

## Annotation.

In this thesis project, I have developed an automated ultrasonic thickness gauge for the thickness control of steel sheets.

The first part of the diploma describes the theoretical foundations of non-destructive testing and ultrasonic thickness measurement. Control methods, types of transducers, how ultrasound works, etc.

In the second part of the diploma, we calculated the acoustic path, from which we could further build on in order to select components for our device and draw up a structural diagram, functional and assembly drawings.

In the end, we drew conclusions and came to the conclusion that based on these calculations and the selected components, we could build a real device.