

A process for strengthening the working surfaces of machine parts using vibration action, which consists in the use of the alternating current passed through the electrolyte with which the plating bath is filled, at that in the plating bath at the same time aluminum plate is immersed, which plate serves as the anode and the steel treated part, which serves as the cathode, current is passed, thin layer of aluminum oxide with the thickness of 50 ... 100 nm appears on the part, then vibrator is connected to the part which vibrates at a resonant frequency, and an aluminum matrix is joint with an iron matrix.