

ABSTRACT

"Galvanic coatings in mechanical engineering. Development of technological process of zinc coating on frame parts"

Pinchuk T. V. - Kyiv: Igor Sikorsky KPI, ChTP , EC-72.

Diploma project, 2021, number of pages -79, tables - 18, figures - 7, sources - 25.

The project develops the technology of applying zinc coating to the battery frame in order to increase the corrosion resistance of the metal product. The coating thickness is 9 μm . The deposition of the zinc coating is carried out from a zincate electrolyte in a galvanic bath, which is made of polypropylene, is carried out at a cathode current density of 1 A / dm^2 and at a temperature of 20 °C. The project carried out constructive and technological calculations, selected the appropriate equipment, developed a scheme for automatic regulation of the galvanizing process.

Calculations of energy economy, wages and technical and economic indicators have been performed. The project uses the neutralization of alkaline solutions of sodium zincate and provides a scheme for neutralization of acid-base wastewater, analyzes harmful and dangerous production factors and proposes measures for safety and health.

Key words: galvanic coatings, galvanizing, galvanic bath, zinc electrolyte, voltage balance, electrolysis, wastewater.