

SUMMARY

Jolkin Sergij Valeriyovych. Efficiency improvements research of drilling operations in combination with modernization of vertical drilling machine design. Master thesis contains 153 pp, 27 figures and bibliography of 28 titles. The graphic part comprises 10 drawing sheets.

The goal of research is to increase the machining productivity and quality during drilling operations using special vertical drilling machines.

The master thesis deals with:

- technique and methods review of drilling operations efficiency improvements;
- the machine complex diagram of shape forming and configuration optimization;
- the kinematic and force loading calculation of vertical drilling machine main and feed drives;
- the vertical drilling machine designs for drilling operations with increased productivity and quality are proposed

Key words: VERTICAL DRILLING MACHINE, DRILLING, PRODUCTIVITY IMPROVEMENT, QUALITY