

# 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).
Note
none
Туре
Face-to-face training
Duration
5 days
Language
en en

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