BS EN 4549:2014

BSI Standards Publication

Aerospace series — Pipe coupling, in heat resisting steel or in heat resisting nickel alloy — Coupling end, welded — Design configuration — Inch series

bsi.

...making excellence a habit.™

National foreword

This British Standard is the UK implementation of EN 4549:2014. It supersedes BS EN 4549:2003 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ACE/69, Aerospace hydraulic systems, fluids and components.

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.

© The British Standards Institution 2014. Published by BSI Standards Limited 2014

ISBN 978 0 580 84530 7

ICS 49.080

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 May 2014.

Amendments issued since publication

Date	Text affected

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 4549

April 2014

ICS 49.080

Supersedes EN 4549:2003

English Version

Aerospace series - Pipe coupling, in heat resisting steel or in heat resisting nickel alloy - Coupling end, welded - Design configuration - Inch series

Série aérospatiale - Système de raccordement, en acier résistant à chaud ou en alliage de nickel résistant à chaud - Extrémités à souder - Configuration géométrique - Série inch

Luft- und Raumfahrt - Rohrverschraubung, aus hochwarmfestem Stahl oder aus hochwarmfester Nickellegierung - Anschweißzapfen - Konstruktionsblatt - Inch-Reihe

This European Standard was approved by CEN on 27 December 2013.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

© 2014 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Contents

Page

Foreword

This document (EN 4549:2014) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 October 2014, and conflicting national standards shall be withdrawn at the latest by October 2014.

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 4549:2003.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The following dimensions and tolerances have been used on couplings, 37°, spherical, in FE-PA3601 (X6CrNiTi18) or in FE-CM3901 (X10CrNiNb18) material, welded on pipe in FE-PA3601 (X6CrNiTi18) material, or on couplings in NI-PH3601 (NiCr22MoNb) material, welded on pipe in NI-PH3601 (NiCr22MoNb) material, for aerospace applications with nominal pressure of class D in accordance with ISO 6771. They have to be confirmed for other materials or applications.

1 Scope

This European Standard defines the dimensions and tolerances for the weld end of fluid system components mating with pipe.

Both shall be:

— from inch series;

— of the same dimensional code;

— made of corrosion resistant steel or nickel alloy.

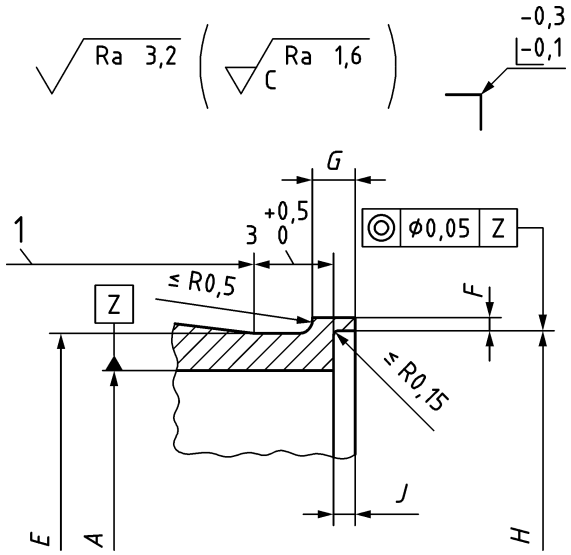
2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 6771, *Aerospace — Fluid systems and components — Pressure and temperature classifications*

3 Dimensions – Tolerances

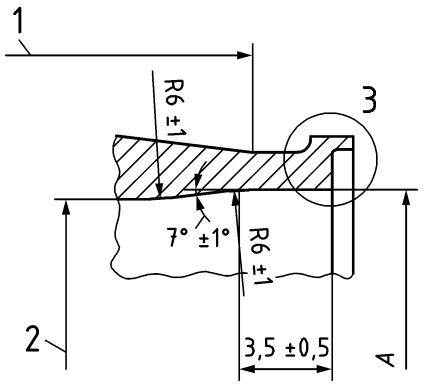
See Figures 1 and 2 and Table 1. Dimensions and tolerances are in millimetres.



Key

1 External conical part (if any on product standard)

Figure 1



Key

1 Internal conical part (if any on product standard)
2 (internal diameter of the fitting)
3 See Figure 1

Figure 2

Table 1

Dimensional code [a]	Nominal diameter	Wall thickness of tube	*A* 0 − 0,1	*E* + 0,1 0	*F* 0 − 0,05	*G* + 0,1 0	*H* + 0,1 0	*J* + 0,05 0
A003	4,763	0,711	3,36	4,85	0,35	1,40	4,93	0,70
B003		0,889	2,96					
A004	6,350	0,711	4,95	6,35			06,45	
B004		0,889	4,55					
A005	7,924	0,711	6,52	7,95			8,02	
B005		0,889	6,12					
A006	9,525	0,711	8,12	9,55			9,62	
B006		0,889	7,72					
A008	12,700	0,711	011,30	12,70	0,50	1,60	12,80	0,80
B008		0,889	010,90					
A010	15,875	0,711	014,48	15,90			15,98	
B010		0,889	014,08					
A012	19,050	0,711	017,65	19,05		1,80	19,15	0,90
B012		0,889	017,25					
A016	25,400	0,711	024,00	25,40		2,20	25,50	1,10
B016		0,889	023,60					
A020	31,750	0,711	030,35	31,75		2,40	31,85	1,20
B020		0,889	029,95					
A024	38,100	0,711	036,70	38,10			38,20	
B024		0,889	036,30					
A028	44,450	0,711	043,05	44,45			44,55	
B028		0,889	042,65					
A032	50,800	0,711	049,40	50,80			50,90	
B032		0,889	049,00					
A036	57,150	0,711	055,75	57,15			57,25	
B036		0,889	055,35					
A040	63,500	0,711	062,10	63,50			63,60	
B040		0,889	061,70					
A044	69,850	0,711	068,45	69,80			69,90	
B044		0,889	068,05					
A048	76,200	0,711	074,80	76,20			76,30	
B048		0,889	074,40					
A052	82,550	0,711	081,15	82,55			82,65	
B052		0,889	080,75					
A056	88,900	0,711	087,50	88,90			89,00	
B056		0,889	087,10					
A064	101,600	0,711	100,20	101,60			101,70	
B064		0,889	099,80					
A072	114,300	0,711	112,90	114,30			114,40	
B072		0,889	112,50					
A080	127,000	0,711	125,60	127,00			127,10	
B080		0,889	125,20					
A088	139,700	0,711	138,30	139,70			139,80	
B088		0,889	137,90					
A096	152,400	0,711	151,00	152,40			152,50	
B096		0,889	150,60					
A104	165,100	0,711	163,70	165,10			165,20	
B104		0,889	163,30					
A112	177,800	0,711	176,40	177,80			177,90	
B112		0,889	176,00					
A120	190,500	0,711	189,10	190,50			190,60	
B120		0,889	188,70					

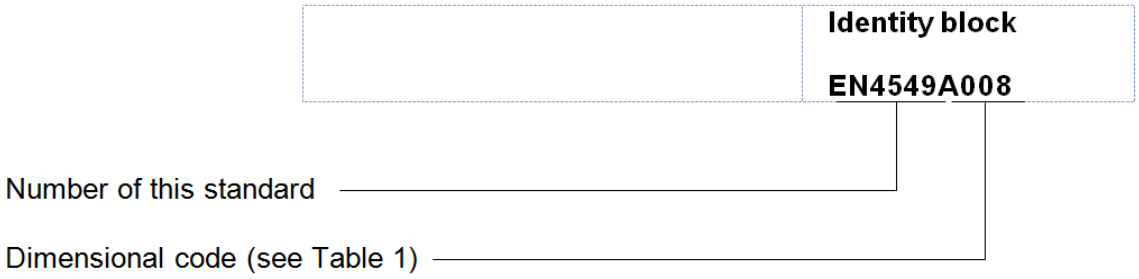
[a] This code corresponds to:

– tube wall thickness (*A*: 0,711 mm; *B*: 0,889 mm);

– nominal diameter given in 16th of inches within three digits.

4 Designation

EXAMPLE



Annex A
(informative)

Standard evolution form

MODIFICATION	REASON AND VALIDATION
Figure 2 page 4 Before: No definition, no dimension for the welded end area. After: Added nota “see Figure 1” for the definition of the welded end.	Dimensions of welded end area are the same for both cases (Internal configuration with straight hole or with conical area).
Table 1 (dimensions) Before: Dimension *H* (internal diameter of welded end) was 4,86 for A003 and B003. After: Dimension *H* is 4,93 for A003 and B003.	Accordance with standard DT45-01.

This page deliberately left blank

This page deliberately left blank

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

British Standards Institution (BSI)

BSI is the national body responsible for preparing British Standards and other standards-related publications, information and services.

BSI is incorporated by Royal Charter. British Standards and other standardization products are published by BSI Standards Limited.

About us

We bring together business, industry, government, consumers, innovators and others to shape their combined experience and expertise into standards -based solutions.

The knowledge embodied in our standards has been carefully assembled in a dependable format and refined through our open consultation process. Organizations of all sizes and across all sectors choose standards to help them achieve their goals.

Information on standards

We can provide you with the knowledge that your organization needs to succeed. Find out more about British Standards by visiting our website at bsigroup.com/standards or contacting our Customer Services team or Knowledge Centre.

Buying standards

You can buy and download PDF versions of BSI publications, including British and adopted European and international standards, through our website at bsigroup.com/shop, where hard copies can also be purchased.

If you need international and foreign standards from other Standards Development Organizations, hard copies can be ordered from our Customer Services team.

Subscriptions

Our range of subscription services are designed to make using standards easier for you. For further information on our subscription products go to bsigroup.com/subscriptions.

With **British Standards Online (BSOL)** you'll have instant access to over 55,000 British and adopted European and international standards from your desktop. It's available 24/7 and is refreshed daily so you'll always be up to date.

You can keep in touch with standards developments and receive substantial discounts on the purchase price of standards, both in single copy and subscription format, by becoming a **BSI Subscribing Member**.

PLUS is an updating service exclusive to BSI Subscribing Members. You will automatically receive the latest hard copy of your standards when they're revised or replaced.

To find out more about becoming a BSI Subscribing Member and the benefits of membership, please visit bsigroup.com/shop.

With a **Multi-User Network Licence (MUNL)** you are able to host standards publications on your intranet. Licences can cover as few or as many users as you wish. With updates supplied as soon as they're available, you can be sure your documentation is current. For further information, email bsmusales@bsigroup.com.

BSI Group Headquarters

389 Chiswick High Road London W4 4AL UK

Revisions

Our British Standards and other publications are updated by amendment or revision.

We continually improve the quality of our products and services to benefit your business. If you find an inaccuracy or ambiguity within a British Standard or other BSI publication please inform the Knowledge Centre.

Copyright

All the data, software and documentation set out in all British Standards and other BSI publications are the property of and copyrighted by BSI, or some person or entity that owns copyright in the information used (such as the international standardization bodies) and has formally licensed such information to BSI for commercial publication and use. Except as permitted under the Copyright, Designs and Patents Act 1988 no extract may be reproduced, stored in a retrieval system or transmitted in any form or by any means – electronic, photocopying, recording or otherwise – without prior written permission from BSI. Details and advice can be obtained from the Copyright & Licensing Department.

Useful Contacts:

Customer Services
Tel: +44 845 086 9001
Email (orders): orders@bsigroup.com
Email (enquiries): cservices@bsigroup.com

Subscriptions
Tel: +44 845 086 9001
Email: subscriptions@bsigroup.com

Knowledge Centre
Tel: +44 20 8996 7004
Email: knowledgecentre@bsigroup.com

Copyright & Licensing
Tel: +44 20 8996 7070
Email: copyright@bsigroup.com

bsi.

...making excellence a habit.™