SIEMENS

Basics of Drive Technology - AC Motors (WT-GAT-M)

Beskrivning/mål

Electrical drive technology plays an important role in industry, mobility and infrastructure. A general knowledge of drives systems is therefore essential for the performance of planning, commissioning and maintenance work. This training session introduces you to this subject. It gives you a basic understanding of what you need to know to achieve optimal learning results from SITRAIN courses at the training center.

Målgrupp

Decision makers, sales personnel
Project managers, project assistants
Engineers, programmers
Startup engineers, configuration engineers
Service personnel
Operators, users
Maintenance personnel

Innehåll

- Output ranges and areas of application of electric motors
- Fundamental electrical principles: magnetism, alternating current, induction, permanent and electromagnets
- Fundamental mechanical principles: speed and acceleration, force and torque, power and energy, gear ratios
- Design and construction of electric motors: rotors, stators, windings, bearings, enclosures, number of poles and speed
- Operating principle of three-phase motors:
- Induction motors
- Permanently excited synchronous motors
- Separately excited synchronous motors
- Characteristic curves: torque-speed curve, current-speed curve, starting torque, breakdown torque, slip
- Association between active power, reactive power, apparent power and power factor
- Behavior of an induction motor during voltage and frequency fluctuations
- Load curves: linear, quadratic and constant torque, constant power, moment of inertia
- Energy efficiency, lifecycle costs, system analysis
- Standardized motors as per IEC and NEMA

Förkunskaper

None

Övrig information

This training session looks at the mains-fed operation of AC motors. For operation with frequency converters, please also use the Web Based Training WT-GAT-U.

Typ

Webbutbildning

Antal dagar

0,3 dagar

Språk

en

Pris

0 SEK