

REWINDING PLANNING ON A 3-PHASE INDUCTION MOTOR

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ABSTRACT

Induction motors are the most widely used alternating current (AC) motors and can be found in every industrial and household application. Induction motors have a stable rotating speed, both loaded and without load and the speed depends on the frequency. As a result, the induction motor is not easy to adjust its speed.

A commonly used electric motor is a type of cage rotor induction motor. As a starting driver, induction motors in operation often serve varying loads with continuous work, so it is not uncommon to experience damage caused by instability of loads, currents and overvoltages. The damage mostly affects the fragility of the stator winding insulation so that it becomes damaged and burns. To be able to reuse this burned motor, rewinding is usually carried out, namely by replacing the insulation of the stator winding of the motor that has been burned with a new stator winding.

In this study, the motor used was 3 HP with 36 grooves. This induction motor is rewinding with a wire diameter of 0.65 and 99 windings per groove. . In no-load testing with a voltage of 220 V the delta connection (Δ) produced a current of 11.7 A and 1497 Rpm. At a voltage of 380 V the star connection (Y) produced a current of 7.6 A and 1498 Rpm. So the induction motor is worth using.

Keywords : Induction Motor, Rewinding, Electrical Test