

Determination of Suitability Between Single Phase Induction Motor and Load

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Abstract : Single-phase induction motors are widely used in industry. Most manufacturing processes use capacitor-run single-phase induction motors to drive mechanical loads. The selection of a suitable motor for driving is important. The optimum operating range of the motor can help the motor operate efficiently. Thus, this paper presents an operating range analysis of capacitor-run single-phase induction motors and a determination of suitability between motor and mechanical loads. An observational study found that the optimum operating range of the motor can be used to determine the suitability between the motor and the mechanical load. Such considerations ensure that the motor uses no more current than necessary and operates efficiently.

Keywords : single phase induction motor, operating range, torque curve, efficiency curve

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