SIEMENS

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

Short Description

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.

Objectives

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.

Target Group

Commissioning engineers
Engineering personnel

Content

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 postion controller: Heuristic, gain optimum, symmetric optimum, linear optimum
Reference model
Controller adaption 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

Prerequisites

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

Included in the course price: Free access to the digital learning platform SITRAIN access – starting one week before the start of the course until two weeks after the end of the course. Here you will find web-based trainings on SINAMICS Converters as well as other topics. With the Learning Membership, you can deepen or repeat the content of this Learning Event as well as continue your education on other interesting topics.

Note

none

Type

Face-to-face training

Duration

5 days

Language

en

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