Abstract

Galvanic coatings in mechanical engineering. Development of a technological process of applying a brilliant coating on steel parts of a complex configuration.

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Zinc brilliant coating - protective and decorative coating and applied on St3PS detail that looks like rectangular pipe (40*25 mm) with 3 mm pile of walls. Total detail area 0.29 m^2 and weight 4.5 kg. Detail its holder stand and welded angle plates. Mounting holes of 6 mm in diameter are drilled after zinc plating. Coating should have a thickness of 9mm.

Zinc coating is an anode that protects steel even when the coating is damaged. Detail is operated in places with high humidity, constant vibration and can get into places contaminated with gases (H_2S, CO_2, SO_2). The rate of corrosion is 4-10 microns. Increase the coating's protection is passed by chromium.

The usual matte zinc coating, even with its pores, protects steel at the expense of more negative potential. Brilliant coating has a smaller porous and it is more corrosion resistant than matt, so in the operation of underground transport, brilliant zinc plating is technologically determined.