INTERNATIONAL STANDARD 3816

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Zinc ingots — Selection and preparation of samples for spectrographic analysis

Zinc en lingots — Prélèvement et préparation des échantillons pour l'analyse spectrale d'émission

First edition — 1976-09-30

UDC 669.5-412 : 543.42 : 620.113.41

Ref. No. ISO 3816-1976 (E)

Descriptors : zinc, ingots, chemical analysis, emission spectrometry, sampling, test specimen conditioning.

Price based on 2 pages

FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

International Standard ISO 3816 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 :

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

The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Australia
Canada

Printed in Switzerland

Zinc ingots — Selection and preparation of samples for spectrographic analysis

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the requirements for the selection and preparation of samples for spectrographic analysis. Sampling may be carried out either by drilling or by sawing slices. Both methods of sampling provide a sample for possible analysis by other standardized methods.

This International Standard 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 PROCEDURE FOR DRILLING, PELLETIZATION AND RECASTING

4.1 Sampling by drilling

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 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.