



DPC: 20 / 30424111 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

Date: 16 July 2020

Origin: European

Latest date for receipt of comments: 16 August 2020

Project No. 2009/01617

Responsible committee: ACE/65 Non-metallic materials for aerospace purposes

Interested committees:

Title: Draft PD CEN/TR 4903 Aerospace series - Surface treatments - Template for the writing of surface treatments standards dedicated to result of process

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

- i) has any issues related to 3rd party IPR, patent or copyright
- ii) affects other national standard(s)
- iii) requires additional national guidance or information

**WARNING: THIS IS A DRAFT AND MUST NOT BE REGARDED OR USED AS A BRITISH STANDARD.
THIS DRAFT IS NOT CURRENT BEYOND 16 August 2020**

This draft is issued to allow comments from interested parties; all comments will be given consideration prior to publication. No acknowledgement will normally be sent. **See overleaf for information on the submission of comments.**

No copying is allowed, in any form, without prior written permission from BSI except as permitted under the Copyright, Designs and Patent Act 1988 or for circulation within a nominating organization for briefing purposes. Electronic circulation is limited to dissemination by e-mail within such an organization by committee members.

Further copies of this draft may be purchased from BSI Shop <http://shop.bsigroup.com> or from BSI Customer Services, Tel: +44(0) 20 8996 9001 or email cservices@bsigroup.com. British, International and foreign standards are also available from BSI Customer Services.

Information on the co-operating organizations represented on the committees referenced above may be obtained from <http://standardsdevelopment.bsigroup.com>

Responsible Committee Secretary: **Committee Service Centre (BSI)**
Direct tel: **020 8996 7009**
E-mail: csc@bsigroup.com

 **Documents**
Document Sharing Hub

Introduction

This draft standard is based on European discussions in which the UK has taken an active part. Your comments on this draft are welcome and will assist in the preparation of the consequent British Standard. Comment is particularly welcome on national, legislative or similar deviations that may be necessary.

Even if this draft standard is not approved by the UK, if it receives the necessary support in Europe, the UK will be obliged to publish the official English Language text unchanged as a British Standard and to withdraw any conflicting standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with reasons) or positive vote on this draft.

Submission of Comments

- The guidance given below is intended to ensure that all comments receive efficient and appropriate attention by the responsible BSI committee. **Annotated drafts are not acceptable and will be rejected.**
- All comments must be submitted, preferably electronically, to the Responsible Committee Secretary at the address given on the front cover. Comments should be compatible with version 6.0 or version 97 of Microsoft Word for Windows, if possible; otherwise comments in ASCII text format are acceptable. **Any comments not submitted electronically should still adhere to these format requirements.**
- All comments submitted should be presented as given in the example below. Further information on submitting comments and how to obtain a blank electronic version of a comment form are available from the BSI website at:
<http://drafts.bsigroup.com/>

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
------------------	-------------------------------

1	2	(3)	4	5	(6)	(7)
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/ Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

TR4903

Aerospace series — Surface treatments – Template for the writing of surface treatments standards dedicated to result of process

Série aérospatiale – Traitements de surface – Modèle pour l'écriture de normes de traitements de surface dédiées au résultat de procédé

Luft- und Raumfahrtserie – Oberflächenbehandlungen – Modell zum Schreiben von Oberflächenbehandlungsstandards für das Prozessergebnis

This document will replace EN7001.

Scope**Normative references****Terms and definitions****General principles of the process**

Purpose of the process

Classification

Limitations

Process requirements

Information for the processor

Process conditions

Water quality

Periodic bath chemical analysis

Re-anodizing

Test specimens requirements

Definitions of test specimens

Tests for the qualification

Periodic tests

Parts requirements

Condition of parts prior to the treatment

Inspection before the treatment

Inspection during the treatment

Inspection on parts after anodizing

Quality assurance

Annex A (normative) Tests on test specimens for the qualification

Annex B (normative) Periodic tests on test specimens

Annex C (normative) Tests on parts

Annex D (normative) Dye-spot test

Annex E (informative) Standard evolution form

Bibliography

Introduction

This template is on base of EN4827 (P3:2020) and is intended to set a common template for the writing of surface treatments standards dedicated to result of process.

1 Scope

This document defines the requirements for *(write the process) hexavalent chromium free anodizing of aluminium and aluminium alloys* for *(write the functions) corrosion protection, bonding and painting*.

Hard anodizing and plasma electrolytic anodizing (micro-arc oxidation) are not covered by this document.

The purpose of this document is to give design, quality and manufacturing requirements. It does not give complete in-house process instructions; these are given in the processors detailed process instructions.

2 Normative references

EN 4902, *Aerospace series – Surface treatments – Definitions and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4902 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1.1

Definition 1

Write your definition

3.1.2 (example when you take a reference from EN 4902 by adding a modification)

pit

surface corrosion defect at which the anodic coating is penetrated and/or perforated

Note 1 to entry: Typical characteristics of corrosion pits are:

- *rounded or irregular or elongated geometry,*
- *comet tail or line or halo that emerges from the cavity,*
- *some corrosion by-products inside pits (on aluminium the by-product may be granular, powdery or amorphous and white, grey or black in colour).*

To be considered as a corrosion pit, a surface cavity shall exhibit at least two of the above characteristics.

Note 2 to entry: See Figure 1.

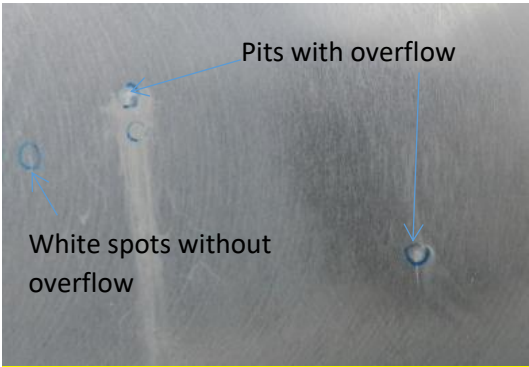
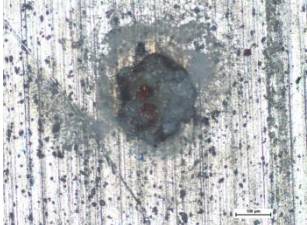
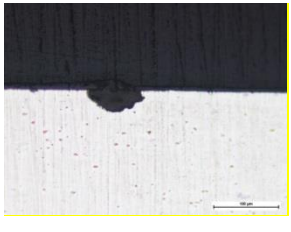
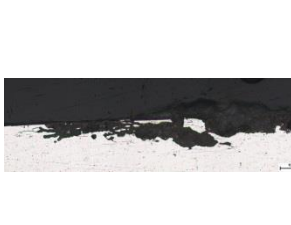
	 	 
<i>Examples of corrosion pits on an aluminium alloy after exposure to neutral salt spray (NSS)</i>	<i>Examples of analysis of corrosion pits on machined 2024 T351 and laminated 2024 T3 that have been SAA treated</i>	

Figure 1 - Example of corrosion on an aluminium alloy after exposure to salt spray

[SOURCE: EN XXXX – modified: Note 2 and Figure 1 have been added]

4 General principles of the process

4.1 Purpose of the process

4.2 Classification

4.3 Limitations

5 Process requirements

5.1 Information for the processor

5.2 Process conditions

5.3 Water quality

5.4 Periodic bath chemical analysis

5.5 Re-anodizing