



ENSURING THE RELIABILITY OF PIPELINE TRANSPORT IN GAS PROJECTS IN UZBEKISTAN

Pipeline Transport Safety Improvement Program does not apply to foreign oil and gas organizations; however, specialists from the Network Group and LUKOIL Group entities work with colleagues from foreign organizations on projects in which LUKOIL is an operator, and provide necessary consultations.

Gas fields in Uzbekistan are characterized by having high gas pressure (up to 200 atm), high hydrogen sulfide H₂S (up to 4.5%, Southern Gissar), and carbon dioxide (up to 5%) content, as well as high chloride content in formation water (up to 60,000 ppm).

Practical experience in operating the Khauzak-Shady and Gissar fields has shown that the approaches used to ensure the reliability of pipelines in a very harsh environment have contributed to trouble-free operation for the past 10 years.

To ensure the integrity of equipment, the corporate standards of LLC LUKOIL Uzbekistan Operating Company have been elaborated and agreed with the state inspection of the Republic of Uzbekistan. These standards regulate the procedures for monitoring the technical condition, maintenance, diagnosis, and repair of equipment, taking into account the high content of hydrogen sulfide and carbon dioxide.

Advanced corrosion monitoring methods (FSM matrix, Ultracorr, Hydrosteel 6000) are used in the fields, and an automated electrochemical protection system is being designed. The Wavemaker system has been installed, which allows an object to be monitored at a distance of up to 100 meters in both directions from an installed sensor; consequently, diagnoses can be performed in hard-to-reach areas. There are plans to integrate data on the results of in-line diagnostics with the geographic information system of LLC LUKOIL Uzbekistan Operating Company.