

ABSTRACT

The diploma project is executed on 82 pages and contains 39 figures, 4 tables and 3 posters A1.

The purpose of the diploma project is the development and research of automated electric drive for 3D-printer using linear stepper motors, deepening knowledges in the field of the theory of automated electromechanical systems, development of skills, autonomy in making appropriate technical decisions and analysis of the results.

Analytical review in linear electric drive, carried description process unit and calculated energy-power characteristics of linear electric drive, made the choice of electrical power and the developed of control circuits, made model of linear stepper electric drive, selected method of control, investigated static and dynamic modes EMS with LSD described protection and safety of work.

Calculation and implementation of this degree project were provided by means of use of the following programs: MATLAB R2013, Microsoft Office Word 2013, Microsoft Office Visio 2013, Autodesk Fusion 360.

LINEAR STEPPER MOTOR, 3D-PRINTER, INDUCTION MOTOR, FREQUENCY CONVERTER, SYNTHESIS, SIMULATION, AUTOMATION.

					6.050702.5131.016.БР			
					Electric drive with stepper linear motors Abstract	<i>Лім</i>	<i>Маса</i>	<i>Масштаб</i>
Зм.	Лист	№ докум.	Підпис	Дата		Т		
Розроб.		Чернога В.Г.			8	84		
Перевір.					КПІ ім. Ігоря Сікорського Каф. АЕМС-ЕП Гр. ЕП-32			
Т. контр.								
Керівник		Геряев В.І.						
Н. контр.		Триймак Б.І.						
Затверд.		Пересада С.М.						