AEROSPACE MATERIAL SPECIFICATION

AMS-H-6875™	REV. C

Issued 1998-11
Revised 2010-11
Reaffirmed 2019-05
Stabilized 2020-09

Superseding AMS-H-6875B

Heat Treatment of Steel Raw Materials

RATIONALE

AMS-H-6875C has been replaced by AMS2761.

STABILIZED NOTICE

AMS-H-6875C has been declared “STABILIZED” by AMS Committee E. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because a four-digit replacement has been issued. Previously, this document was reaffirmed. The last technical update of this document occurred in November 2010. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification, including exceptions listed on the certification.

NOTE: In many cases, the purchaser may represent a sub-tier supplier and not the cognizant engineering organization.

AMS Committee E recommends that the following similar, but not identical, specification may be considered for future procurement. This listing does not constitute authority to substitute these specifications for the “STABILIZED” specification.

AMS2761 Heat Treatment of Steel Raw Materials

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**

For more information on this standard, visit
https://www.sae.org/standards/content/AMSH6875C

NOTICE

The initial SAE publication of this document was taken directly from U.S. Military Standard MIL-H-6875H, Amendment 2. This SAE Standard may retain the same part numbers established by the original military document. Any requirements associated with Qualified Products Lists (QPL) may continue to be mandatory for DoD contracts. Requirements relating to QPLs have not been adopted by the SAE for this standard and are not part of this SAE document.

1. SCOPE

1.1 Scope

This specification covers the requirements for heat-treatment of four classes of steel (See 1.2) and the requirements for furnace equipment, test procedures and information for heat-treating procedures, heat-treating temperatures and material (See 6.3) test procedures. This specification is applicable only to the heat treatment of raw material (See 6.3.1); it does not cover the requirements for the heat treatment of steel parts (See 3.4 and 6.3.2). This specification also describes procedures that, when followed, will produce the desired properties and material qualities within the limitations of the respective alloys tabulated in Tables 1A, 1B, 1C and 1D. Alloys other than those specifically covered herein may be heat treated using all applicable requirements of this specification.

1.1.1 Limitations

Unless otherwise specified, this specification is not applicable to heating or to intermediate (non-final) heat treatment, of raw material, e.g., for hot working. Processes not covered include deliberate surface heat-treating and specialized heat-treating, such as induction hardening, flame hardening, carburizing, nitriding; however, this specification may be referenced for equipment and controls. Austempering, ausbay quenching and martempering may be used when specified by the cognizant engineering organization.

1.2 Classification

Steels covered by this specification are classified into the following four classes. Unless otherwise specified, the process and equipment requirements in this specification refer to all classes of steel tabulated in Tables 1A, 1B, 1C, and 1D, respectively.

Class A - Carbon and low alloy steel

Class B - Martensitic corrosion-resistant steel

Class C - Austenitic corrosion-resistant steel

Class D - Precipitation-hardening and maraging steel

2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

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

AMS2418	Plating, Copper
AMS2424	Plating, Nickel, Low-Stressed Deposit
AMS2750	Pyrometry
AMS2759	Heat Treatment of Steel Parts, General Requirements
AMS2759/3	Heat Treatment, Precipitation-Hardening Corrosion-Resistant and Maraging Steel Parts
AMS-QQ-N-290	Nickel Plating (Electrodeposited)

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM A 262	Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels
ASTM A 370	Mechanical Testing of Steel Products
ASTM C 848	Young’s Modulus, Shear Modulus, and Poisson’s Ratio for Ceramic Whitewares by Resonance
ASTM D 3520	Quenching Time of Heat Treating Fluids (Magnetic Quenchometer Test)
ASTM E 3	Metallographic Specimens, Preparation of
ASTM E 8 / E 8M	Tension Testing of Metallic Materials