

Summary

Mazurok Vitaliy Veriyovych. Graduation thesis Investigation of slide spindle shaft computer solid model of 5B352PF2 model semiautomatic spline-milling machine tool, pages 221, formulas 130, tables 26, figures 58, applications 10, used literature sources 42.

Computer solid model of slide spindle shaft of 5B352PF2 model semiautomatic spline-milling too; is the subject of investigation in the graduation thesis.

Development of the construction of spline-milling machine slide and its spindle headstock with further investigation of slide spindle shaft solid model is the main purpose of the thesis.

To implement the set aim technological analysis of typical production object is carried out, the system of calculations for loading determination during machining process is performed. Analysis of the theoretical base for design of tooth-cutting and spline-milling machines structural elements is conducted. Analysis of forming for their further implementation on designed machine tool equipment as well as designed machine tool assembly circuit is performed. Complex of design calculations and project works concerning formation of the structure of spline-milling (tooth-cutting) machine tool slide and its spindle headstock are carried out. Solid models of machine tool slide spindle is worked out on the basis of Solid Works program basis. Parts joint into assembly unit are designed. Investigation of strain-stress state of the slide spindle shaft of 5B352PF2 model semiautomatic spline-milling machine tool are carried out.

The problems of health, safety and environment regulations in case of emergency are considered.

Complex of economic calculations demonstrating possibility of obtaining annual saving rate up to the amount of 131700 hryvnias is made.

Keywords: SPINDLE, SHAFT, HEADSTOCK, TOOTH-CUTTING, STRAIN-STRESS, SPINDLE UNIT, SOLID-STATE MODEL, LEADSCREW, TAILSTOCK, CALIPER, SKIDS, HEAT DISSIPATION, BEARINGS.