

In - Situ Induction Motor Efficiency Determination Using the Genetic Algorithm

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Abstract - Numerous methods exist for determining the efficiency of induction motors. Many of them require a no-load test, which is not possible for in-situ determination. The evaluation of motor efficiency based on the motor's nameplate or manufacturer's data, on the other hand, in many cases cannot ensure a fair assessment of induction motors employed in the plant. An extensive survey of techniques for efficiency measurement is given. A new method is proposed for in-situ induction motor efficiency determination, based on the genetic algorithm. Results are compared with torque-gauge results.