PD ISO/TR 7262:2022



BSI Standards Publication

Natural gas — Coalbed methane quality designation and the applicability of ISO/TC 193 current standards

bsi.

National foreword

This Published Document is the UK implementation of ISO/TR 7262:2022.

The UK participation in its preparation was entrusted to Technical Committee PTI/15, Natural Gas and Gas Analysis.

A list of organizations represented on this committee can be obtained on request to its committee manager.

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

This publication is not to be regarded as a British Standard.

© The British Standards Institution 2022
Published by BSI Standards Limited 2022

ISBN 978 0 539 18354 2

ICS 75.060

Compliance with a Published Document cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 28 February 2022.

Amendments/corrigenda issued since publication

Date	Text affected

PD ISO/TR 7262:2022

TECHNICAL REPORT

ISO/TR 7262

First edition
2022-01

Natural gas — Coalbed methane quality designation and the applicability of ISO/TC 193 current standards

Gaz naturel — Désignation de la qualité du méthane de houille et applicabilité des normes en vigueur ISO/TC 193

Reference number
ISO/TR 7262:2022(E)

© ISO 2022



COPYRIGHT PROTECTED DOCUMENT

© ISO 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2022 – All rights reserved

Contents

Page

Foreword ... **iv**
Introduction ... **v**
1 Scope ... **1**
2 Normative references ... **1**
3 Terms and definitions ... **1**
4 Symbols, abbreviations and units ... **4**
4.1 Symbols and units ... 4
4.2 Abbreviations ... 4
5 Applicability of sampling standard ... **4**
6 Applicability of test and calculation standard ... **5**
6.1 General ... 5
6.2 Gas composition ... 5
6.2.1 General ... 5
6.2.2 Major components ... 5
6.2.3 Minor components ... 7
6.2.4 Trace constituents ... 8
6.3 Gas properties ... 10
6.3.1 General ... 10
6.3.2 Calorific value, relative density and Wobbe number ... 10
6.3.3 Water dew point and water content ... 11
6.3.4 Hydrogen dew point and Hydrocarbon liquid content ... 11
6.4 Solid particulate matter ... 12
Annex A (informative) **Technical requirements and test methods for CBM** ... **13**
Annex B (informative) **The issue of particulate matter in CBM** ... **16**
Bibliography ... **19**

© ISO 2022 – All rights reserved

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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

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

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

© ISO 2022 – All rights reserved

Introduction

Coalbed Methane (CBM) is an unconventional form of natural gas and refers to methane-rich gases that naturally exist in coal seams and surrounding rocks, see also Reference [31]. It is defined as a methane-rich gas naturally occurring in coal seams (and surrounding rock) typically comprising of 80 % to 95 % methane with lower proportions of ethane, propane, nitrogen and carbon dioxide (see ISO 18875).

At present, CBM is explored and developed in the United States, Canada, Australia, Russia, India, China and a few other countries.

Typical CBM contains 80 % to 95 % or more methane and a small portion of ethane, propane, nitrogen and carbon dioxide, but the composition of coalbed methane varies widely around the world. This document aims to promote communication and coordination among countries and support the smooth progress of unconventional natural gas exploration, development, production and custody transfer.

© ISO 2022 – All rights reserved

TECHNICAL REPORT **ISO/TR 7262:2022(E)**

Natural gas — Coalbed methane quality designation and the applicability of ISO/TC 193 current standards

1 Scope

This document surveys the quality designation of CBM all around the world, and analyses whether ISO/TC 193 standards for sampling, test and calculation methods are applicable to CBM.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 14532, *Natural gas — Vocabulary*

ISO 18875, *Coalbed methane exploration and development — Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 14532, ISO 18875 and the following apply.

NOTE Specific coalbed methane or coal gas mine terms are given in national documents, such as GB/T 31537[30].

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
normal reference conditions
reference conditions of pressure, temperature, and humidity (state of saturation) equal to 101,325 kPa and 273,15 K for a gas in the dry state

[SOURCE: ISO 14532:2014, 2.6.1.3]

3.2
ISO standard reference conditions
reference conditions of pressure, temperature, and humidity (state of saturation) equal to 101,325 kPa and 288,15 K for a real gas in the dry state

[SOURCE: ISO 14532:2014, 2.6.1.4]

3.3
direct sampling
sampling in situations where there is a direct connection between the natural gas to be sampled and the analytical unit

[SOURCE: ISO 14532:2014, 2.3.1.1]

© ISO 2022 – All rights reserved