

Build Up of Copper EDM Electrode by Using Galvanic Plating Process

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Abstract

Studying the effect of galvanic plating variables on the buildup process of copper electrode was investigated in this work. These Variables include DC voltage, current density, electrolyte concentration and distance between anode (copper electrode) and cathode (EDM Electrode) were studied. Interaction between such variables were studied by using Taguchi methods. Wear resistance of buildup electrode was compared with that of conventionally machined electrode. The results obtained shown that the wear resistance of buildup electrode by galvanic plating reach optimum value at the optimum conditions for each variable.

Keywords

Build up, Galvanic Plating, EDM Electrode, Taguchi Method, Wear Resistance.

Biography

Hussain Mohammed is a chief of Engineers in Ministry of Industry and Minerals in Iraq, Engineer in Nasser State Company for Mechanical Industries. He earned B.Sc. in Production Engineering from University of Technology, Iraq, Master degree in Metal Extraction, PhD in Metallurgy Engineering from University of Technology, Iraq. He has published journals and conference papers. Dr. Hussain has completed research projects with state association of research and development in Ministry of Industry and Minerals in Iraq. His research interests include manufacturing, Materials science, and optimization.