INTERNATIONAL STANDARD

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Natural gas — Gas chromatographic requirements for hydrocarbon dewpoint calculation

Gaz naturel — Exigences relatives à la chromatographie en phase gazeuse pour le calcul du point de rosée hydrocarbures

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 23874 was prepared by Technical Committee ISO/TC 193, *Natural gas*, Subcommittee SC 1, *Analysis of natural gas*.

Natural gas — Gas chromatographic requirements for hydrocarbon dewpoint calculation

1 Scope

This International Standard describes the performance requirements for analysis of treated natural gas of transmission or pipeline quality in sufficient detail so that the hydrocarbon dewpoint temperature can be calculated using an appropriate equation of state. It can be applied to gases that have maximum dewpoint temperatures (cricondentherms) between 0 °C and – 50 °C. The pressures at which these maximum dewpoint temperatures are calculated are in the range 2 MPa (20 bar) to 5 MPa (50 bar). Major components are measured using ISO 6974 (all parts) and the ranges of components that can be measured are as defined in ISO 6974-1. The procedure given in this International Standard covers the measurement of hydrocarbons in the range C_5 to C_{12}. *n*-Pentane, which is quantitatively measured using ISO 6974 (all parts), is used as a bridge component and all C_6 and higher hydrocarbons are measured relative to *n*-pentane.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6974-1, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 1: Guidelines for tailored analysis*

ISO 6974-2, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 2: Measuring-system characteristics and statistics for processing of data*

ISO 6974-3, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 3: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and hydrocarbons up to C_8 using two packed columns*

ISO 6974-4, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 4: Determination of nitrogen, carbon dioxide and C_1 to C_5 and C_{6+} hydrocarbons for a laboratory and on-line measuring system using two columns*

ISO 6974-5, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 5: Determination of nitrogen, carbon dioxide and C_1 to C_5 and C_{6+} hydrocarbons for a laboratory and on-line process application using three columns*

ISO 6974-6, *Natural gas — Determination of composition with defined uncertainty by gas chromatography — Part 6: Determination of hydrogen, helium, oxygen, nitrogen, carbon dioxide and C_1 to C_8 hydrocarbons using three capillary columns*

ISO 6975, *Natural gas — Extended analysis — Gas-chromatographic method*

ISO 10715, *Natural gas — Sampling guidelines*