



Bukhara Oil Refinery is Always on Top

Raufov.I.S.

Freelance researcher on the history of Uzbekistan at Bukhara state university

ABSTRACT

From the moment our country gained independence, the processing of oil raw materials produced in our country has become an acute problem. In this regard, the construction of an oil refinery in Bukhara ready to process these raw materials into a finished product was a priority task. As we can already see from the example of this plant, our country coped with this task perfectly. The plant's products are widely used in many sectors of agriculture in our state. And this, in turn, strengthens the economy of Uzbekistan.

Keywords:

Oil, Product, Plant, Diesel, Oxygen, Processing.

The Bukhara oil refinery, founded on the initiative of the first president of our country, this year turned 24 years old, built on the basis of the projects of the French company "TEKNIP". When forming the technological processes of this plant, licenses from the French Institute of Petroleum, the American company "Merikem" and the Dutch "Komprimo" were used. The plant has a processing capacity of 2.5 million tons of oil and gas condensate per year.

Such products of this plant as gasoline, jet fuel, diesel fuel, hydrocarbon solution, fuel oil, liquefied gas, sulfur are in great demand. Here, on the basis of programs to improve the quality of the product, bringing it into line with world standards, the technology for the production of high-octane gasolines of the AI-91 and AI-95 brands was mastered. Another piece of news was the launch of the production of environmentally friendly diesel fuel resistant to low temperatures. In addition, based on modern requirements, our plant produces Jet-

A-1 jet fuel intended for Boeing and Aerobus airliners.

At present, the Bukhara oil refinery is on the next round of renovation.

If we recall its history, then the first stage of the Bukhara Oil Refinery was put into operation on August 22, 1997. The French consortium Technip was involved in the design and construction of the plant.

In the process of design and construction, the most modern achievements of science and technology in the field of processing hydrocarbon raw materials were used. Licensed technological processes for atmospheric distillation of liquid hydrocarbons and catalytic reforming with continuous catalyst regeneration (France), kerosene democratization (USA), diesel fuel hydrotreatment (Japan), gas fractionation with amine treatment (Japan), and sulfur recovery (Netherlands) have been mastered.

The production capacity of the plant allows the production of such popular oil products as motor gasoline of various grades (AI-91, 92, 95,

80), Jet A-1 aviation fuel, diesel fuel grades ECO L (summer), ECO Z (winter), diesel fuel grades Euro K4 and K5, diesel fuel grades TDL (summer) and TDU (weighted), heating oil grades M-100 and M-40, pyrolysis gasoline, propane refrigerant, liquefied petroleum gas (LPG), hydrocarbon solvent C4-135/220, technical sulfur.

In order to improve the quality indicators of produced diesel fuel in 2006-2008, the technology for the production of environmentally friendly diesel fuel (ECO) of summer and winter types was mastered.

In 2007-2009, a lot of work was done to introduce new products into production - jet fuel for gas turbine engines of the Jet A-1 brand, which is standard fuel for airliners of the Boeing and Airbus types. For this purpose, the technological infrastructure of the factory shops has been modernized and fuel storage tanks have been prepared - their inner surface has been coated with a special coating. The factory laboratory is equipped with modern equipment and instruments for testing for compliance with international standards. Based on the DEF STAN 91-91 (Great Britain) standard, the Uzstandard Agency developed and registered the state standard of Uzbekistan O'z DSt 1117:2007 "Aviation fuel for gas turbine engines Jet A-1 (Jet A-1)". Together with leading research organizations (All-Russian Scientific Research Institute for Oil Refining, the State Research Institute of Civil Aviation of the Russian Federation, the Institute of General and Inorganic Chemistry of the Academy of Sciences of the Republic of Uzbekistan), studies were carried out to develop the production of Jet A-1 aviation fuel at the Bukhara Oil Refinery.

As a result, since August 2009, BOR started commercial production of Jet A-1 and is currently supplying them to consumers, such as Uzbekistan Airways JSC, Uzbekistan Airports JSC and the Ministry of Defense of the Republic of Uzbekistan.

As part of the Finished Products Localization Program, starting from 2008, the production of a hydrocarbon solvent grade C4-135/220, which is an important component used in the

manufacture of paint and varnish products, was launched.

In 2011, a new railway overpass was put into operation, which makes it possible to speed up the process of unloading hydrocarbon raw materials entering the plant.

The beginning of cardinal changes was laid by the Presidential Decree "On measures to increase the production of finished export-oriented products based on the deep processing of hydrocarbon raw materials for 2016-2020" dated September 28, 2016.

According to the document, tasks were set for the production of finished products with high added value that are in demand on foreign markets, and a list of investment projects for 2016-2020 was approved. The Decree laid the conceptual foundation for the implementation of the BOR modernization and reconstruction project.

To implement the investment project for the modernization of the plant, a resolution of the President "On measures to further expand and strengthen cooperation between the Republic of Uzbekistan and the Republic of Korea" dated April 29, 2019 was adopted. As part of the execution of the document, on July 6, 2020, the Chairman of the Board of Uzbekneftegaz JSC Mekhriddin Abdullayev and the President of the South Korean company SK Engineering & Construction Jason Ann signed an agreement on the provision of engineering services, which provides for the development of a basic design (FEED) for the modernization of the Bukhara Oil Refinery.

As a result, on March 30, 2020, for the first time in the history of Uzbekistan, the production of environmentally friendly and high-quality diesel fuel of Euro-4 and Euro-5 classes was launched. A certificate of conformity for the products has been received, it is supplied to consumers of the republic.

Stable operation and development of the plant largely depend on the professionalism of the staff. Every year, the BNPZ organizes advanced training for its employees, and in order to exchange experience, they are sent to large international companies.

Directly at the production site of the plant, together with universities, industrial and pre-

diploma practice for students was organized in order to train young specialists and acquire production skills for them.

About 600 college graduates are provided with work in their specialty on the basis of tripartite contracts. Employed college graduates are passed on experience by mentors, attached specialists with many years of work experience at the plant.

The company has a workshop for the production of oxygen. As you know, during the pandemic in the country, the demand for oxygen concentrators has noticeably increased. The staff of the Bukhara Oil Refinery, as part of a charitable program, provided liquid oxygen to hospitals in the Bukhara region free of charge. Aid played a big role in saving the lives of patients.

As is known, in accordance with the Decree of the President of the Republic of Uzbekistan "On additional measures for the implementation of the investment project "Production of synthetic liquid fuel based on purified methane of the Shurtan GCC" dated December 29, 2016, an investment project for the production of synthetic liquid fuel UzGTL is being implemented in the country. Production of synthetic kerosene, synthetic naphtha and synthetic diesel fuel is envisaged.

Also, the Bukhara Oil Refinery is implementing the project "Expanding the production of the Bukhara Oil Refinery by involving Uzbekistan GTL LLC in the production of synthetic kerosene components".

As part of industrial cooperation, it is planned to supply GTL synthetic kerosene from the Kashkadarya region to the Bukhara refinery for the production of Jet A-1 grade aviation kerosene, the qualification tests of which are also planned to be carried out in internationally recognized laboratories.

For the reception, storage and mixing of GTL kerosene, the project provides for the construction of two tanks with a volume of 5,000 cubic meters each with utilities, and the reconstruction of a pumping station.

Thus, the plant makes a significant contribution to strengthening the energy independence of Uzbekistan.

List of used literature:

1. Bnpz.uz 29.08.2017.
2. Yuz.uz 12.05.2021.
3. Manufacturers.ru 12.02.2020.
4. Gazeta.uz 26.05.2022
5. «Бухоро хакикати» 15.09.1996