
International Standard 2632/III

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Roughness comparison specimens — Part III : Cast surfaces

Échantillons de comparaison viso-tactile de rugosité — Partie III : Surfaces moulées

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Descriptors : products made with metal, castings, surface condition, roughness, viso-tactile comparison specimens, test specimen conditioning.

Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2632/III was developed by Technical Committee ISO/TC 57, *Metrology and properties of surfaces*, and was circulated to the member bodies in March 1978.

It has been approved by the member bodies of the following countries :

Australia	France	Romania
Austria	Germany, F. R.	South Africa, Rep. of
Belgium	Hungary	Spain
Brazil	Japan	Switzerland
Bulgaria	Mexico	Turkey
Canada	Netherlands	USA
Chile	New Zealand	USSR
Czechoslovakia	Poland	Yugoslavia

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Sweden
United Kingdom

Roughness comparison specimens — Part III : Cast surfaces

1 Scope and field of application

This International Standard specifies the characteristics of specimens of cast metallic surfaces which are intended for tactile and visual comparison with workpiece surfaces produced by similar casting methods and which have been cleaned by an appropriate treatment, for example shot blasting, grit blasting, or tumbling.

It is complementary to ISO 2632/I, *Roughness comparison specimens — Part I : Turned, ground, bored, milled, shaped and planed*, and to ISO 2632/II, *Roughness comparison specimens — Part II : Spark-eroded, shot blasted and grit blasted, and polished*.

2 References

ISO/R 468, *Surface roughness*.

ISO 1302, *Technical drawings — Method of indicating surface texture on drawings*.

ISO 1880, *Instruments for the measurement of surface roughness by the profile method — Contact (stylus) instruments of progressive profile transformation — Profile recording instruments*.

ISO 3274, *Instruments for the measurement of surface roughness by the profile method — Contact (stylus) instruments of consecutive profile transformation — Contact profile meters, system M*.

3 Definitions

3.1 roughness comparison specimen : A specimen surface of known average roughness height (R_a) representing a particular casting process. The specimen is used to give design personnel guidance on the feel and appearance representative of the particular casting process and roughness grade, and to enable workshop personnel to assess and control workpiece

surfaces by tactile and visual comparison with the specimen surface.

Note — There is usually no predominant lay on the surfaces of cast specimens.

Other terms used to describe surface characteristics or measurement are defined in ISO/R 468.

4 Methods of manufacture

The specimens shall be manufactured as follows :

4.1 By electroforming positive replicas of master surfaces.

4.2 By making positive replicas, in plastics, of master surfaces; the feel and appearance of the natural cast metallic surface should be represented by a coating or by other means.

4.3 By making positive replicas of master surfaces in other materials and by other methods ensuring that the feel and appearance of the natural cast metallic surface are represented.

4.4 By direct application of the casting process which the specimen is intended to represent (individually cast specimens).

5 Surface characteristics

Master surfaces for reproduction, their resultant electro-formed and plastics replicas, and individually cast specimens (see 4.1, 4.2, 4.3 and 4.4) shall exhibit only the characteristics resulting from the natural action of the casting process (including shot blasting or grit blasting or other appropriate cleaning treatment) which they are intended to represent. They shall not contain other surface irregularities, such as occasional defects, waviness or effects caused by abnormal conditions, which may be acceptable on actual workpieces.