

Abstract

Electroplating in mechanical engineering. Development of the technological process of electroplating of wear-resistant chrome coating on steel details.

Savina R. Kyiv, NTUU "KPI", HTF, HE-21

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This project argues for operation of the technology of obtaining of special wear-resistant chrome coating on steel details. This coating enables to increase wear resistance of details' surface to make them capable to be applied under friction. The electroplating is held in a stationary electrolyzer covered with steel in a sulphate electrolyte warmed to 55 °C. Details are coated under cathode current density 40 A/dm² and voltage 17.19 V. The project contains also technological calculations and an advanced scheme of automatic regulation of the plating procedure. Additionally, some feasible calculations are held. The project too discusses stage of savage water treatment by the method of galvanic coagulation. Eventually, the project reflects on the issue of safety measures aimed at providing the workshop workers with safe working environment.

Keywords: chrome plating, stationary electrolyzer; wear-resistant coating; galvanic coagulation method of wastewater treatment.

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