

ABSTRACT

Galvanic coatings in mechanical engineering. Development of nickel plating technology on steel fasteners

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The project develops the technology of applying a nickel coating on a steel part in order to provide the part with protective and decorative properties. The deposition of a single-layer nickel coating is made of sulfate electrolyte in a drum-type installation. The work includes a rationale for the choice of electrolyte, equipment, type and thickness of the coating, as well as the technological process. Calculations of electricity balances were carried out and technical and economic indicators were determined. The project provides a method of wastewater treatment after the galvanic coating process, and also contains a list of safety measures for the safe operation of workers.

Key words: nickel, protective and decorative covering, galvanic bath, drum, sewage treatment, electrolyzer, economic indicators, ecology.