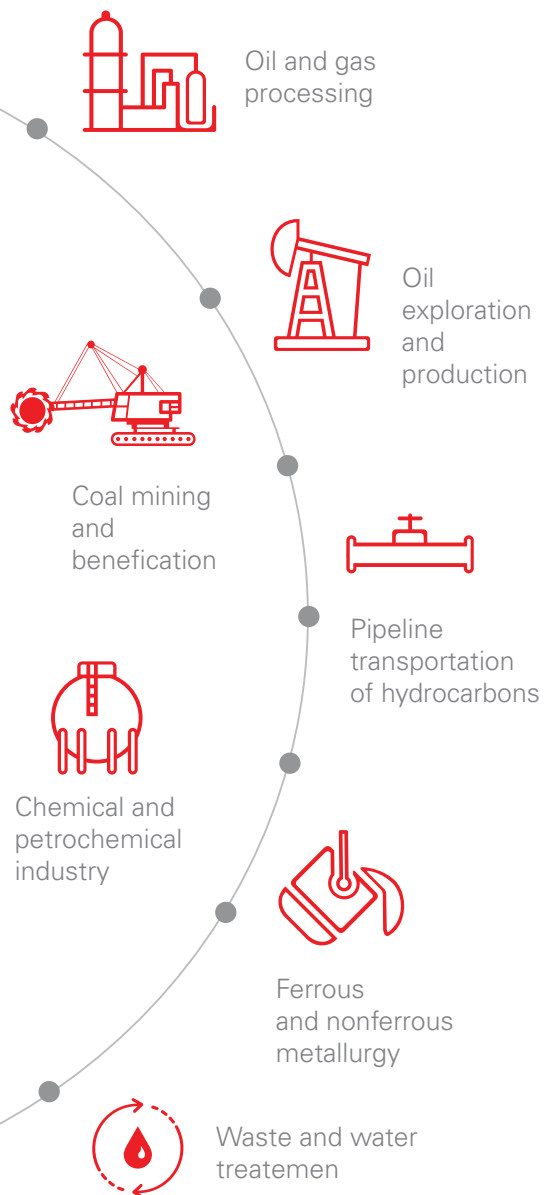


The Mirrico Group Business Domains:



«MIRRICO» –

a Russian group
of manufacturing and service
companies with a proprietary
modern production facility-
manufacturing chemical
products for the companies
of oil and gas and
petrochemical industries



The Mirrico Group of Companies

OOO Osnova Chemical Group, Oil and Gas
Refinery and Petrochemical Industry
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MIRRICO
GROUP OF COMPANIES



DEWAXOL*

PRODUCT LINE
OF COKING AND COKE
DEPOSITION INHIBITORS

* Product of Mirrico Group Made in Russia.

Chemicals for coking reduction of Dewaxol line:

- Coking and coke deposition inhibitors of Dewaxol 1001 and 1004 brands;
- Coke antiprecipitating and dispersing agent of Dewaxol 1002 brand;
- Passivator of Dewaxol 1003 brand.

Application:

The line of Dewaxol reactants ensures anti-coking protection for the following equipment of oil refineries:

- Heat exchangers of crude feed pre-heat units;
- Visbreaker heaters, ADU/VDU heaters;
- Fractionating columns.

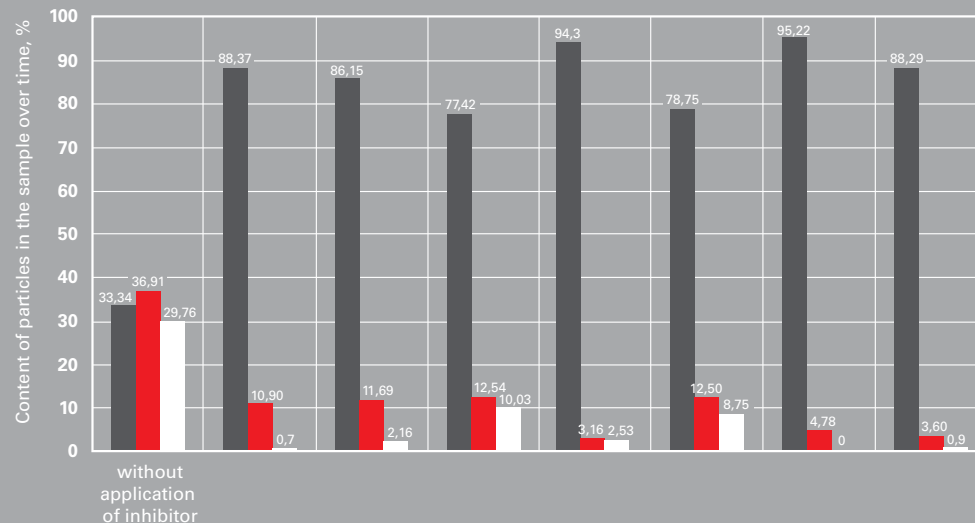
Purpose:

- Increasing time between repairs for refinery equipment.
- Implementation of visbreaking processes at high temperatures with reduced risk of equipment carburization:
 - Increasing efficiency of cracking reactions;
 - Increasing yield of light petroleum products;
 - Decreasing viscosity of cracking residue.

Advantages:

- Optimum price/quality ratio;
- Comprehensive performance of each of the agents in the product line (inhibiting, coking, dispersing of coke particles);
- Competitive capacity on the level of foreign analog products.

Distribution of coke particles by size in the cracking residue without processing and during processing:



Change of coke particles ratios in the cracking residue samples with application of inhibitor and without it.

Sampling rate — 2 weeks.

- 0-3 µm
- 3-5 µm
- > 6 µm

Experience:



OJSC-Kuibyshev Refinery
JSC Angarsk Petrochemical Company



Over 80 %

reduction of coarse coke particles formation can be achieved by application of reactants of Dewaxol product line.