ANNOTATION

Shamrenko O.

Supervisor: Ph.D., as. prof. V.N. Voloshyn

Project theme: Design research of the quick changeover piston lathe chuck for the rotary-revolving CNC machines equipment.

Project volume: Project 96 pages, 17 figures, 12 tables, 26 sources, 2 applications, 9 sheets A1 size graphic material.

The aim of the study: Increased accuracy and efficiency of processing, reducing idling time and readjustment machine.

Object for research: Quick changeover piston lathe chuck of the rotary-revolving CNC machine.

Research methods: finite element method, 3-d parametric Solid modeling.

In this work the investigation was made aimed at determination of the influence of characteristics of the technological system of a turning lathe, particularly quick changeover piston lathe chuck on precision of treatment. Proved that the use of study designs lathe chuck that implements the new principle of readjustment ensures reliable clamp of hot-rolled bars and apiece workpieces throughout the operating range of the machine without changing the clamping elements. Using this construction make quick manual or automatic readjustment of the lathe chuck to the other diameter range, significantly reduces the auxiliary movements and increases productivity turning.

Keywords: lathe chuck, multi clamping element, load, finite element.