

ROTEC Training Week on RASdelta measurement system

September 10th - 13th, 2024 in Munich

In our training week you will receive an introduction to the ROTEC measurement system RASdelta and practical training on how to apply it. You will also learn about the measurement settings with the software and how to perform evaluations in the filter and spectral range.

Content

- ✓ ROTEC RAS Software including measurement settings and analyses in time domain and spectral domain
- ✓ Essential methods of signal processing in torsional vibration analysis (spectrum and filter)
- ✓ Practical training in sensor technology and application

Seminar duration

3.5 days

Language

English

Location

VISPIRON ROTEK GmbH
Joseph-Dollinger-Bogen 28
80807 Munich

Registration deadline

July 11th, 2024

Hotel recommendation

the niu Loco
Frankfurter Ring 228 | 80807 Munich

FourSide Hotel
Frankfurter Ring 228 | 80807 Munich

B&B Hotel München City Nord
Frankfurter Ring 243 | 80807 Munich

Program

Basic Training (one day)

- ✓ RASdelta measurement system: application areas
- ✓ What is torsional vibration?
- ✓ Measuring torsional vibration
- ✓ Measuring torsional vibrations - Sources of error
- ✓ RASdelta equipment: Hardware
- ✓ RASdelta measurement principle
- ✓ RASdelta software
 - File Manager
 - Measurement data
 - Restricting the time range of a measurement
 - Cursor function & determining the number of teeth
 - Correction of measurement
 - Measurement settings
 - RASdelta "Choose Frontend" and "Configure Frontend"
 - Hardware wizard
 - General settings
 - Online graphics
 - Speed, Analog, CANbus, etc.
 - Evaluation
 - Syntheses, Analyses, Extras, Diagrams, Pages
 - Evaluation examples
 - Edit layout
 - Default settings
- ✓ Placeholder and Sequences
- ✓ Integration of measurement data from previous ROTEC system generations
- ✓ Question & answer session

Spectral & Filter Training (two days)

PART 1: SPECTRUM

- ✓ Basics of the spectral transformation
 - Continuous, Discrete and Fast Fourier transformation
 - Spectrum as a harmonic analysis
 - How FFT works (Animation)
 - Integral and derivative
- ✓ Specifics of the discrete Fourier transformation
 - Leakage, Aliasing, Sampling transformation
- ✓ Specifics of speed signals
 - Amplitude damping in speed measurement
 - Reference of order spectra
- ✓ Spectrum in ROTEC evaluation
 - e.g. Remove ramp (before FFT), Speed ramp filter, FFT window functions
- ✓ In-depth studies and additions
 - Leakage and window functions
 - Undersampling and aliasing
- ✓ Summation
 - Summation in time domain and spectral domain
 - Summation and FFT window functions

PART 2: FILTER

- ✓ Basic types of filters
- ✓ Filter characteristics
- ✓ Transfer behavior of typical filters
- ✓ Example for filtering a signal
- ✓ Filter without phase shift
- ✓ Filter operations with the ROTEC software
- ✓ Speed signals and filtering summary on the spectrum

Practical Training (half day)

- ✓ ROTEC Laser Sensors (Laser Tachometer 3)
- ✓ ROTEC Speed Sensors
- ✓ Strain gauge application
- ✓ Temperature board application
- ✓ Grounding
- ✓ ROTEC ENGINEERING Demo Vehicle