DESIGN ENGINEERING OF ELECTRICAL CIRCUIT, TOOL FEED MECHANISM, AND DIELECTRIC FLUID CIRCULATION FOR EDM EXPERIMENTAL MACHINE

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Abstract

Along the development of technology, the human need of tools to ease the work is increasing. In addition to the functions and benefits, in the selection tool, also need to consider the economic value.

EDM is one of non-conventional machining processes that have been widely used in industry. In this thesis designed an EDM machine with a transmission system that is simple, easy to use and more economical. Transmission system is designed not to use hydraulic as in EDM machines in general.

Transmission gears are selected using a straight (spur gear) and drive to use low-speed motor. Dimensional framework of planned EDM measuring: length 0,3 m, 0,4 m width, and height of 0,3 m. considered a constant speed down 0.005 mm. For the material selected acrylic water tank. After doing the calculations, spring is strong enough to lift the maximum load that has been predetermined.

Keywords: EDM Machine, Motor, Transmission