

ISO/TR 15263:2024-01 (E)

Measurement uncertainties in mechanical tests on metallic materials - The evaluation of uncertainties in tensile testing

Contents		Page
Foreword		iv
Introduction		v
1 Scope		1
2 Normative references		1
3 Terms, definitions and symbols		1
3.1 Terms and definitions.....		1
3.2 Symbols.....		2
4 Steps for the evaluation of uncertainty		4
4.1 General.....		4
4.2 Step 1 — Defining the measurands for which uncertainty is to be evaluated.....		5
4.3 Step 2 — Identifying all sources of uncertainty in the test.....		6
4.4 Step 3 — Estimating the standard uncertainty for each source of uncertainty.....		8
4.4.1 General.....		8
4.4.2 Type A evaluation of standard uncertainty.....		8
4.4.3 Type B evaluation of standard uncertainty.....		9
4.4.4 Uncertainty due to repeatability of measurement.....		9
4.5 Step 4 — Computing the combined uncertainty, u_c		10
4.6 Step 5 — Computing the expanded uncertainty, U		10
5 Reporting of results		10
Annex A (informative) Mathematical formulae for calculating uncertainties in tensile testing		12
Annex B (informative) Worked example for calculating uncertainty in the determination of proof strength at ambient temperature		25
Annex C (informative) Interlaboratory scatter		29
Bibliography		35