

## JSC 'Saratovskiy Oil refinery'

### Information about the works and object:

Engineering works, construction and assembly operations, partial supply of equipment to JSC 'Saratovskiy Oil refinery' by Oil Company 'Rosneft' on the basis of the project 'Adjusting refinery process units such as chemical plant of workshop № 4, recycling water supply of workshop №11 to the requirements of fire safety regulations in relation to re-equipment of control tools and emergency shut-down'.

### Description of corporate customer - JSC 'Saratovskiy Oil refinery'

The oil refinery was built in 1934. JSC 'Saratovskiy Oil refinery' is situated at industrial zone in Zavodskoy district at the South of Saratov city. The oil refinery is based on five areas: oil refinery itself, oil product depot, silt area, onshore terminal and onshore pump station. On the south slope of Tolmakovskiy ravine, next to Knyazevka railway station and Novy Uvek town there is a living area and an area with summer cottages which are close to the industrial area of the oil refinery.

Capacity of 'Saratovskiy Oil refinery' is 6.75 million of tons (48.9 mil of barrels) of oil a year. 'Saratovskiy Oil refinery' processes the oil of "Urals" brand name and the oil from Saratovskiy oil field which is supplied over pipeline. The oil refinery also processes the oil from Sorochinskiy, Orenburgskiy and Zaikinskiy oil fields supplied by rail. All kinds of motor fuel produced at the oil refinery meet the highest "Euro 5" ecological standard.

In 2013 at 'Saratovskiy Oil refinery' the new unit of pentane-hexane fraction isomerization with the capacity of 300 thousand tons a year was put in service. The existing CDU / VDU-6 unit was reconstructed and its capacity was increased up to 7 million tons a year of crude oil. Asphaltum oil visbreaking unit was also reconstructed and its capacity was increased up to 1 million of tons a year of crude oil.

After 'Saratovskiy Oil refinery' has joined JSC "Oil Company "Rosneft", the program of developing of the oil refinery has been started for the year 2020. The main aim of the program of developing is improving oil conversion ratio in order to increase production of light fuel products. The total amount of investments is 4.5 billion of rubles.



### Project task:

Stage1: general design engineering

Stage 2: executing general constructor functions

Within the framework of the project 3 units has been reconstructed:

- Chemical plant -2
- Recycling water supply unit-4
- Chemical treatment of water unit



### Task solution:

#### Performed activities:

Within the framework of the project engineering and construction of tanks, pipelines, thermal insulation system, water supply system, heating system and ventilation system have been performed. Emergency shut-down has been updated.

#### Short description of units:

- Chemical plant – 2 was built together with CDU / VDU-6 unit. It was put into service in 1995. Chemical plant was meant for receiving, storage and provision oil refinery units with chemicals. The main function of the chemical plant is to receive chemicals from rail tanks on time, storage of chemicals in right conditions, preparation of chemical solution of required concentration and provision the oil refinery units with chemical solutions.
- Recycling water supply unit -4 was meant for cooling of recycled water coming from the units of the oil refinery. Design capacity of Recycling water supply unit -4(I) is 8000 m3 an hour. It was put into service in 1967. Design capacity of Recycling water supply unit -4(II) - 4000 m3 an hour. It was put into service in 1989.
- Chemical treatment of water unit was meant for preparation and provision oil refinery units with demineralized water. Capacity of Chemical treatment of water unit is 150 m3 an hour. Preparation of demineralized water is performed in several stages: heating of water from the Volga River; filtering by mechanical filters; water softening by filtering with Na-cation filters equipped with two-stage cleaning system. The unit was put into service in 1990.

### Terms of project execution:

Stage1 (2011-2013): general design engineering

Stage 2(2014-2016): executing general constructor functions

At first stage and at the beginning of the second stage the units were adjusted to the actual requirements of safety regulations that allowed to provide safe and reliable operation of units, prevent and reduce accidents, property damage and pollution of environment, reduce sickness rate as well as accidents.



Additional information can be  
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