## ABSTRACT

Galvanic workshop of instrument-making plant. Development of technological process of causing of the three-layered coverage is a copper-nickel-chrome on steel parts in an automatic transfer autostatement line.

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In this project the technology of galvanic matte nickel plating on steel parts with productivity 15000 sq m/year has been developed. The basic nickel electrolytes, selected and grounded electrolyte matte nickel. For the copper plating electrolyte elected two - tsianydny and sulfate. The thickness of the coating shall be elected in accordance with the operating conditions and the details of the standard , and is 21-15-I microns.

The project envisages measures for safety, process parameters' automation. A scheme of sewage treatment, material, documentary, organizational and technical preparation of production is developed.

Keywords: galvanic coatings, three-layered coatings, copper-nickel-chrome, galvanic bath, flowsheet, tension, current density, ecological safety, cleaning of effluents, computer-aided, technician of safety manufacturing.