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**Hard coal — Audibert-Arnu
dilatometer test**

Houille — Essai au dilatomètre Audibert-Arnu



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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.

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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 27, *Solid mineral fuels*, Subcommittee SC 5, *Methods of analysis*.

This second edition cancels and replaces the first edition (ISO 349:1975), which has been technically revised. The main changes are the following:

- Reformatting of the figures in the main document and annexes.

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.

Introduction

The Audibert-Arnu dilatometer test is used to determine the coking properties of hard coal or hard coal blends on the laboratory scale.

In principle, the test is not designed, nor can it be used, to indicate the pressures exerted by hard coals on the walls of industrial carbonization ovens.

Hard coal — Audibert-Arnu dilatometer test

1 Scope

This document specifies a method for determining the swelling properties of hard coal when heated under standard conditions in a dilatometer.

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 1213-2, *Solid mineral fuels — Vocabulary — Part 2: Terms relating to sampling, testing and analysis*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 1213-2 and the following apply.

3.1

softening temperature

temperature of initial contraction

temperature at which the downward movement of the dilatometer piston is 0,5 mm

Note 1 to entry: See temperature T_1 in [Figure 1](#).

3.2

temperature of maximum contraction

temperature at which the dilatometer piston reaches its lowest point

Note 1 to entry: See temperature T_2 in [Figure 1](#).

3.3

temperature of maximum dilatation

temperature at which the dilatometer piston reaches its highest point

Note 1 to entry: See temperature T_3 in [Figure 1](#).

3.4

maximum contraction

maximum downward movement of the dilatometer piston, measured from the zero point

Note 1 to entry: Maximum contraction is expressed as a percentage of the initial test-piece length.

Note 2 to entry: See a in [Figure 1](#).

3.5

maximum dilatation

maximum upward movement of the dilatometer piston after contraction, measured from the zero point

Note 1 to entry: Maximum dilatation is expressed as a percentage of the initial test-piece length.

Note 2 to entry: See b in [Figure 1](#). The value can be either positive or negative.