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SIMULATION OF THE INDUCTION MOTOR FAULTS USING FUZZY LOGIC TECHNIQUE

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ABSTRACT

Induction machines are commonly used in various applications. They have many uses compared to other motors, as 80% of the motors used in industries are induction motors. But due to their continuous working and movement, they are exposed to many faults. In this paper, we represent a new type of diagnosis technique which is called Fuzzy Logic to diagnose and detect the induction motor faults that may take place during the operation to help the operator to make the right decision to deal with this fault. This paper presents SIMULINK induction motor model using SIMULINK in MATLAB software, and also distinguishes between healthy and defective motor by analyzing three types of faults, Rotor Faults, Stator Faults, and Mechanical or Bearing Faults.

KEYWORDS: *Induction Motor, Fuzzy Logic, Rotor Faults, Stator Faults, Bearing Faults, MATLAB/SIMULINK*

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