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