INCH-POUND

MIL-H-6875H
AMENDMENT 2
27 October 1998
SUPERSEDING
AMENDMENT 1
16 July 1993

MILITARY SPECIFICATION

HEAT TREATMENT OF STEEL, PROCESS FOR

This amendment forms a part of MIL-H-6875H, dated 1 March 1989, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

* Title heading: Delete the current title and substitute: "HEAT TREATMENT OF STEEL RAW MATERIALS".

* 1.1: Delete the second sentence and substitute: “This specification is applicable only to the heat treatment of raw material (see 6.1.1); it does not cover the requirements for the heat treatment of steel parts (see 3.4 and 6.1.2)."

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3.1.1.1: For "Nitrogen", under the "Class D" column, delete "No" and substitute "X 10/", and add a new footnote:

"10/ The use of a nitrogen atmosphere shall be limited to heat treating temperatures of 1400°F and below. A nitrogen atmosphere may be used for heat treatment above 1400°F provided a minimum of 0.020 inches of metal is subsequently removed from all surfaces of heat treated material. "

3.1.1.1: For “Vacuum”, under the “Class D” column, add "11/" next to the “X” and add a new footnote:

"11/ Nitrogen is not permitted as a partial pressure above 1400°F. Nitrogen may be used as a backfill quench for vacuum heat treatments performed at or below 1925°F.”

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* 3.3.4: Insert new paragraph after 3.3.4:

"3.4 Heat treatment of parts. Finished or semi-finished parts shall be heat treated in accordance with SAE-AMS 2759. Raw materials shall be heat treated in accordance with the requirements specified herein. Any references to parts heat treatment in this document are superseded by the requirements specified in SAE-AMS 2759."

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* 6.1: Delete 6.1 and substitute:

"6.1 Intended use. This specification is intended for the heat treatment of steel raw materials (see 6.1.1). It is not intended for the heat treatment of parts (see 6.1.2).

6.1.1 Raw material. Raw material includes, but is not limited to, such items as sheet, plate, wire, rod, bar, forgings and extrusions. It is usually identified by a heat or lot number and is usually tested destructively for acceptance. It is heat treated, by or for a material producer, in accordance with a material specification which may require, by reference, conformance to a heat treating specification.

6.1.2 Parts. Parts are usually identified by a part number, are produced from raw material in accordance with the requirements of a drawing, and are usually tested by nondestructive techniques only. They are heat treated, by or for a fabricator, in accordance with a drawing, purchase order, fabrication order, or heat treat specification. At the time of heat treatment, they may resemble raw material."

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Footnote 12/: Delete and substitute:

“Cooling in air or other gases is optional for small parts up to, and including, 0.250 inches in thickness. For 440C, cool to -90°F or lower immediately after quenching and before tempering and soak for two hours minimum; the delay between quenching and sub-zero cooling shall not exceed one hour.”

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Footnote 19/: Delete and substitute:

“Cool immediately after quenching and before tempering; delay shall not exceed 1 hour. Cool to -90°F or lower, and soak for one hour minimum.”

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TABLE ID:

Delete the "1700" solution treatment temperature for "Custom 450" and substitute "1900".

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Footnote 4/: Add: "The tolerance on this calculated soak time shall be +10 to -0 minutes.”

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Footnote 16/: Delete: "...4 hours...", and substitute "...4 to 6 hours...".

NOTE: The margins of this amendment are marked with asterisks to indicate where changes from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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