

MODIFICATION IN CNC MACHINE BY USING THE MODEL OF FANUC POWERMATE ID IN SPN 50 ATC MACHINE

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Abstract

Computer numerical control (CNC) machines are used to shape metal parts by milling, boring, cutting, drilling, and grinding. A CNC machine generally consists of a computer controlled servo-amplifier, servo-motors, spindle motor, and various tooling. [1] The machine can be programmed to shape a part by use of a front control panel. More sophisticated models allow a computer-aided design drawing to be uploaded to the machine. The electronic components within a CNC machine are particularly sensitive to the grounding techniques used in the electrical supply to the machine. Malfunction, degradation, and damage to the electronics can often be traced to supplemental ground rods and lightning strikes to earth. Production downtime, product loss, and expensive repair bills results with the wide-spread use of CNC machines across the world, these problems have become a significant financial concern to many CNC machine users and their electric utility companies. [1]

Keywords : CNC machine, Availability, Type of breakdown, Time series analysis, Transfer function modeling.