Australian Standard™

Refractories and refractory materials—Physical test methods

Method 25: Determination of density by the Rees-Hugill method

PREFACE

This Standard was prepared by the Standards Australia Committee MN/7, Refractories and Refractory Materials to supersede AS 1774.25—1992.

The objective of this revision is to include the specification for Rees Hugill density flasks. These flasks were originally specified in AS 2226—1980, which has now been withdrawn.

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.

METHOD

1 SCOPE This Standard describes the procedure for determining the density of refractory materials of particle size less than 500 μm. The method is applicable to material of density greater than 2200 kg/m^3 but less than 4860 kg/m^3.

NOTE: This method may not give the true density, which is determined by the method given in AS 1774.6.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS
1174 Refractories and refractory materials—Physical test methods
1174.6 Method 6: Determination of true density
2780 Refractories and refractory materials—Glossary of terms

3 DEFINITIONS For the purpose of this Standard, the definitions given in AS 2780 and those below apply.

3.1 Capacity to any graduation line—the additional volume of water, at 20°C, which must be added to the flask, already filled to the datum mark at 20°C, in order to bring the water surface up to that graduation line, the lowest point of the water meniscus being adjusted to the top edge of the datum mark and the graduation line respectively.

3.2 Powder density—the ratio of the mass of the material to its apparent solid volume in the powder form.