efficiency comparable to foreign analogs

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**Mirrico Group is looking for start-ups**

Corporate venture investment process is started in the company

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## MARTin robot has entered the Top 25 technological projects of Russia

The ranking is done by the experts of the IV Russian Tech Tour competition. 25 companies were shortlisted of total 300 that got an opportunity to present their inventions to the potential investors — the delegates of the Tech Tour and the International Venture Club at the Russian Venture Forum.

**THE** Mirrico Group's technology of robotic cleaning of tanks, oilfield and petrochemical equipment was included in the list of technologies approved by experts. The project has drawn the particular interest of the companies from Switzerland and Saudi Arabia. In November 2017 the robot will also be presented at the ADIPEC international oil and gas exhibition.



**Andrey Spirikhin,**  
product-manager of  
the product portfolio  
development group  
(Mirrico Group)

— The core of the technology is that we perform cleaning using a robot instead of humans, thus ensuring the safety of works. Moreover, the bottom settlings are broken into oil, water, and solid fractions by application of the mobile unit. Petroleum products (oil and water) are returned to the customer thus

reducing their costs, and the solids are taken to landfills in lesser volumes thus increasing the environmental safety of the process.

More and more of the local and foreign companies that care of their personnel and the environment get interested in this service. I forecast that eventually the hand cleaning will be officially prohibited and the customers will introduce the robotic method into their processes or outsource the service in order to meet the standards required by law.



## Well-Slide – a high-performance water-based drilling mud: economy with ecology

The need for high-performance water-based mud systems is driven by high price and environmental restrictions for usage of hydrocarbon-based muds as well as underperformance of the standard drilling mud systems. The product developed by the Mirrico Group enables the balance between high-performance drilling and minimization of environmental impact.



**A**pplication: this drilling mud suitable for drilling in all intervals of the well.

#### Benefits:

- Possibility to use in the producing interval (the system components are acid soluble).
- The risk of drilling fluid filtrate penetration into producing layer is reduced to zero (due to formation of a dense membrane).

- The mud system suppresses gas hydrates, which is important for offshore drilling.
- Possibility of recycling and re-use (reduction of the drilling mud types leads to reduction of mud disposal).
- No need for additional resources for cleaning the equipment and drilled out cuttings (which is not the case for the hydrocarbon-based muds).

## The first Russian coking inhibitor Dewaxol demonstrates efficiency comparable to the foreign analogs

Based on the pilot tests results, the efficiency of Dewaxol is comparable and in some experiments even exceeds the efficiency of the imported analogs.

Currently, the additive created by the Mirrico Group is supplied to two oil refineries.



**Vera Stepanova,**  
Head of Oil and Gas Refinery and Petrochemical Industry business unit:

— Until recently, there were only foreign solutions for coking inhibition on visbreaking units.

The Russian companies did not manufacture the product due to complexity of the visbreaking process modelling in lab (which hampers the preliminary assessment of the coking inhibitor ad-

ditives efficiency) and also due to reluctance of the customers to carry risks of introducing the new additive which might lead to unplanned stoppages of the technological equipment due to the additive inefficiency.

*The full range of products of Oil and Gas Refinery and Petrochemical Industry business unit using the local raw materials was presented at the council meeting dedicated to import substitution of lubricating oils and fuels, which was initiated by the Mirrico Group at the Downstream Tatarstan conference.*

## Less water, more oil: ATREN WSO – an effective solution for reduction of water cut and oil recovery enhancement

The water cut in the produced oil grows annually by 0.5 % on the average.

There are various materials preventing penetration of water into the reservoir, but these systems have specific technological and economic disadvantages. The Mirrico Group has developed a solution with a number of advantages over other water shut-off solutions on the market.



**Aim:** depending on the brand and preparation method, the additive can be used for water shut-off and injection profile conformance control technologies.

**The benefits of ATREN WSO:**

- Selective treatment of the producing interval during water shut-off operations is performed without the use of mechanical insulation

systems, which in turn simplifies the water shut-off operations and reduces the cost of remedial well servicing.

- Complete dissolution of the gelling agent at high rates in the flow of injected water of almost any mineral content.
- Additional input of cross-linking

components into the system is not required.

- Mechanical impact resistance of the polymer system formed.
- Easy breaking of the cross-linked polymer system. If necessary, the produced gel can be broken by the water solutions of chlorine hydride.

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## The OPU-30 plant complies with the international environmental, occupational health and safety standards.

The Mirrico Group performed a huge work to implement the integrated management system ISO 14001:2015 and OHSAS 18001:2007 in the shortest possible time: training of specialists, preparation of necessary documentation, internal audits, identification of hazards and risk assessment, identification of environmental aspects and assessment of their environmental impact, corrective actions.

**C**ertification guarantees significant increase in the level of environmental safety of the enterprise and ensures timely monitoring of working conditions to eliminate and reduce occupational hazards.

In addition, the adherence to these international standards increases competitiveness and market opportunities of the enterprise.

Nowadays, the OPU-30 plant holds the following certificates:

- ISO 9001:2008, Quality management system;
- ISO 14001:2015, Environmental management system;
- OHSAS 18001:2007, Occupational health and safety management system.



## The company has implemented the international financial reporting

IFRS-compliant financial statements were first prepared in 2015 in cooperation with KPMG audit firm. The 2016 annual report was prepared by the Mirrico Group independently, while KPMG experts acted as auditors.



**Anna Zakirova, the head of consolidation and management reporting department at the Mirrico Group:**

— To meet the requirements of the unified financial standards is one more step towards building international relations. It is easier for a customer to evaluate activities of the company basing on the unified criteria; in addition, IFRS-compliant financial statements

indicate size of the company (only large shareholder companies implement this approach) and transparency of its financial activity. Self-reporting indicates that company grows and its employees acquire new

competencies. The Mirrico Group is currently working on streamlining the IFRS-compliant reporting process and trying to reduce the reporting time.

## The Mirrico Group is looking for start-ups

Since 2017, the company is searching and assessing projects that can be added into the portfolio of innovative developments.

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company's specialists independently monitor external projects and review applications sent.

The Mirrico Group cooperates with large investment and venture funds, while the company's employees

The project review process consists of two stages:

I. Assessment of compliance with the Mirrico Group criteria, the most important of which being:

- compliance with the company's strategy,
- technical feasibility,
- compliance with the acceptable level of investment risks.

II. Decision on the format of cooperation (purchasing of the project by the company, establishment of joint ventures, purchasing of shares or equity stakes).



**Vasily Solodov,**  
Director for  
Innovations:

— On the official website of our company, we have created a one-stop interface for innovations: the start-up teams can fill in the special form and send their projects to receive investments. Since the appearance of the one-stop interface, the number of external projects for commercialization has doubled. Projects with prototype or pilot sample are preferable, but ideas are also considered. The Mirrico Group pays attention to modern technology and is stable enough in financial terms to support promising inventions.



#MIRRICODRIVE

## The Mirrico staff is actively engaged in social and sports activities

In 2017, employees of Mirrico tried themselves at the Kazan Marathon, Marathon of Good and IRONSTAR Triathlon. Igor Malykhin, CEO, an experienced marathon runner participating in the most famous running events over the globe, is the mastermind for the employees.



**Veronika Anisimova,**  
HR Department  
Manager:

— HR Department is regularly monitoring the significant sports events and offers them to the staff. Since healthy living philosophy is close to the Mirrico Group's morale, the company covers the registration fees for its employees.

Social dimension is also taken into consideration when choosing the event: for instance, this year the staff of our company received positive emotions not only from the team building, but also from the opportunity to contribute to good deeds, to help raise funds for a hospice in Tatarstan and attract attention to the issues of environmental protection and AIDS prevention.



Anton Kachurin, Director of Operations,  
at the IRONSTAR 2017



Igor Malykhin, CEO, at the Elton Ultra Trail  
(the distance is 182 km)



Staff of the Mirrico Group  
at the Kazan Marathon 2017