

NOTICE OF
ADOPTION

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10 October 1991
SUPERSEDING
AMS 2361A
18 December 1978

ADOPTION NOTICE

ELEVATED TEMPERATURE TENSILE PROPERTIES OF CASTINGS

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RELEASING NON-GOVERNMENT STANDARDS BODY: Society of Automotive Engineers

AMS APPROVAL DATE: 1 October 1990

Custodians:

Army - MR
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Military Coordinating Activity:

Army - MR

Project MECA-0499

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AEROSPACE MATERIAL SPECIFICATION

SAE AMS-2361

REV

B

Issued 1966-09-30

Revised 1990-10-01

Superseding AMS-2361A

Submitted for recognition as an American National Standard

ELEVATED TEMPERATURE TENSILE PROPERTIES OF CASTINGS

1. **SCOPE:** This specification establishes a procedure for designating minimum elevated-temperature tensile property requirements of castings by means of this AMS number and a series of dash numbers.
2. **APPLICABLE DOCUMENTS:** The following publications form a part of this specification to the extent specified herein. The applicable issue of referenced publications shall be the issue in effect on the date of the purchase order.
 - 2.1 **ASTM Publications:** Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.
 - ASTM E 8 - Tension Testing of Metallic Metals
 - ASTM E 8M - Tension Testing of Metallic Metals (Metric)
3. **TECHNICAL REQUIREMENTS:**
 - 3.1 **Tensile Specimens:** Shall be machined from a representative casting or castings after any heat treatment specified in the basic material specification has been accomplished. Specimens shall be of standard proportions in accordance with ASTM E 8 or ASTM E 8M with 0.250 inch (6.35 mm) diameter at the reduced parallel gage section, except that if the thickness of the casting is insufficient to provide such specimens, they shall be of a smaller size proportional to the standard as agreed upon by purchaser and vendor.
 - 3.1.1 **Specimen Location:** When property requirements are designated by the procedure of this specification, the location(s) in the casting to which the designated property requirements apply shall be as shown on the purchaser's drawing and as follows:

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3.1.1.1 When the property-limit dash-number designations of 3.2 apply to a specific area or areas, the designation of 3.2 may be used alone or with the final two-letter designation "DR" to indicate that the drawing shows the location(s) from which specimens shall be taken.

3.1.1.2 Property requirements for specimens from non-specific locations in castings may be designated as in 3.2, using one of the following two-letter suffixes as applicable:

-AO = Requirements apply to all areas of the casting.

-GR = Requirements apply to all areas except near gate, sprue, and riser locations.

3.2 Tensile Property Requirements: Will be designated by AMS-2361 followed by five groups of one to four digits indicating in successive order, the temperature in Fahrenheit or Celsius degrees, the minimum tensile strength in 1000 psi or in MPa, the minimum yield strength in 1000 psi or in MPa, the minimum elongation in 4D in percent, and the minimum reduction of area in percent. Designations of temperature and stress shall be assumed to be in inch/pound units (°F and psi) unless "AMS-2361" is followed by "(SI)". When there is no requirement for a particular property, an "X" shall replace the figures for that property.

3.2.1 Examples:

3.2.1.1 In inch/pound units, AMS-2361-1300-75-37-5-10 shall designate that the test is to be conducted at 1300°F and that the requirements are as follows:

| | |
|--|------------|
| Tensile Strength, minimum | 75,000 psi |
| Yield Strength at 0.2% Offset, minimum | 37,000 psi |
| Elongation in 4D, minimum | 5% |
| Reduction of Area, minimum | 10% |

3.2.1.2 In SI units, AMS-2361(SI)-704-517-255-5-10 shall designate that the test is to be conducted at 704°C and that the requirements are as follows:

| | |
|--|---------|
| Tensile Strength, minimum | 517 MPa |
| Yield Strength at 0.2% Offset, minimum | 255 MPa |
| Elongation in 4D, minimum | 5% |
| Reduction of Area, minimum | 10% |

4. QUALITY ASSURANCE PROVISIONS: Not applicable.

5. PREPARATION FOR DELIVERY: Not applicable.

6. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

7. REJECTIONS: Not applicable.