SIEMENS

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

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.

Target Group

Commissioning engineers

Content

Control system types overview
System identification in time domain and frequency domain
Nyquist and Bode diagram, transfer function
Control elements and filters
Stability criteria and tuning methods:

- Heuristic
- Gain optimum
- Symmetric optimum

Tuning of current, speed and technology controller
Cascaded control, feed forward and reference model
Controller adaption and linearization
Application examples for sizing and tuning:

- Two mass system
- Multi mass system
- 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).

Type

Face-to-face training

Duration

3 days

Language

en

Fee

0 GBP