

Issued 1971-05
Revised 2007-12
Reaffirmed 2012-10
Superseding AS1182B

Standard Stock Removal Allowance
Aircraft-Quality and Premium Aircraft-Quality Steel
Bars and Mechanical Tubing

RATIONALE

AS1182C has been reaffirmed to comply with the SAE five-year review policy.

1. SCOPE

The purpose of this document is to provide the aerospace industry with standards for minimum stock removal allowances for bars and mechanical tubing to provide surfaces which are free from decarburization, seams, laps, tears, cracks, pits, and other injurious surface imperfections.

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

- AMS 2241 Tolerances, Corrosion and Heat-Resistant Steel, Iron Alloy, Titanium, and Titanium Alloy Bars and Wire
- AMS 2243 Tolerances, Corrosion and Heat-Resistant Steel Tubing
- AMS 2251 Tolerances, Low-Alloy Steel Bars
- AMS 2253 Tolerances, Carbon and Alloy Steel Tubing

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2012 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada)
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: <http://www.sae.org>

**SAE values your input. To provide feedback
on this Technical Report, please visit
<http://www.sae.org/technical/standards/AS1182C>**

3. REQUIREMENTS

3.1 Hot Rolled or Cold Drawn Low-Alloy and Martensitic Corrosion-Resistant Steel Bars (see 4.1)

TABLE 1A - INCH/POUND UNITS

Hot Rolled Size Inches	Minimum Stock Removal From Surface, Inch	Cold Drawn Size Inches
Up to 0.500, incl	0.030	Up to 0.4375, incl
Over 0.500 to 0.750, incl	0.045	Over 0.4375 to 0.6875, incl
Over 0.750 to 1.000, incl	0.060	Over 0.6875 to 0.9375, incl
Over 1.000 to 1.500, incl	0.075	Over 0.9375 to 1.4375, incl
Over 1.500 to 2.000, incl	0.090	Over 1.4375 to 1.9375, incl
Over 2.000 to 2.500, incl	0.125	Over 1.9375 to 2.4375, incl
Over 2.500 to 3.500, incl	0.156	Over 2.4375 to 3.8750, incl
Over 3.500 to 4.500, incl	0.187	Over 3.3750 to 4.3750, incl
Over 4.500 to 6.000, incl	0.250	

TABLE 1B - SI UNITS

Hot Rolled Size Millimeters	Minimum Stock Removal From Surface Millimeters	Cold Drawn Size Millimeters
Up to 12.70, incl	0.76	Up to 11.113, incl
Over 12.70 to 19.05, incl	1.14	Over 11.113 to 17.463, incl
Over 19.05 to 25.40, incl	1.52	Over 17.463 to 23.813, incl
Over 25.40 to 38.10, incl	1.91	Over 23.813 to 36.512, incl
Over 38.10 to 50.80, incl	2.29	Over 36.512 to 49.213, incl
Over 50.80 to 63.50, incl	3.18	Over 49.213 to 61.913, incl
Over 63.50 to 88.90, incl	3.96	Over 61.913 to 85.725, incl
Over 88.90 to 114.30, incl	4.75	Over 85.725 to 111.125, incl
Over 114.30 to 152.40, incl	6.35	

- 3.2 Round, Seamless, Hot and Cold Drawn Low-Alloy and Martensitic Corrosion-Resistant Steel Mechanical Tubing (see 4.2 and 4.3)

TABLE 2A - INCH/POUND UNITS

Outside Diameter Inches	Minimum Stock Removal Inch Per Side Outside and Inside
Up to 2.500, incl	0.044
Over 2.500 to 3.500, incl	0.046
Over 3.500 to 4.500, incl	0.052
Over 4.500 to 5.500, incl	0.057
Over 5.500 to 6.500, incl	0.064
Over 6.500 to 8.000, incl	0.074
Over 8.000 to 10.000, incl	0.087

TABLE 2B - SI UNITS

Outside Diameter Millimeters	Minimum Stock Removal Millimeters Per Side Outside and Inside
Up to 63.50, incl	1.12
Over 63.50 to 88.90, incl	1.17
Over 88.90 to 114.30, incl	1.32
Over 114.30 to 139.70, incl	1.45
Over 139.70 to 165.10, incl	1.63
Over 165.10 to 203.20, incl	1.88
Over 203.20 to 254.00, incl	2.21

- 3.3 Turned, Ground, or Polished Low-Alloy and Martensitic Corrosion-Resistant Steel Bars (see 4.1)
- 3.3.1 For product supplied turned, ground, or polished, Table 1 and Table 2 do not apply. Some shallow surface imperfections may be present due to the inability of non-destructive testing to effectively detect shallow defects, as a result of insufficient instrument sensitivity, surface finish, product straightness, etc.
- 3.3.2 Product supplied to the ordered size, also sometimes called smooth turned, shall, after additional stock has been removed as in Table 3, be free from decarburization, seams, laps, tears, cracks, pits, and other imperfections detrimental to usage of the product.
- 3.3.3 Product supplied to a diameter larger than the ordered size, also sometimes called rough-turned, shall be free from decarburization, seams, laps, tears, cracks, pits, and other imperfections detrimental to usage of the product after stock has been removed to reach the ordered size and stock has been removed as in Table 3.