

## Fault Diagnosis in Induction Motor

**Authors :** Kirti Gosavi, Anita Bhole

**Abstract :** The paper demonstrates simulation and steady-state performance of three phase squirrel cage induction motor and detection of rotor broken bar fault using MATLAB. This simulation model is successfully used in the fault detection of rotor broken bar for the induction machines. A dynamic model using PWM inverter and mathematical modelling of the motor is developed. The dynamic simulation of the small power induction motor is one of the key steps in the validation of the design process of the motor drive system and it is needed for eliminating advertent design errors and the resulting error in the prototype construction and testing. The simulation model will be helpful in detecting the faults in three phase induction motor using Motor current signature analysis.

**Keywords :** squirrel cage induction motor, pulse width modulation (PWM), fault diagnosis, induction motor

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020