

# ISO 18555:2016-02 (E)

## Metallic and other inorganic coatings - Determination of thermal conductivity of thermal barrier coatings

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Principle .....	4
5	Apparatus for measuring thermal diffusivity .....	4
6	Specimen .....	5
6.1	Shape and dimensions .....	5
6.2	Surface treatment .....	7
7	Measuring procedure .....	7
7.1	Specimen thickness .....	7
7.2	Thermal diffusivity .....	7
7.2.1	Measurement of temperature-rise curve .....	7
7.2.2	Calculation of thermal diffusivity of substrate .....	7
7.2.3	Calculation of thermal diffusivities of BC and TC .....	7
7.3	Specific heat capacity .....	10
7.4	Bulk density .....	10
8	Thermal conductivities of BC and TC .....	11
9	Report .....	11
9.1	Items to be reported .....	11
9.2	Additional items to be selected for the report .....	12
Annex A (informative) Areal heat diffusion time method .....		13
Annex B (informative) Examples of theoretical temperature-rise curves .....		16
Bibliography .....		18