BS SP 28 & 29:2021

BSI Standards Publication

Pins, taper, solid (inch series), corrosion resisting steel and cadmium plated alloy steel — Specification

bsi.

Publishing and copyright information

The BSI copyright notice displayed in this document indicates when the document was last issued.

Published by BSI Standards Limited 2021

ISBN 978 5 9 04874 2

ICS 9.03 40

The following BSI references relate to the work on this document:
Committee reference ACE/12
Draft for comment 20/30395622 DC

Amendments/corrigenda issued since publication

Date	Text affected

Contents

Summary of pages
This document comprises a front cover, an inside front cover, pages I to IV, pages 1 to 3, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 September 2021. It was prepared by Technical Committee ACE/12, Aerospace fasteners and fastening. A list of organizations represented on this committee can be obtained on request to the committee manager.

Supersession

This British Standard supersedes BS SP 28 & 29:1951, which is withdrawn.

Information about this document

This is a full revision of the standard, and introduces the following principal changes:

- The addition of a cadmium caution notice;
- Clarification of the BS Part No. designation.

This publication can be withdrawn, revised, partially superseded or superseded. Information regarding the status of this publication can be found in the Standards Catalogue on the BSI website at bsigroup.com/standards, or by contacting the Customer Services team.

Where websites and webpages have been cited, they are provided for ease of reference and are correct at the time of publication. The location of a webpage or website, or its contents, cannot be guaranteed.

Hazard warnings

CAUTION. This British Standard features parts that have cadmium as a plating material which has been restricted and/or banned for use in many countries owing to environmental and health concerns; they should not be used in new product designs. Local officials should be consulted about any concerns on the use of cadmium plated parts.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the Shorter Oxford English Dictionary is used (e.g. "organization" rather than "organisation").

Contractual and legal considerations

This publication has been prepared in good faith, however no representation, warranty, assurance or undertaking (express or implied) is or will be made, and no responsibility or liability is or will be accepted by BSI in relation to the adequacy, accuracy, completeness or reasonableness of this publication. All and any such responsibility and liability is expressly disclaimed to the full extent permitted by the law.

This publication is provided as is, and is to be used at the recipient's own risk.

The recipient is advised to consider seeking professional guidance with respect to its use of this publication.

This publication is not intended to constitute a contract. Users are responsible for its correct application.

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

1 Scope

This British Standard specifies the materials, dimensions and finish of solid taper pins for aerospace use.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions of this document. For dated references, only the edition cited applies.[1)] For undated references, the latest edition of the referenced document (including any amendments) applies.

BS S 80, *High chromium-nickel corrosion resisting steel forging stock, bars, forgings and parts (880 to 1080 MPa: limiting ruling section 100mm)*

BS S 154, *Specification – 2 ½ % nickel-chromium-molybdenum steel billets, bars, forgings and parts (880-1080 MPa: limiting ruling section 150 mm)*

BS EN 2133, *Aerospace series – Cadmium plating of steels with specified tensile strength ≤ 1450 MPa, copper, copper alloys and nickel alloys*

SAE AMS03-19, *Electro-Deposition of Cadmium*

3 Terms and definitions

No terms and definitions are listed in this document.

4 Materials and manufacture

The pins shall be manufactured from the appropriate material specified in Table 1.

The pins shall have a smooth machine ground finish and shall be free from visible surface defects when viewed by the naked eye and/or good lighting conditions.

NOTE Pin outline end form options are shown in Figure 1.

The large end of the pins shall be of a curved dome form but extending no further beyond length B than a full hemisphere.

The small end of the pins, though shown of domed form (see Figure 1), shall be machined, but at the option of the manufacturer may be of any suitable lead-in form.

Table 1 — *Materials*

BS identifier	Description	Material specification
SP 28	Alloy steel	BS S 154 [A)]
SP 29	Corrosion resisting steel	BS S 80

[A)] BS S 114 and BS S 96 have been withdrawn but are included here for reference only for earlier-made pins, which might still be in service.

5 Protective finish

Alloy steel pins conforming to BS SP 28 shall be cadmium plated in accordance with SAE AMS03-19 or BS EN 2133.

[1)] Documents that are referred to solely in an informative manner are listed in the Bibliography.