First edition
2001-04-01

Representation of results of particle size analysis —

Part 2: Calculation of average particle sizes/diameters and moments from particle size distributions

Représentation de données obtenues par analyse granulométrique —

Partie 2: Calcul des tailles/diamètres moyens des particules et des moments à partir de distributions granulométriques

Reference number
ISO 9276-2:2001(E)

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.ch
Web www.iso.ch

Printed in Switzerland

Contents

Page

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 3.

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 part of ISO 9276 may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

International Standard ISO 9276-2 was prepared by Technical Committee ISO/TC 24, *Sieves, sieving and other sizing methods*, Subcommittee SC 4, *Sizing by methods other than sieving*.

ISO 9276 consists of the following parts, under the general title *Representation of results of particle size analysis*:

— *Part 1: Graphical representation*

— *Part 2: Calculation of average particle sizes/diameters and moments from particle size distributions*

— *Part 3: Calculation of means and moments of particle size distributions*

— *Part 4: Characterization of a classification process.*

— *Part 5: Validation of calculations relating to particle size analyses using the logarithmic normal probability distribution*

Introduction

In particle size analysis, particulate matter is often characterized based on representative samples of the population with the final aim of linking the size information with some other important physical property such as strength, flowability, solubility, etc. In general, a correlation between the physical property and the size of the particles, the so-called property function, can be obtained if an average particle size has been derived or calculated from the measured distribution of sizes.

A unique definition of the average size, $\overline{x}_{k,r}$, is given in this part of ISO 9276, using the so-called moments, $M_{k,r}$, of a size distribution. Apart from average sizes, moments are also used in the calculation of volume related surface area, the spread and other statistical measures of a particle size distribution.