Australian Standard®

Refractories and refractory materials—Physical test methods

Method 10: Pyrometric cone equivalent (refractoriness)

PREFACE

This Standard was prepared by the Standards Australia Committee on Refractories and Refractory Materials, under the direction of the Multitechnics Standards Policy Board, as a revision of AS 1774.10—1982, *Methods for physical testing or refractories and refractory materials,* Method 10: *The determination of pyrometric cone equivalent (refractoriness)*.

The 1982 edition has been updated to allow the use of the ISO series, Orton and Seger cones.

METHOD

1 SCOPE This Standard sets out a method for the preparation of a test specimen of a refractory material and the determination of its pyrometric cone equivalent (refractoriness) within the temperature range of 950°C to 2015°C.

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

AS
1141 Methods for sampling and testing aggregates
1141.2 Part 2: Basic testing equipment
1152 Test sieves
2243 Safety in laboratories
2646 Sampling of solid mineral fuels
2646.4 Part 4: Hard coal—Sampling for stationary situations
2780 Refractories and refractory materials—Glossary of terms

AS/NZS
1338 Filters for eye protectors

3 PRINCIPLE A pyramidal test cone is prepared from the refractory material. It is heated according to a prescribed schedule alongside standard pyrometric cones and its softening behaviour compared with that of reference cones.

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

4.1 Reference temperature—the temperature that the manufacturer of a pyrometric reference cone states as the temperature equivalent of that cone.