

**Solid biofuels - Determination of particle size
distribution of disintegrated pellets**

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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ICS 75.160.10

English Version

Solid biofuels - Determination of particle size distribution of disintegrated pellets

Biocombustibles solides - Détermination de la distribution granulométrique des granulés désintégrés

Feste Biobrennstoffe - Bestimmung der Partikelgrößenverteilung von Pellet-Ausgangsmaterial

This European Standard was approved by CEN on 7 January 2012.

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Foreword

This document (EN 16126:2012) has been prepared by Technical Committee CEN/TC 335 “Solid biofuels”, the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2012, and conflicting national standards shall be withdrawn at the latest by August 2012.

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Introduction

In coal power plants with powder fuel burners for energy production, rebuilt to use biomass powder from biofuel pellets, the operators need information on the particle size distribution in the fuel for optimising of e.g. efficiency and emission levels. The grinders used for producing fuel powder within these plants grinds the biomass pellets into the individual internal particles in the pellets. The method described in this document aims to estimate the internal particle size distribution of the material comprised in fuel pellets.

For the time being, this method is based on experience of pellets made from sawdust, wood shavings and milled wood or straw as raw material. The method may also be applicable for pellets produced from other biofuel materials.

1 Scope

This European Standard aims at defining the requirements and method used to determine the particle size distribution of disintegrated pellets. It is applicable for pellets, which disintegrate in hot water at a temperature below 100 °C. It is intended for persons and organisations that manufacture, plan, sell, erect or use machinery, equipment, tools and entire plants related to fuel pellets, and to all persons and organisations involved in producing, purchasing, selling and utilising fuel pellets.

2 Normative references

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

EN 14588, *Solid biofuels — Terminology, definitions and descriptions*

EN 14774-1, *Solid biofuels — Determination of moisture content — Oven dry method — Part 1: Total moisture — Reference procedure*

EN 14774-2, *Solid biofuels — Determination of moisture content — Oven dry method — Part 2: Total moisture — Simplified procedure*

EN 14778, *Solid biofuels — Sampling*

EN 14780, *Solid biofuels — Sample preparation*

EN 15149-2, *Solid biofuels — Determination of particle size distribution. — Part 2: Vibrating screen method using sieve apertures of 3,15 mm and below*

3 Terms and definitions

For the purpose of this document, the terms and definitions given in EN 14588 apply.

4 Principle

The particle size distribution is determined after the sample pellets have been disintegrated in hot deionised water and dried in a drying cabinet. The determination is performed by sieving according to EN 15149-2.

5 Reagents

Deionised water shall be used.

6 Apparatus

6.1 Disintegration container

Water-proof container made of a material capable of withstanding a temperature of 100 °C, e.g. stainless steel, with a capacity of at least 3 000 ml.