Summary

The objective of this graduation project is the development of magnetic control device used for recording magnetic stray fields arising in places of occurrence of defects in the drill pipe.

Magnetic nondestructive testing usually used for production control of ferromagnetic materials, ie materials which can significantly change their magnetic characteristics under the influence of an external (magnetizing) magnetic field. Operation of magnetizing (placing the object in the magnetic field) when using this type of control is mandatory.

Presently being in operation a large amount of expensive drilling pipes, some of which have produced guarantee period.

In this diploma project was conducted mathematical modeling to determine the stray fields that arise the presence of defects. Based on the results developed magnetic control device that uses a magnetic transducer on the basis magnetic resistors.