BS EN ISO 6158:2011

BSI Standards Publication

Metallic and other inorganic coatings — Electrodeposited coatings of chromium for engineering purposes (ISO 6158:2011)

bsi.

...making excellence a habit.™

Document Sharing Hub

National foreword

This British Standard is the UK implementation of EN ISO 6158:2011. It supersedes BS EN ISO 6158:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee STI/33, Electrodeposited and related coatings.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© BSI 2011

ISBN 978 0 580 74030 5

ICS

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2011.

Amendments issued since publication

Date	Text affected

Documents
Document Sharing Hub

Full document details: BS EN ISO 6158:2011

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6158

July 2011

ICS 25.220.40

Supersedes EN ISO 6158:2004

English Version

Metallic and other inorganic coatings - Electrodeposited coatings of chromium for engineering purposes (ISO 6158:2011)

Revêtements métalliques et autres revêtements inorganiques - Dépôts électrolytiques de chrome pour usages industriels (ISO 6158:2011)

Metallische und andere anorganische Überzüge - Galvanische Chromüberzüge für technische Zwecke (ISO 6158:2011)

This European Standard was approved by CEN on 14 July 2011.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2011 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 6158:2011: E

Documents
Document Sharing Hub

Full document details: BS EN ISO 6158:2011

Foreword

This document (EN ISO 6158:2011) has been prepared by Technical Committee ISO/TC 107 "Metallic and other inorganic coatings" in collaboration with Technical Committee CEN/TC 262 “Metallic and other inorganic coatings” the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2012, and conflicting national standards shall be withdrawn at the latest by January 2012.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 6158:2004.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 6158:2011 has been approved by CEN as a EN ISO 6158:2011 without any modification.

Documents
Document Sharing Hub

Full document details: BS EN ISO 6158:2011

Contents

Page

Foreword iv
Introduction v
1 Scope 1
2 Normative references 1
3 Terms and definitions 2
4 Information to be supplied by the purchaser to the processor 2
5 Designation 3
6 Requirements 6
7 Sampling 8
Annex A (informative) **Typical thickness of chromium specified in engineering applications** 9
Annex B (normative) **Thickness test methods for electroplated chromium and other metallic coatings** 10
Annex C (normative) **Determination of cracks and pores in chromium coatings** 11
Bibliography 12

© ISO 2011 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 6158:2011

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 6158 was prepared by Technical Committee ISO/TC 107, *Metallic and other inorganic coatings*, Subcommittee SC 3, *Electrodeposited coatings and related finishes*.

This third edition cancels and replaces the second edition (ISO 6158:2004), of which it constitutes a minor revision.

© ISO 2011 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 6158:2011

Introduction

Electrodeposited chromium coatings are frequently deposited from hexavalent chromium solutions similar to those used for decorative electroplating. Engineering chromium coatings, however, are generally thicker than decorative ones. Regular or conventional chromium is the type most frequently specified, but porous, cracked or specially profiled surfaces and duplex chromium are also applied to achieve oil-retaining or non-sticking surfaces, or to improve corrosion resistance.

Electrodeposited chromium coatings for engineering applications are most often applied directly to the basis metal to increase wear and abrasion resistance, to increase fretting resistance, to reduce static and kinetic friction, to reduce galling and seizing, to increase corrosion resistance, and to build up undersize or worn parts. For protection against severe corrosion, nickel or other metallic undercoats may be applied prior to the electrodeposition of chromium, or the corrosion resistance of the chromium coating may be increased by alloying, e.g. with molybdenum.

© ISO 2011 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 6158:2011

Documents
Document Sharing Hub