

## **Uncertainty of measurement concept in European Standards Reference documents**

### Basic documents

- Guide to the expression of uncertainty in measurement (GUM), 1995
- Accuracy (trueness and precision) of measurement methods and results (ISO 5725)
- Guidance for the use of repeatability, reproducibility and trueness estimates in measurement uncertainty estimation (ISO/TS 21748)
- Fundamental standards - Metrology and application of the statistics - Help to the process for estimation and the use of the measurement and test results uncertainty (AFNOR FD X 07 - 021, 1999)

### Some examples of sectorial standards (non-exhaustive)

- Geometrical Product Specifications (GPS) - Inspection by measurement of workpieces and measuring equipment - Part 1: Decision rules for proving conformance or non-conformance with specifications (EN ISO 14253-1: 1998)
- Geometrical Product Specifications (GPS) - Inspection by measurement of workpieces and measuring equipment - Part 2: Guide to the estimation of uncertainty in GPS measurement, in calibration of measuring equipment and in product (ENV ISO 14253-2:2011)
- Geometrical Product Specifications (GPS) -- Inspection by measurement of workpieces and measuring equipment -- Part 3: Guidelines for achieving agreements on measurement uncertainty statement (EN ISO 14253-3)
- Petroleum products – Determination and application of precision data in relation to methods of test (EN ISO 4259)

### Other interesting documents

- Measurement uncertainty leaflet, Magnus Holmgren et al. SP Swedish National Testing and Research Institute
- Introducing the concept of uncertainty of measurement in testing in association with the application of the standard ISO / IEC 17025, ILAC - G17: 2002
- EA Guidelines on the expression of uncertainty in quantitative testing , EA-4/16
- Expression of the uncertainty of measurement in calibration, EAL - 4/02; December 1999