

## ABSTRACT

Explanatory Note To The Thesis:

132 pages, 43 figures, 21 tables., 2 додатка, 32 джерела.

The object of development and research is the electric drives of the longitudinal milling and boring machine.

The purpose of work - development and research of the system of positional electric drive of a table of giving of the longitudinal-milling machine with CNC 6M612F4-20.

The issues of designing the SIMODRIVE 611D digital electric drive are considered, the power calculation is made and the engine, the network filter, the switching chokes, the power supply units, the power modules, the control boards and the special modules are made. The actuator control system is synthesized.

To ensure high positioning accuracy, the vector control principle has been applied to control a permanent magnet synchronous motor. The calculated system meets stringent requirements for positioning accuracy and quality of dynamic performance.

LONG-MILLING MACHINE, POWER SUPPLY OF THE TABLE,  
NUMERICAL SOFTWARE CONTROL, SYSTEM OF VECTOR CONTROL,  
POSITIONING, PERMANENT MAGNET SYNCHRONOUS MOTOR

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