

SINAMICS S120 - Parameterizing and Optimization (DR-S12-OPT)

Kurzbeschreibung

In this course you learn to optimize control structure of the drive system SINAMICS 120. Therefore you gain the highest dynamics of the drive axis.

Ziele

You already know the control structure of the drive system SINAMICS 120 and use the automatic optimization as well as the trace function. In this course you learn how you reach the highest dynamics of the drive axis even at critical applications. After the course visit you understand the interplay of mechanics, motor and drive converter. You can examine the system by means of frequency analysis and parameterize filters against unwanted vibrations correctly. Also you achieve a stable load balancing of mechanical coupled axes.

Zielgruppe

Commissioning engineers
Engineering personnel

Inhalte

Control system types overview
System identification in time domain and frequency domain, Laplace transformation
Frequency response, Nyquist and Bode diagram,
Stability criteria
Tuning methods of current, speed and position controller: Heuristic, gain optimum, symmetric optimum, linear optimum
Reference model
Controller adaptation and linearization
Feed forward control, friction characteristic, symmetry filter
Application examples for tuning of:
▪ Two mass systems und multi mass systems
▪ Load balancing of mechanically coupled drives
Practical exercises at SINAMICS S120 with SIMOTICS synchronous motors

Teilnahmevoraussetzung

Good knowledge of parameterization and commissioning of SINAMICS S120 in accordance with course DR-S12-PM (formerly DR-SNS-SI).

Hinweise

none

Typ

Präsenztraining

Dauer

5 Tage

Sprache

en