Measuring Torque Correctly

Program

Date: 2016, June, 21- 22

Location: HOTTINGER BALDWIN MESSTECHNIK GMBH
Application- and Training Center / hbm-academy
Im Tiefen See 45
64293 Darmstadt / (near to Frankfurt am Main / Airport)
Germany

Lecturer: Thomas Hesse
Day 1

9:00  Welcome and introduction  
What are your expectations?

9:30  Measurement methods and construction of torque transducers  
Action/reaction, fields of application, mechanical construction and electrical measurement systems, output signals

10:30  Coffee break

10:50  Correct understanding of data sheet details  
Terms and definitions, metrological properties, application and load limits

11:35  Selection criteria for torque transducers  
Choosing the nominal torque, space requirements and mechanical connection, environmental conditions

12:30  Lunch break

13:30  Application and installation of torque transducers  
Hints for the installation, couplings, joint shafts, damper elements, overload protection, balancing, axial and radial alignment

14:30  Coffee break

14:50  Amplifying and conditioning measurement signals for torque, speed and angle of rotation  
Electrical connection, setting the parameters, digital interfaces

15:20  Calibration of torque transducer  
Methods, calibration pyramid, measurement uncertainty, transfer and reference transducers, calibration on the test bench

16:30  End of day 1
Day 2

8:30  Introduction to the practical training
      Practical training Part 1

9:30  Dynamic influences on torque measurements
      The sources of dynamic torque, torsional vibrations, bending vibrations,
      resonance in rotating machines

10:45 Coffee break

11:15 Practical training Part 2

12:15 Lunch break

13:15 Practical training Part 3

14:15 Measurement uncertainty in the application

15:15 Final discussion and distribution of certificates
      Was it in line with your expectations?

15:45 End of seminar