

ABSTRACT

The subject of the present dissertation is the study of the methods used for the installation of subsea pipelines for natural gas and the examination of the consequences of the project to the surrounding environment. The positioning of underwater pipelines will serve as a primary purpose for the transportation of Natural Gas from block 12 of the Cypriot Exclusive Economic Zone to land, where the terminal station is found. The specific construction aims for the liquidation of the Natural Gas, which will reach the terminal reservoir in the form of gas. The project will be completed in six chapters, which will be structured as follows:

In the first chapter takes place a general introduction to the hydrocarbon reservoirs and the natural gas and there is also a reference to the energy policy of Cyprus and especially to the natural gas policy and the potential prospects will be discussed opened. Moreover, there is a reference on the agencies involved in the search, exploration and exploitation of the natural gas.

In the second chapter, there is a determination of the operating conditions of the subsea pipelines and calculations such as the wall thickness of the pipeline as well as its diameter which determine the cross section are defined. Furthermore, the construction materials of the subsea pipelines and the connections used to join the individual parts are referred to. Finally, the basic controls that have to be made to protect the pipeline are identified.

The third chapter includes calculations of the initial natural gas reserves of the block 12, as well as the recoverable reserves in the case volumetric depreciation. In this chapter the estimates made in the case of the abandonment of the natural gas from the reservoir are also mentioned.

The fourth chapter includes a general presentation of the methodology by which the project will be executed from the beginning until its completion. Moreover, are developed the installation methods of the subsea pipelines with their advantages and disadvantages.

In the fifth chapter, is analyzed an assessment of the environmental consequences throughout the whole duration of the execution of the procedure until the completion of the project.

Finally in the sixth chapter discussed the conclusions resulting from the completion of this dissertation.