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Australian Standard®
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ALUMINIUM ORES—SAMPLING
Part 2—SAMPLING FROM STATIONARY SITUATIONS

STANDARDS ASSOCIATION OF AUSTRALIA
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The following interests are represented on Committee MN/3:

CSIRO, Division of Mineral Chemistry

CSIRO, Division of Mineral Physics

Department of Resources and Energy

Testing Authorities

Mining Companies

Superintendant Companies

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AUSTRALIAN STANDARD

ALUMINIUM ORES—SAMPLING
Part 2
SAMPLING FROM STATIONARY SITUATIONS

AS 2806.2—1985

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PREFACE

This standard was prepared by the Association's Committee on Aluminium Ores under the direction of the Minerals Standards Board as one of a series of standards for the sampling of aluminium ores. Other parts of this standard are as follows:

Part 1—Sampling from Moving Streams
Part 3—Preparation of Samples*
Part 4—Determination of Quality Variation, Precision and Bias*
Part 5—Determination of Moisture Content of Bulk Material*

This standard has been prepared at the request of the aluminium ore industry to fulfil a vital need for the standardization of sampling procedures used in that industry.

This standard should be read in conjunction with other parts of the standard.

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* In course of preparation.

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STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
ALUMINIUM ORES—SAMPLING

PART 2—SAMPLING FROM STATIONARY SITUATIONS

1 SCOPE. This standard sets out requirements for the sampling of aluminium ores from stationary situations to provide gross samples for sample preparation by the procedures specified in AS 2806.3.

Methods of sampling outlined in this standard should only be considered when the preferred method of sampling from a moving stream is not possible (see AS 2806.1).

Stopped-belt sampling is specifically included.

2 REFERENCED DOCUMENTS. The following standards are referred to in this standard:

AS 1152 Test Sieves

AS 2806 Aluminium Ores—Sampling
Part 1—Sampling from Moving Streams
Part 3—Preparation of Samples*
Part 4—Determination of Quality Variation, Precision and Bias*
Part 5—Determination of Moisture Content of Bulk Material*

ISO 3534 Statistics—Vocabulary and Symbols

3 DEFINITIONS. For the purpose of this standard, the definitions given in ISO 3534 and the following apply:

3.1 Constant mass division—method of sample division in which the retained portion from individual increments is of uniform mass.

3.2 Division—process of decreasing the sample mass (without modification of the particle size of the constituent pieces) where a representative part of the sample is retained while the remainder may be rejected.

3.3 Duplicate sampling—a particular case of replicate sampling (with only two replicate samples), for the purpose of estimating the average precision of sampling from a number of lots or sampling units.

3.4 Fixed rate division—method of sample division in which the retained portion from individual increments is a constant proportion of the original mass.

3.5 Gross sample—sample formed when all the primary increments or subsamples, either as taken or after having been prepared individually to a particular stage of sample preparation, are combined in the correct proportions for preparation of a laboratory sample.

3.6 Increment—the quantity taken by—

(a) a single pass of the sampling device in the case of mechanical sampling;

(b) either a single pass or the combined sum of multiple passes of the sampling implement in the case of manual sampling.

3.7 Isolated lot—a lot that is to be sampled without knowledge of its sampling characteristics.

3.8 Lot—quantity of ore delivered at one time. The lot may be composed of one or more sampling units.

3.9 Manual sampling—operation of sampling when the increments forming subsamples and gross samples are taken by human effort using a hand-held implement.

3.10 Mass-basis sampling—method of taking increments at uniform mass intervals throughout the lot or sampling unit.

3.11 Nominal top size—size of aperture of the finest sieve (complying with AS 1152) through which a minimum of 95 percent of the mass of the ore passes.

3.12 Quality variation—a measure of the heterogeneity of a lot. It is the standard deviation of the quality characteristics between strata.

3.13 Random stratified sampling—taking increments at irregular intervals within constant intervals of time, mass or space.

3.14 Replicate sampling—taking increments from the lot or sampling unit at equal intervals of time, mass or space. Increments are placed in rotation into different containers to give several replicate samples of approximately equal mass.

3.15 Sampling unit—discrete units (e.g. trains, sections of belt, daily production) which comprise the lot.

3.16 Strata—approximately equal parts of a lot or sampling unit based on intervals of time, mass or space.

3.17 Subsample—quantity of ore, consisting of a number of increments taken from part of the lot; also a composite of a number of increments, each having been prepared individually as necessary.

3.18 Systematic stratified sampling—taking increments at regular intervals within constant intervals of time, mass or space.

3.19 Time-basis sampling—method of taking increments at uniform time intervals throughout the lot or sampling unit.

* In course of preparation