

ABSTRACT

Chrome-free finishing of zinc coatings

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The technology of zinc coating with finishing in drums for protection of steel parts from corrosion, with an annual productivity of 12,000 m² has been developed. Passive films on a zinc coating are obtained from borate solutions with the addition of polymeric sodium molybdate.

The technology provides for electroextraction of zinc from the bath of capture and treatment of wastewater by electrocoagulation method. The project approved the scheme of automatic control and management of galvanic galvanizing line. The startup project is developed and the basic technical and economic indicators which testify to profitability of the enterprise are calculated. Occupational safety measures are provided at the production.

Key words: zinc, protective coating, chloride electrolyte, passive film, sodium tetraborate, sodium molybdate, automatic control scheme, technical and economic indicators.