INTERNATIONAL STANDARD 3751

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Zinc ingots — Selection and preparation of samples for chemical analysis

Zinc en lingots — Prélèvement et préparation des échantillons pour l'analyse chimique

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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 3751 was drawn up by Technical Committee ISO/TC 18, *Zinc and zinc alloys,* and was circulated to the Member Bodies in July 1975.

It has been approved by the Member Bodies of the following countries :

Australia	India	South Africa, Rep. of
Austria	Ireland	Spain
Belgium	Japan	Turkey
Bulgaria	Mexico	United Kingdom
Czechoslovakia	Peru	U.S.S.R.
France	Poland	
Germany	Romania	

The Member Body of the following country expressed disapproval of the document on technical grounds :

Canada

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Zinc ingots — Selection and preparation of samples for chemical analysis

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the requirements for the selection and preparation of samples for chemical analysis.

It covers only the selection and preparation of samples from zinc ingots. Alternatively, the interested parties may agree to select samples of zinc in the liquid state during production.

2 REFERENCE

ISO/R 752, *Zinc ingots.*

3 SELECTION OF INGOTS

3.1 General

3.1.1 The samples shall be selected from batches, each batch being composed of ingots of the same composition, as specified in 3.1 of ISO/R 752.

3.1.2 Following agreement between the interested parties, each consignment may be divided into a series of batches, provided that they contain not less than 25 t. Any consignment of less than 25 t shall be regarded as a single batch.

3.2 Procedure

3.2.1 From each batch of ingots select, at random, one ingot from every 100 for 99,995 – 99,99 – 99,95 zinc and one ingot from every 50 for 99,5 – 98,5 – 98 zinc. The number of ingots selected shall be not less than five.

NOTE — When the consignment is made up of less than five ingots, all shall be used in making the selection.

3.2.2 Carefully clean the surface of each ingot selected, to remove all dirt. Apply the consignee's mark by means of a die-stamp.

4 SELECTION OF SAMPLES

The selection of samples for chemical analysis shall be carried out by drilling in accordance with the following procedure :

— Arrange the selected ingots flat, side by side, upside down with reference to the position occupied in the ingot mould, in groups of a maximum of ten ingots. Ensure that the casting marks are arranged in the same way for each of the ingots.

— In each group, draw a diagonal across the rectangle thus formed.

— With the aid of a tungsten carbide drill of approximately 15 mm diameter and without the use of a lubricant, drill each ingot right through at two points on the diagonal at distances from the long side of the ingot of one-third and two-thirds of the length of the short side (see the figure).

— Carry out the drilling without heating the metal to the point of oxidation, in such a way as to obtain drillings of a thickness between 0,2 and 0,5 mm.

— Collect all the drillings and break them up.

NOTE — In the case of batches of less than 25 t, a sufficient number of drillings must be provided for the mass of the sample to amount to at least 1 kg.

5 PREPARATION OF SAMPLES

Homogenize the sample by mixing, as completely as possible, all the drillings originating from the ingots from a single batch.

Take a mean sample having a mass of at least 1 kg.

Divide the mean sample into four portions of approximately 250 g.

Place each of these portions in a suitable container. Close, label and seal the container. One portion is intended for the supplier, another for the purchaser; the two others are intended to be stored by the purchaser and supplier respectively at their premises, in case a subsequent check or arbitration analysis is required.