Australian Standard™

Procedures for acceptance testing of refractory products

Part 1: Batch procedure

Standards Australia

This Australian Standard was prepared by Committee MN-007, Refractories and Refractory Materials. It was approved on behalf of the Council of Standards Australia on 15 June 2001 and published on 1 August 2001.

The following interests are represented on Committee MN-007:

Australasian Ceramic Society

Australasian Institute of Mining and Metallurgy

Australian Aluminium Council

Bureau of Steel Manufacturers of Australia

Cement Industry Federation

CSIRO—Manufacturing Science and Technology

Refractories Manufacturers Association of Australia

University of Wollongong

Additional interests participating in the preparation of this Standard:

CSIRO—Mathematical and Information Sciences

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-007, Refractory and Refractory Materials as a revision of AS 2497—1981, *Sampling procedures for acceptance testing of shaped refractory products* to extend its scope to include all refractory products. The Standard provides a practical guide to manufacturers and users of refractory products on sampling for acceptance testing.

This Standard is Part 1 of a series and relates to batch sampling procedures. Part 2 will cover sequential sampling procedures.

The content and format of the original edition of AS 2497 were derived from a study of typical practical sampling problems taken from the records of large industrial users and suppliers and were decided on after undertaking a study of the provisions of all relevant national and international Standards* and draft Standards available to the Committee.

It was considered that relevant ISO Standards on refractory products were limited in scope and prescriptive. On the other hand the use of general Australian, other national and international Standards on sampling methods is daunting, particularly for users because of the size of the Standards and the lack of practical examples.

This Standard utilizes general standards on sampling methods and applies them to the refractory industry.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

Statements expressed as mandatory terms in notes to tables are deemed to be requirements of this Standard.

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* Specific references are given in Appendix A.

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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard sets out the methodology for the acceptance testing of refractory products based on minimum quality levels associated with an agreed specification.

The Standard is suitable for shaped or unshaped products, raw materials or for any product in an intermediary phase. This Standard is applicable to all situations where a minimum quality level, as opposed to a mean quality level, is required for hazard minimization.

This Standard does not cover the varied quality control methods used to meet performance requirements.

1.2 APPLICATION

The Standard recommends guiding principles to assist both purchasers and suppliers of refractory products in preparing sampling plans that will enable them to determine within practical limits whether or not the product complies with pre-set specifications. For a given set of conditions there will usually be several possible plans, a choice between them being made on the grounds of simplicity or cost.

1.3 REFERENCED DOCUMENTS

The documents referred to in this Standard are listed in Appendix A.

1.4 DEFINITIONS

For the purposes of this Standard, the definitions below apply.

NOTE: See also Appendix B and AS 2780.

1.4.1 Acceptable quality level (AQL)

A quality level which, in a sampling plan, corresponds to a specified but relatively high probability of acceptance. It is the maximum percent defective that, for purpose of sampling inspection, can be considered satisfactory as a process average.

1.4.2 Batch or lot (inspection)

A quantity of some commodity from which a sample is to be drawn and inspected to determine compliance with the acceptability criteria. (This may differ from a quantity of some commodity designated as a batch or lot from other purposes, e.g. for shipment. Other Standards may define batch and lot separately.) Each batch is assumed, as far as practicable, to consist of material or items of a single type, grade, class, size and composition, and to have been manufactured under essentially the same conditions at essentially the same time. It may therefore be necessary to subdivide a mixed consignment into homogeneous batches.