

## ABSTRACT

Galvanic coatings in instrument building industry. The development of silver electroplating technological process in stationary plating bath.

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The project developed a technological process of applying a matt single-layer silver coating on a part of beryllium bronze, a thickness of 9  $\mu\text{m}$ , to protect against corrosion and increase surface electrical conductivity. The silver deposit is made from a cyanide electrolyte in a stationary bath at a cathode current density of 0.5 A /  $\text{dm}^2$  and a temperature of 20 °C.

The technological calculations and determination of main and auxiliary equipment design parameters in this project were carry out. The developed a scheme for automatic regulation of electrolyte level, concentration of potassium cyanide, current and voltage in the bath of galvanic silvering was designed. The main technical and economic indicators - the profitability and the time of return of investment were calculated. The principal scheme for wastewater treatment, which includes the extraction of silver by cementation with aluminum scrap and the electrochemical destruction of cyanide ions were designed.

Harmful and dangerous analysis production factors has been carried out and measures proposed for occupational safety and health.

Key words: galvanic coatings, silvering, galvanic bath, current density, electrolysis, wastewater, cyanides.

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