

AEROSPACE MATERIAL SPECIFICATION

SAE AMS-T-6735B

Issued	1998-12
Noncurrent	2003-06
Cancelled	2007-12

Superseding AMS-T-6735A

Tubing, Chrome-Molybdenum, 4135 Steel, Seamless Aircraft Quality

RATIONALE

AMS-T-6735A has been designated cancelled as similar requirements are provided by AMS 6365.

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE International, as of December, 2007. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications indicating that it has been "CANCELLED".

Cancelled specifications are available from SAE.

Similar, but not necessarily identical products are covered in the following specification. However, this listing is provided for information only and does not constitute authority to substitute these specifications for the "CANCELLED" specification.

AMS 6365 Steel Tubing, Seamless, 0.95Cr - 0.20Mo (0.33-0.38C) (SAE 4135) Normalized or Stress Relieved

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 reaffirmed, revised, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2007 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: 724-776-4970 (outside USA)
 Fax: 724-776-0790
 Email: CustomerService@sae.org
SAE WEB ADDRESS: <http://www.sae.org>

1. SCOPE:

This specification covers chrome-molybdenum (4135) seamless steel tubing of aircraft quality.

1.2 Classification:

Tubing shall be of the following types and physical conditions, as specified (see 6.2):

Type I - Round
Type II - Rectangular or square
Type III - Streamline
Type IV - Oval

Physical condition:

(A) - Annealed
(N) - Normalized or stress relieved
(HT-125) - Heat treated to a minimum tensile strength of 125,000 psi
(HT-150) - Heat treated to a minimum tensile strength of 150,000 psi
(HT-180) - Heat treated to a minimum tensile strength of 180,000 psi
(HT-200) - Heat treated to a minimum tensile strength of 200,000 psi

1.2.1 Unless otherwise specified, tubing shall be furnished in type I, condition (N).

2. APPLICABLE DOCUMENTS:

The following publications, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001 or www.sae.org.

AMS 2301	Aircraft Quality Steel Cleanliness, Magnetic Particle Inspection Procedure
AMS 2640	Magnetic Particle Inspection
AMS-STD-183	Continuous Identification Marking of Iron and Steel Products

2.2 U.S. Government Publications:

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

MIL-PRF-16173E	Corrosion Preventive Compound, Solvent Cutback, Cold Application
MS33534	Standard Dimensions for Streamline and Oval Tubular Shapes

3. REQUIREMENTS:

3.1 Data:

Unless otherwise specified in the contract or order, no data are required by this specification or any of the documents referenced in section 2 (see 6.2).

3.2 Material:

The tubing shall be of aircraft quality. The material shall be magnetically inspected in accordance with the procedures of AMS 2301, and shall not exceed the size and frequency rating limits indicated in the paragraph entitled "Disposition" of AMS 2301 (see 4.5).

3.2.1 Manufacturing Process: The steel shall be manufactured by the open-hearth or electric-furnace process, unless a single process is specified in the contract or purchase order.

3.2.1.1 Sufficient discard shall be taken from each ingot to ensure freedom from piping and undue segregation.

3.3 Chemical Composition:

The chemical composition shall be as specified in Table I.

TABLE I - Chemical Composition

Element	Analysis	Check analysis tolerance ¹
	Percent	Percent
Carbon.....	0.32-0.39	± 0.02
Manganese.....	.70- .90	± .03
Phosphorus.....	.025 (max)	+ .005
Sulfur.....	.025 (max)	+ .005
Silicon.....	.20-0.35	± .02
Chromium.....	.80-1.10	+ .05-0.03
Molybdenum.....	.15-0.25	± .03

¹ The average of all the separate determinations shall be within the limits specified in the "Analysis" column. Individual determinations may vary to the extent shown in the "Tolerance" column, except that the several determinations of a single element in any one heat or melt shall not vary both above and below the specified range.