$$U = k \bullet u_c(y)$$

Measurement Uncertainty Budget

inotech Meter Calibration Systems GmbH

Measurement Uncertainty Budget for Test Rigs

The inotech meter calibration system GmbH offers as a part of its service program the preparation of a **measurement uncertainty budget** specific to the test rig.
This service can be performed by qualified inotech personnel for every test rig, independent from the manufacturer, the equipment and the size of the test rig.
This service includes all necessary steps from the comprehensive survey and the description of the test rig through the preparation of the entire documentation of the measurement uncertainty budget with the recommendations for the test rig operator. The calculation of the measurement uncertainty budget for the test rig is made according to **GUM**[1].

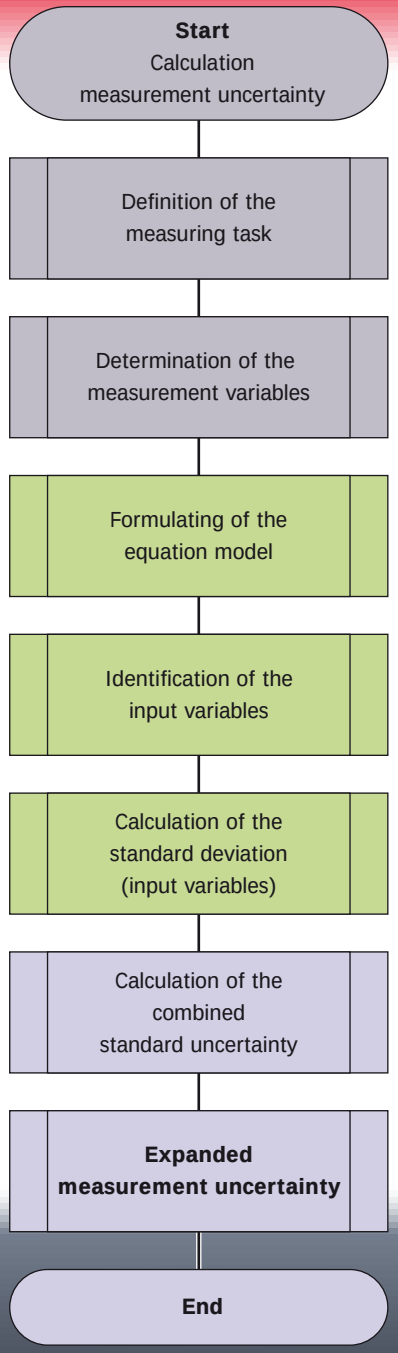
[1] **GUM** is the abbreviation of the guideline „Guide to the Expression of Uncertainty in Measurement“.

Therefore a model equation based on the description of the test rig and the identified measuring processes is formulated. The model equation gives the relevant input variables for the measurement uncertainty budget.
The determination of the standard deviation for the input variables is done by measurements or using the available data in test rig documentation e.g. calibration reports, verification certificates.
The combined standard uncertainty is calculated from the different standard deviations using the error propagation. The desired value of the expanded uncertainty is the result of the multiplication of the combined standard uncertainty with the coverage factor.

Measurement Uncertainty Budget for each Measuring Point

The latest generation of the inotech Meter Calibration Software provides the module -measurement uncertainty-. This function offers the possibility to calculate the measurement uncertainty during the calibration process. The measurement uncertainty is calulated for each meter under test and measuring point. The measurement uncertainty result will be displayd on screen and on the test report. . The module can be installed on all inotech test rigs with the inotech Meter Calibration Software PS 8.x.

Program Sequence Measurement Uncertainty Budget



PRODUCT RANGE

- Low pressure test rigs for domestic and industrial gas meters
- High pressure test rigs for gas meters designed as closed-loop or as bypass
- Mobile gas meter test rigs
- Modernization of test rigs
- Test rigs for gas pressure regulators
- Test rigs for water meters and heat meters
- Purging units
- Leakage test units

SERVICE PROGRAM

- Remote support and service support
- Spare parts
- Maintenance contracts
- Preventive maintenance
- Update service
- System availability service
- System extension
- Software support with customized adaptations
- Standard and tailor-made trainings

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