

## **Performance analysis of line-start permanent magnet synchronous motor in presence of rotor fault**

### **ABSTRACT**

Electrical Motors are widely employed in both industrial and domestic fields. Line start-permanent magnet motor is one of the modern high efficiency motor introduced. During working of electrical motors, various faults, like stator faults, rotor faults, bearing's faults, occur that lead to malfunction of the motor. Among these faults, rotor fault, broken bar, is important in the motors with squirrel cage rotor. This paper deal with the finite element method of the electromagnetic field associated with this motor to find the performance of it with presence of rotor faults.

**Keyword:** Broken rotor bar; Finite element method; Line start - permanent magnet motor