ISO/TS 27893:2009-02 (E)

Vacuum technology - Vacuum gauges - Evaluation of the uncertainties of results of calibrations by direct comparison with a refer ence gauge

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Symbols and abbreviated terms 3

5 Basic concept and model 3
5.1 Sum model 4
5.2 Quotient model 4
5.3 Combination of the two models 5

6 Calculation of uncertainty in the sum model 5
6.1 Total uncertainty (sum model) 5
6.2 Uncertainty contributions due to reference standard 6
6.3 Uncertainty contributions due to unit under calibration 7
6.4 Uncertainty contributions due to calibration method or calibration conditions 8
6.5 Coverage factor 8

7 Calculation of uncertainty in the quotient model 9
7.1 Total uncertainty (quotient model) 9
7.2 Uncertainty contributions due to reference standard 9
7.3 Uncertainty contributions due to the unit under calibration 10
7.4 Uncertainty contributions due to calibration method or calibration conditions 11
7.5 Coverage factor 12

8 Combination of the sum and quotient model for error of reading 13

9 Reporting uncertainties 13
9.1 Uncertainty budget 13
9.2 Calibration certificate 14

Bibliography 15