International Standard

ISO 17829

Solid biofuels — Determination of length and diameter of pellets

Biocombustibles solides — Détermination de la longueur et du diamètre des granulés

Second edition
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Foreword

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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 document 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).

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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 238, *Solid Biofuels and Pyrogenic Biocarbon*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 335, *Solid Biofuels and Pyrogenic Biocarbon,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17829:2015), which has been technically revised.

The main changes are as follows:

— extended scope which now includes the determination of specified pellet length fractions;

— description of a procedure to determine fractions of specified length including particles < 10 mm;

— added definition of pellet length;

— modified drawings for measuring pellet length;

— changed sizes of the test portions for the determination of the pellet length and fractions of specific length including pellets > 40 mm;

— changed procedures for measuring pellet length with two options: using a device for measuring the pellet length or a calliper;

— added measurement and reporting of the length of the longest pellet if pellets over 40 mm are found

— added informative annex with a device for measuring the length of pellets with other diameters than 6 mm;

— added informative annex with comparing data for the determination of pellet length with different methods

— added informative annex with an example of a building plan for a measuring block

— updated references;

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— modified drawings of pellet length to avoid potential ambiguity.

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.

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Introduction

Pellets with a length and diameter outside the specification can cause problems with transportation in screw conveyors, silo outlets, and burner feeding systems. ISO 17225-1, ISO 17225-2, ISO 17225-6, and ISO 17225-8 stipulate the dimensions of pellets. The average pellet length and the amount of pellets of specific size fractions can influence the bulk density and the combustion behaviour.

This document describes procedures for determining the diameter class according to ISO 17225-2 as well as the length and diameter of pellets and the shares of specified pellet length fractions.

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Solid biofuels — Determination of length and diameter of pellets

1 Scope

This document specifies the methods for determination of the diameter and length of pellets. Concerning the pellet length, methods for the determination of fractions of specified lengths, such as pellets > 40 mm and particles < 10 mm and for determination of the average length are included.

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 3310-2, *Test sieves — Technical requirements and testing — Part 2: Test sieves of perforated metal plate*

ISO 5370, *Solid biofuels — Determination of fines content in pellets*

ISO 14780, *Solid biofuels — Sample preparation*

ISO 16559, *Solid biofuels — Vocabulary*

ISO 17225-1, *Solid biofuels — Fuel specifications and classes — Part 1: General requirements*

ISO 17225-2, *Solid biofuels — Fuel specifications and classes — Part 2: Graded wood pellets*

ISO 17225-6, *Solid biofuels — Fuel specifications and classes — Part 6: Graded non-woody pellets*

ISO 17225-8, *Solid biofuels — Fuel specifications and classes — Part 8: Graded thermally treated and densified biomass fuels for commercial and industrial use*

ISO 18135, *Solid Biofuels — Sampling*

ISO 21945, *Solid biofuels — Simplified sampling method for small scale applications*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16559 and the following apply.

ISO and IEC maintain terminology 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
pellet length
distance from endpoint to endpoint along the pellet axis

Note 1 to entry: Before measuring the pellet length, the coarse pellet fines (fraction of particles between 3,15 mm and 5,6 mm) are removed by sieve according to ISO 5370. For determination of the average pellet length, this fraction is not considered. For the determination of specific size fractions, the coarse pellet fines is included as mass fraction.

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