TC 65

International Standard ISO 4299

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Manganese ores — Determination of moisture content

Minerais de manganèse — Détermination de l'humidité

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Foreword

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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.

International Standard ISO 4299 was developed by Technical Committee ISO/TC 65, *Manganese and chromium ores*, and was circulated to the member bodies in November 1978.

It has been approved by the member bodies of the following countries :

Australia	Hungary	South Africa, Rep. of
Austria	India	Thailand
Brazil	Italy	Turkey
Bulgaria	Japan	United Kingdom
Czechoslovakia	Korea, Rep. of	USSR
Egypt, Arab Rep. of	Poland	Yugoslavia
France	Portugal	
Germany, F. R.	Romania	

No member body expressed disapproval of the document.

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Manganese ores — Determination of moisture content

1 Scope and field of application

This International Standard specifies a method of determining the moisture content of manganese ores, whether natural or processed and including concentrates, pellets and agglomerates.

The method shall be applied at the places of dispatch and/or acceptance of the ores.

2 Definition

For the purpose of this International Standard the following definition applies :

moisture sample : The sample taken for the determination of the moisture content of the consignment or part of the consignment.

3 Principle

Drying of a final moisture sample in an oven at 105 ± 5 °C and determination of the moisture content, as a percentage by mass, from the initial and dried masses.

4 Apparatus

4.1 Pans, made of stainless material (for example, stainless steel or brass), having a smooth surface, free from contamination and capable of accommodating the specified quantity of moisture sample in a layer of less than 30 mm thickness.

4.2 Drying oven, equipped with a temperature controlling device capable of regulating the temperature in the oven to within ± 5 °C.

4.3 Weighing device, having a sensitivity better than 0,05 % and an accuracy which will allow repeatability of the moisture determination at the precision required in clause 8.

5 Sampling[1)]

5.1 After crushing to minus 22,4 mm in size, take a final moisture sample of 5 kg or more.

If no bias due to the loss of moisture during crushing from minus 22,4 mm to minus 10 mm is confirmed by check experiments, a final moisture sample of not less than 1 kg may be obtained by so crushing the sample.

5.2 If one gross sample is obtained from the consignment, four final moisture samples shall be prepared. Two of these shall be submitted for the determination of moisture content and the other two samples shall be reserved as duplicates in case a check determination is required.

5.3 If sub-samples from a consignment are not combined into one gross sample, one final moisture sample shall be prepared from each sub-sample, and each of these shall be submitted for the determination of moisture content.

NOTE — Samples which have been sieved in water for size determination shall not be used for determination of moisture content.

6 Procedure

NOTE — The moisture content of sticky or wet ores shall be determined by the method specified in annex A unless the mass of the sample is not large, in which case the entire mass of the sample may be dried to determine the moisture content by the following procedure.

6.1 Weigh a drying pan (4.1) and record its mass.

6.2 Spread the final moisture sample, prepared as described in clause 5, to a thickness of less than 30 mm in the tared drying pan and weigh. Record the total mass, the mass of the drying pan, the initial mass of the sample and the numerical value of 0,05 % of the initial mass of the sample (see annex B, clause B.2).

1) Sampling of manganese ores will be the subject of a future International Standard.