2.8.5 Construction and operation of oil and gas pipelines, bases and storage facilities

Уровень Training level: aspirantura
Form of training: aboutchnaya
Duration of training: 4 years old
Group of scientific specialties: *Subsurface use mining sciences*
Number of seats: 5 (contract)

Program Description

The purpose of mastering the postgraduate program is to write, design and submit for the defense of a dissertation for the degree of Candidate of Sciences, containing the solution of a scientific problem that is important for the development of the relevant branch of science.

Scientific specialty 2.8.5 Construction and operation of oil and gas pipelines, bases and storage facilities – a field of science and technology that studies, develops scientific foundations, and improves the theory and practice of construction and operation of oil and gas pipelines, product pipelines, bases and storage facilities. The importance of solving scientific and technical problems of this specialty for the national economy is to develop and improve methods of construction and operation of oil and gas industry facilities, technological processes and technical means of pipeline transport systems, oil and gas treatment and storage in order to increase the efficiency and reliability of main oil pipelines, gas pipelines, product pipelines, bases and storage facilities.

The program is aimed at comprehensive and high-quality training of scientific and scientific-pedagogical personnel in the following areas:

1. Stress state and interaction with the environment of pipelines, reservoirs and equipment under various operating conditions in order to develop scientific foundations and methods for strength, hydraulic and thermal calculations of oil and gas pipelines and gas and oil storage facilities.
2. Development and optimization of methods of design, construction and operation of onshore and offshore oil and gas pipelines, oil depots and gas and oil storage facilities in order to improve technological processes taking into account the requirements of industrial ecology.
3. Development of scientific bases and improvement of technology of pipeline transport of gas, oil and oil products, hydro-and pneumatic container transport.
4. Development of the theory of structural and system reliability of oil and gas pipeline systems, including for difficult climatic conditions.
5. Development of scientific bases and improvement of technology of storage of oil, gas and oil products and methods of construction of underground and surface gas and oil storage facilities.
6. Development and improvement of methods of operation and technical diagnostics of equipment of pumping and compressor stations, linear part of pipelines and methods of their protection against corrosion.
7. Research in the field of life of pipeline structures, including those predicted during design and residual during their operation.