

ISO/TR 12148:2009-02 (E)

Natural gas - Calibration of chilled mirror type instruments for hydrocarbon dewpoint (liquid formation)

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Symbols	2
5	Performance characteristics of automatic weighing method in accordance with ISO 6570:2001	2
5.1	Working principle	2
5.2	Functional requirements	4
5.3	Measurement uncertainty	5
6	Performance requirements for a chilled-mirror-type instrument for hydrocarbon-dew-point determination	6
6.1	Working principle	6
6.2	Precision	7
7	Requirements/Points of interest to carry out a calibration	8
7.1	Process gas	8
7.2	Sampling system	8
7.3	Selection of the PHLC reference value	9
7.4	Compositional range of gases covered by the calibration procedure	10
7.5	Calibration interval	10
8	Execution of calibration procedure	10
8.1	General	10
8.2	Method A -- Change in trip point value	11
8.3	Method B -- Direct change of dew point value	12
8.4	Which method should be used?	12
Annex A (informative) Condensation behaviour of natural gas		13
Annex B (informative) Example of a hydrocarbon-dew-point analysis		16
Annex C (informative) Examples of a calibration		19
Annex D (informative) Performance of different types of chilled-mirror instruments for hydrocarbon dew point determination		29
Bibliography		31