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ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

**ISO RECOMMENDATION
R 2064**

METALLIC AND OTHER NON-ORGANIC COATINGS

DEFINITION OF TERMS

CONCERNING THE MEASUREMENT OF THE THICKNESS

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 2064, *Metallic and other non-organic coatings – Definition of terms concerning the measurement of the thickness*, was drawn up by Technical Committee ISO/TC 107, *Metallic and other non-organic coatings*, the Secretariat of which is held by the Ente Nazionale Italiano di Unificazione (UNI).

Work on this question led to the adoption of Draft ISO Recommendation No. 2064, which was circulated to all the ISO Member Bodies for enquiry in September 1970. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Chile	Italy	Switzerland
Czechoslovakia	Netherlands	Thailand
France	New Zealand	U.A.R.
Germany	Portugal	United Kingdom
Hungary	Romania	U.S.S.R.
India	South Africa, Rep. of	
Israel	Sweden	

No Member Body opposed the approval of the Draft.

This Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided to accept it as an ISO RECOMMENDATION.

FOREWORD

An important requirement of most coatings specifications is that the coating should have a thickness not less than a given value (and in a few cases not greater than a certain value). The method to be used for measuring the thickness of a particular coating is laid down in the coating specification. Because the area of coating over which measurements are made differs from one method to another, the number and distribution of measurements need to be defined in relation to these areas. This ISO Recommendation gives the definitions that apply to coated surfaces falling within different ranges of size.

METALLIC AND OTHER NON-ORGANIC COATINGS

DEFINITION OF TERMS

CONCERNING THE MEASUREMENT OF THE THICKNESS

1. SCOPE

This ISO Recommendation defines terms concerning the determination of the thickness of metallic or other non-organic coatings on any substrate, except for

- coatings applied to machine screw threads;
- coatings applied to sheet, strip or wire in the unfabricated form, or to coil springs.

2. DEFINITIONS

For the purpose of this ISO Recommendation the following definitions apply :

- 2.1 *Significant surface*. The part of the surface which is essential to the appearance or serviceability of the article and which is to be covered by the coating.
- 2.2 *Measuring area*. The area of the significant surface over which a single measurement is made.

EXAMPLES :

- 2.2.1 For mass loss methods : the area over which the coating is removed.
- 2.2.2 For the anodic dissolution method : the area enclosed by the sealing ring of the cell.
- 2.2.3 For the microscopical method : the point at which a single measurement is made.
- 2.2.4 For non-destructive methods : the probe area (the area influencing the reading obtained is usually larger than the contact area but it cannot be precisely determined).
- 2.3 *Reference area*. The area within which a specified number of single measurements are required to be made.
- 2.4 *Local thickness*. The mean of the thickness measurements of which a specified number should be made within a reference area.
- 2.5 *Minimum thickness*. The lowest value of the local thickness found on the significant surface of a single article.
- 2.6 *Maximum thickness*. The highest value of the local thickness found on the significant surface of a single article.