

Australian Standard™

**Heavy mineral sand concentrates—
Physical testing**

Part 1: Size analysis



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Australasian Institute of Mining and Metallurgy
Chamber of Minerals and Energy of Western Australia

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Producers of heavy mineral sand concentrates

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PREFACE

This Standard was prepared by the Standards Australia Committee MN-004, Heavy Mineral Sands, to supersede AS 4350.1—1995, *Heavy mineral sand concentrates—Physical testing, Part 1: Size analysis*. This revision includes more detail on the test portion used in the analysis and incorporates in an Appendix the procedure for calculating the American Foundrymen's Society number.

The objective of this Standard is to provide those responsible for size analysis of heavy mineral sand concentrates with a standardized procedure that should ensure consistent results.

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.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 REFERENCED DOCUMENTS.....	4
3 APPARATUS	4
4 SAMPLING	4
5 PROCEDURE.....	5
6 EXPRESSION OF RESULTS.....	6
7 TEST REPORT.....	6
APPENDICES	
A WORKED EXAMPLE	7
B CALCULATION OF AMERICAN FOUNDRYMEN’S SOCIETY NUMBER.....	8

STANDARDS AUSTRALIA**Australian Standard****Heavy mineral sand concentrates—Physical testing****Part 1: Size analysis****1 SCOPE**

This Standard sets out a method for determining the size distribution of free-flowing heavy mineral sand concentrates such as rutile, zircon, ilmenite and monazite.

The complete sizing analysis requires the removal of clay and fines prior to sizing. The removal of clay and fines is usually carried out by wet screening. However, mineral sand concentrates are substantially free of clays and fines and hence this step is omitted.

This Standard includes, in Appendix B, the method of calculating the American Foundrymen's Society Number (AFS number).

2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS

1152 Specification for test sieves

2706 Numerical values—Rounding and interpretation of limiting values

2884 Heavy mineral sand concentrates—Sampling

2884.3 Part 3: Preparation of samples

ISO

565 Test sieves—Metal wire cloth, perforated metal plate and electroformed sheet—Nominal sizes of openings

3 APPARATUS**3.1 Test sieves**

Complying with AS 1152 or ISO 565.

3.2 Balance

Accurate and readable to the nearest 0.01 g.

3.3 Mechanical sieve shaker

A rotating, tapping mechanical sieve shaker. A vibrating-type sieve shaker or manual shaking may be used, provided that it can be demonstrated that results are equivalent to the rotating, tapping-type shaker.

3.4 Brush

A soft brush for brushing the underside of the sieves.

4 SAMPLING

Samples shall be prepared in accordance with AS 2884.3.