

ASSESSMENT OF AIR EMISSIONS IN THE PROCESS OIL AND GAS PROCESSINGS

¹O.Aripdjanov, ²Kh.Pulatov, ³F.Shapatov

¹Associate Professor, Department of Chemical Technology of Oil Refining
Tashkent Institute of Chemical Technology

²Vice-rector of scientific affairs and innovations
Tashkent Institute of Chemical Technology

³Senior teacher, Department of Chemical Technology of Oil Refining
Tashkent Institute of Chemical Technology

<https://doi.org/10.5281/zenodo.8345093>

Abstract. *In this work, the Bilo studied a large number of emissions into the atmosphere of acidic components of the Oil and Gas Processing Plants and their impact on the ecology of these regions.*

Keywords: *adsorption, absorption, seravadarod, carbon monoxide, atmosphere, sulfur.*

In the world, the production of organomineral, synthetic and composite sorbents used to clean oil and gas from acid gases has doubled compared to a decade. Of these, 55% are used at oil and gas processing enterprises in order to purify and separate outgoing gases from the acidic components of mercaptans, carbonyl sulfides, disulfides and other sulfur-containing compounds. Along with this, special attention is paid to the creation of a generation of new universal composite sorbents, the production and development of technologies for the use of these sorbents.

Today, an important group is the synthesis of new nano-structural composite sorbents used for the complete disposal of various wastes from oil and gas processing enterprises, the modernization of technologies for cleaning processes and tail exhaust gases from acidic impurities, increasing the stability of the physicochemical properties of sorbents and improving the environmental conditions for processing secondary sorbents. oil and gas processing enterprises.

Recently, in the government in industrial oil and gas processing plants, additional attention has been paid to the methods of finding, cleaning and exiting gas, production based on the indications of sulfur, mercaptans, carbonyl sulfide (SOS), disulfide (SS₂) and sulfides (RSR), as well as the creation of new types of highly effective composite absorbents for gas purification. The action strategy for the long-term development of the Republic of Uzbekistan provides for the following tasks: "The rise of industry by transferring it to a qualitatively new level, to further intensification of the production of finished products based on the deep processing of local resources, the development of the production of new types of products and technologies." In this regard, research on the creation of composite absorbents and the development of highly effective composite absorbents in various groups, which increase the degree of purification of acidic components and the emergence of new gas production, are of decisive importance.

The atmosphere, like the entire natural environment as a whole, has the ability to self-purify. Harmful substances entering the atmosphere from anthropogenic sources settle on the surface of houses, plants, soil, are washed out by atmospheric precipitation or are transported to considerable distances from the place of release. All these processes occur with the help of wind and depend on air temperature, solar radiation, precipitation and other meteorological factors.

In recent years, problems that are closely related to meteorological factors, such as desertification, land degradation and drought, are among the negative natural phenomena that, in extreme manifestations, lead to loss of life and significant material damage.

Table 1.
The average annual number of days with drought intensity

Station	Drought		
	Weak	Medium	Strong
Urgench	7,9	1,1	0,0
Ayakagitma	27,8	12,3	2,4
Tamdy	17,9	6,2	1,5
Bukhara	14,6	3,0	0,4
Mubarek	31,5	14,0	4,5
Termez	33,2	9,7	1,6
Samarkand	2,7	0,1	-
Yangier	15,2	2,2	0,5

In some areas, air drought is relatively weak, while many areas are affected by severe and very severe drought. The area of maximum values of the number of days with severe drought is located between the Amu Darya and Murgab [1]. The average annual number of days with severe drought in Mubarek reaches 9%, at other stations it is much less. Since air pollution is one of the causes of drought, it is necessary to study and monitor emissions of pollutants from oil and gas processing facilities [2].

Table 2 presents the total amount of emissions from oil and gas processing facilities. Attention should be paid to the Mubarek GPP.

The largest amount of emissions (86414.311 tons/year) is produced by this plant. The average annual number of days with severe drought (4.5) is also observed in Mubarek. Therefore, it can be assumed that not only natural causes can lead. But convincing conclusions can only be drawn from a careful study of this problem.

Table 2.
Number of pollutant emissions from facilities oil and gas processing for 2019

Business name	Total emissions t/year
Mubarek Gas Processing Plant	86414,311
Shurtan GCC	2574,090
Bukhara Oil Refinery	2957,710
Chinaz Refinery	92,528
Ferghana Oil Refinery	10385,620
JSC Makhsusenergogaz	1,929
Total	102426,190

In addition, in 2019, emissions of hydrogen sulfide (387.243 tons/year) and soot (111.627 tons/year) increased at the Mubarek GRP and the Shurtan GCC. This is due to an increase in the number of developments of sulfur deposits of hydrocarbons and gas fields. It should be noted that, getting into the atmospheric air, this gas reacts with oxygen and ozone, forming sulfur dioxide. This gas combines with water to form sulfurous acid [3].

The problem of gas purification from hydrogen sulfide requires ensuring environmental safety in the development of sulfur deposits by reducing harmful emissions into the atmosphere [4].

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