

INTERNATIONAL STANDARD

**ISO
2064**

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Metallic and other inorganic coatings — Definitions and conventions concerning the measurement of thickness

Revêtements métalliques et autres revêtements inorganiques — Définitions et principes concernant le mesurage de l'épaisseur

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ISO 2064:1996

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 2064 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 2, *Methods of inspection and coordination of test methods*.

This third edition cancels and replaces the second edition (ISO 2064:1980), of which it constitutes a technical revision.

ISO 2064:1996

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Introduction

An important requirement of most coating specifications is that the coating have a thickness not less than a given value (and in a few cases not greater than a given value). The method to be used for measuring the thickness of a particular coating is laid down in the coating specification.

The main purpose of this International Standard is to define exactly what is meant by the term “minimum thickness” when used in specifications for metallic and related coatings. In this context, the minimum thickness is defined as a local thickness over a small area.

With some methods, for example the microscopical method, ISO 1463, it is possible to detect appreciable variations in thickness across extremely small areas (for example pits or cracks) which might be considered as places where the specified minimum thickness has not been achieved. However, with other test methods (for example the coulometric method, ISO 2177:1985, *Metallic coatings — Measurement of coating thickness — Coulometric method by anodic dissolution*, or various non-destructive methods), such minute local variations in thickness cannot be detected. Therefore, the only practicable definition of minimum thickness is one that allows comparable results to be obtained by any of the approved test methods. Hence the minimum thickness should be a local thickness over an area that is as small as practicable, but not too small to accommodate any of the specified test methods. These areas are termed “reference areas” and are often large enough to accommodate a number of separate measurements by the chosen method. In order to obtain consistent results, especially with non-destructive tests, the mean of the measurements of such tests on the reference area should be taken as the local thickness.

In practice, it is usually permissible to test the coating at any place on the significant surface in order to find the minimum thickness on an article. Articles are usually tested at areas where the coating may be expected to be thinnest and so the definition of minimum thickness is the lowest value of local thickness (as defined in clause 3) found by the chosen method.

In the case of some coatings, such as hot-dipped and sprayed metal coatings, the coating specifications may call for compliance with a minimum local or an average thickness, or both. These may differ from the parameters defined in this International Standard and the relevant product specifications should be consulted.

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