ROTEC Training Week on RASdelta measurement system
September 2nd - 5th, 2025 in Munich

During our training week, you will receive a comprehensive introduction to the ROTEC measurement system RASdelta, along with hands-on training in its practical application. The program also covers detailed instruction on configuring measurement settings within the software and conducting evaluations using filter and spectral analysis.

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 ROTEC GmbH
Joseph-Dollinger-Bogen 28
80807 Munich

Registration deadline
June 30th, 2024

Hotel recommendation
Holiday Inn - the niu Loco
Frankfurter Ring 228 | 80807 Munich

PLAZA Premium
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