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МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ

Ferroalloys — Sampling and sieve analysis

Ferro-alliages — Échantillonnage et analyse par tamisage

Reference number
ISO 4551 : 1987 (E)

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.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 4551 was prepared by Technical Committee ISO/TC 132, *Ferroalloys*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

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Ferroalloys — Sampling and sieve analysis

1 Scope and field of application

This International Standard specifies the methods of sampling, sample preparation and sieve analysis for the determination of the size distribution in a consignment or a lot of all types of ferroalloys of particle size equal to or greater than 40 µm.

2 References

ISO 565, *Test sieves — Woven metal wire cloth, perforated plate and electroformed sheet — Nominal sizes of openings.*

ISO 2591, *Test sieving.*

ISO 3310, *Test sieves — Technical requirements and testing*

— *Part 1: Metal wire cloth.*

— *Part 2: Metal perforated plates.*

ISO 3713, *Ferroalloys — Sampling and sample preparation — General rules.*

3 Definitions

For definitions of the terms "lot", "consignment", "increment", "gross sample", "divided sample", "test sample" and "nominal top size", see ISO 3713.

In addition, for the purpose of this International Standard, the following definitions apply.

3.1 size sample: A sample taken for the determination of the size distribution of a consignment or a part of a consignment.

3.2 charge: A quantity of a ferroalloy to be subjected to control testing at one time on an individual sieve or a nest of sieves.

3.3 hand placing: A sieving operation in which particles of a ferroalloy are presented on to a sieve, screened and the particles (lumps[1]) retained on the sieve are oriented by hand in such a manner that the possibility of their passing through the sieve will be stated with clear classification of the retained particles (lumps) as oversize.

3.4 size fractions: A portion of a test sample separated with paired sieves having opening sizes of x mm and y mm where $x > y$, or with one sieve having an opening size of x mm (or y mm). The portion separated with paired sieves is designated by $-x\ +y$ mm and the one separated with one sieve is designated by $+x$ mm or $-x$ mm ($+y$ mm or $-\ y$ mm).

3.5 oversize: A portion of a test sample retained on a sieve of opening size x mm; it is designated by $+x$ mm.

3.6 undersize: A portion of a test sample passed through a sieve of opening size y mm; it is designated by $-y$ mm.

3.7 size distribution: A quantitative grouping of particles in a sample according to their sizes; it is expressed in percentage mass passed or retained on selected sieves in relation to the total mass of the sample.

3.8 sieving: A process of separating a mixture of particles according to their sizes with one or more sieves.

3.9 hand sieving: An operation in which a sieve (or set of sieves) is supported and agitated manually.

3.10 assisted hand sieving: An operation in which a sieve (or set of sieves) is supported mechanically but agitated manually.

1) The word "lump" is used in the body of this International Standard for ferroalloys of more than 100 mm in particle size.