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Steel and iron castings — Visual examination of surface quality

Pièces moulées en acier ou en fonte — Examen visuel de l'état de surface

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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Foreword

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ISO 11971 was prepared by Technical Committee ISO/TC 17, *Steel*, Subcommittee SC 11, *Steel castings*.

This second edition cancels and replaces the first edition (ISO 11971:1997), which has been technically revised.

Introduction

The surface roughness of a casting is influenced by the manufacturing process (moulding, grinding, finishing, etc.), the moulding materials used (sand, coating, etc.), the equipment available and the alloy cast.

Since cast surfaces do not exhibit the same cyclic character as machined surfaces, it is difficult to evaluate their roughness using conventional mechanical, optical, or pneumatic devices.

The use of visual/tactile comparators is therefore preferred in these circumstances.

Moreover, in order to take account of the irregularities on as-cast surfaces, ground surfaces or other means of finishing of castings, comparators should have relatively large dimensions (greater than or equal to 15 000 mm^2) in order to make them more reliable and their results repeatable and consistent.

Two sets of comparators are in widespread use:

— *SCRATA comparators for the definition of surface quality of steel castings*, available from Steel Castings Technology International, 7 East Bank Road, Sheffield S2 3PT, United Kingdom;

— BNIF 359, *Recommandation technique du Bureau de Normalisation des Industries de la Fonderie. Caractérisation d'états de surface des pièces moulées — Utilisation des échantillons types de 110 × 160 mm*, available from Editions Techniques des Industries de la Fonderie, 44 avenue de la Division Leclerc, 92310 Sèvres, France.