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Guided By

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Project Title

ROTARY WORK PIECE WIRE EDM MACHINE

Abstract:

Electrical discharge machine (EDM) may be a non-conventional idea of machine that wide used for production of dies and moulds. This technology has been developed within the Nineteen Forties and has been one amongst the primary growing strategies for manufacture throughout Eighties and Nineties. [1] This non-conventional machining strategies used for terribly arduous metals that area unit not possible to machine with standard technology. It has been extensively used, significantly for cutting delicate cavities that collectively would be robust to produce with a traditional machining technique tools. However, one very important limit is that EDM only works with electrical semi conductive material. Only nickel-based alloy, hardened tool steels and carbides are going to be machined by EDM. [2] The wire-cut sort of machine arose within the Sixties for the aim of creating tools (dies) from hardened steel. The tool conductor in wire EDM is just a wire. To avoid the erosion of fabric from the wire inflicting it to interrupt, the wire is wound between 2 spools so the active a part of the wire is continually ever-changing. The earliest numerical controlled (NC) machines were conversions of punched-tape vertical edge machines. the primary commercially accessible North Carolina machine engineered as a wire-cut EDM machine was factory-made within the country in 1967. Machines that would optically follow lines on a master drawing were developed by David H. Dulebohn's cluster within the Sixties at Saint Andrew Engineering Company [2] For milling and grinding machines. Master drawings were later produced by computer numerical controlled (CNC) plotters for greater accuracy. A wire-cut EDM machine using the CNC drawing plotter and optical line follower techniques was produced in 1974. Dulebohn later used the same plotter CNC program to directly control the EDM machine, and the first CNC EDM machine was produced in 1976. [3] The material removal during EDM process takes place as a result of melting and vaporizing the work piece material as well as flushing out molten metal by dielectric [4, 5].

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