SAE The Engineering Society For Advancing Mobility Land Sea Air and Space®
400 Commonwealth Dr., Warrendale, PA 15096-0001

AEROSPACE MATERIAL SPECIFICATION

Submitted for recognition as an American National Standard

AMS 2204F

Issued 6-30-60
Revised 7-1-89

Superseding AMS 2204E

TOLERANCES
Aluminum Alloy Standard Structural Shapes

1. SCOPE: This specification covers established manufacturing tolerances applicable to aluminum alloy standard structural shapes ordered to inch/pound dimensions. Standard structural shapes are shapes in certain standard alloys, tempers, sizes, and sections such as angles, channels, Tees, Zees, I-Beams, and H-Beams commonly used for structural purposes. These tolerances apply to all conditions, unless otherwise noted. The term "excl" applies only to the higher figure of the specified range.

2. CROSS-SECTIONAL DIMENSIONS: Applicable tolerances are those found in Ø AMS 2205 when shape is produced by the extension process. When shape is produced by rolling, the tolerances of Tables I and II apply.

SAE Technical 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 particular infringement arising therefrom, is the sole responsibility of the user."

AMS documents are protected under United States and international copyright laws. Reproduction of these documents by any means is strictly prohibited without the written consent of the publisher.

Copyright 1989 Society of Automotive Engineers, Inc.
All rights reserved.

REAFFIRMED April 1994

Printed in U.S.A.
Documents Document Sharing Hub
Full document details: SAE AMS2204F

2.1 Structural Shapes Where Depth, Flange Width, or Stem Height is Less Than 8.000 Inches: Depth tolerance applies only at web. Depth across other points is controlled by angularity tolerance.

TABLE I

Specified Dimension	Shape	Tolerance, Percent of Specified Dimension or Inch
Thickness	Angles, Channels, Tees, Zees, I-Beams, and H-Beams	±2.5% or ±0.010 inch, whichever is greater
Flange Width	Angles and Zees	±2.5% or ±1/16 inch whichever is greater
Flange Width	Channels, Tees, I-Beams, and H-Beams	±4%
Depth	Zees and H-Beams	±2.5% or ±1/16 inch, whichever is greater
Depth	Channels and I-Beams	+3/32, -1/16 inch
Stem Height	Tees	±2.5% or ±1/16 inch, whichever is greater

AVA Documents Document Sharing Hub

Full document details: SAE AMS2204F