

ISO 15971:2008-12 (E)

Natural gas - Measurement of properties - Calorific value and Wobbe index

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
3.1	Calorific value and Wobbe index	1
3.2	Water content of gas	2
3.3	Performance classification	2
3.4	Terms from metrology	3
4	Principles of measurement	4
4.1	Introduction	4
4.2	Direct combustion calorimetry	5
4.3	Indirect methods	5
4.4	Inferential methods	6
5	Performance assessment and acceptance tests	7
5.1	Performance assessment for instrument selection	7
5.2	Factory and site acceptance tests	20
6	Sampling and installation guidelines	21
6.1	Sampling	21
6.2	Installation guidelines	22
7	Calibration	25
7.1	Calibration procedures	25
7.2	Calibration gases	26
8	Verification	27
8.1	Verification procedures	27
8.2	Verification gases	28
9	Maintenance	29
9.1	Preventive maintenance	29
9.2	Corrective maintenance	29
10	Quality control	29
10.1	General	29
10.2	Environmental parameters and ancillary equipment	31
10.3	Instrumental factors	32
	Annex A (normative) Symbols and units	33
	Annex B (informative) Examples of type-approval and technical specifications	34
	Annex C (informative) Class 0 mass-basis calorimetry	36
	Annex D (informative) Direct combustion calorimetry	40

Annex E (informative) Stoichiometric combustion devices	43
Annex F (informative) Effect of non-alkane gases on stoichiometric combustion devices	47
Annex G (informative) Measurement of Wobbe index	48
Bibliography	49