

INTERNATIONAL STANDARD

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Direct reduced iron — Sampling and sample preparation — Manual methods for reduced pellets and lump ores

*Minerais de fer préréduits — Échantillonnage et préparation des
échantillons — Méthodes manuelles pour granulés et morceaux de minerai
réduits*



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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.

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.

International Standard ISO 10835 was prepared by Technical Committee ISO/TC 102, *Iron ores*, Subcommittee SC 1, *Sampling*.

Annexes A and B form an integral part of this International Standard. Annexes C, D and E are for information only.

Direct reduced iron — Sampling and sample preparation — Manual methods for reduced pellets and lump ores

1 Scope

This International Standard specifies manual methods of increment sampling and sample preparation of direct reduced iron (DRI) to obtain samples for size analysis, moisture determination and chemical analysis.

The methods specified are applicable to the sampling and preparation of samples of reduced pellets and reduced lump ores (called "DRI" in this International Standard).

The methods for sampling are applicable to the taking of samples of DRI from conveyors, railway wagons or containers (including trucks) and stockpiles, during the loading or discharging of a lot in cases where manual sampling can be carried out safely and with due regard to the health of the operator.

NOTES

1 Sampling and sample preparation of DRI feedstock should follow ISO 3081, ISO 3082 and ISO 3083.

2 The theory and basic principles given in this International Standard are similar to those given in ISO 3081 and ISO 3083.

CAUTION — DRI may react with water and air to produce hydrogen and heat. The heat produced may cause ignition. Therefore due consideration shall be given to the safety of operators by respecting applicable regulations or international codes.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based

on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3082:1987, *Iron ores — Increment sampling and sample preparation — Mechanical method*.

ISO 3085:—¹⁾, *Iron ores — Experimental methods for checking the precision of sampling*.

ISO 3086:1986, *Iron ores — Experimental methods for checking the bias of sampling*.

ISO 11323:—²⁾, *Iron ores — Vocabulary*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 11323 apply.

4 General procedures for manual sampling

Sampling shall be carried out while a lot is being transferred.

The general sampling procedure shall be as follows:

- identify the lot to be sampled;
- ascertain the nominal top size;
- determine the mass of increment considering the nominal top size;
- in the case of systematic or stratified random sampling, determine the minimum number of increments to be taken from the lot, allocate the wagons or containers to be selected from the entire lot and determine the number of increments to be taken from the wagons or containers selected;

1) To be published. (Revision of ISO 3085:1986)

2) To be published.