ABSTRACT

Diploma work: 86pages, 31 pictures, 17 tables, 66 literature sources.

Aim of the work:research of the structure and phase composition of aluminum alloy Д16 before and after ultrasound shock treatment in liquid nitrogen medium.

Subject of the work: structure and phase composition of aluminum alloy Д16surface layers before and after ultrasound shock treatment.

Research and treatment methods:ultrasound shock treatment, electrolytic polishing, transmission electron microscopy, electron-diffraction.

Practical application:obtained results have practical application in new technologies development of duralumin alloys surface layer strengthening.The methods of making of new strong protective coatings with UST usage of surface to provide with nanostructured state are of practical interest.

Д16, ULTRASOUND SHOCK TREATMENT, SEVERE PLASTIC DEFORMATION, SURFACE, MICROSTRUCTURE, PHASE COMPOSITION