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AEROSPACE MATERIAL SPECIFICATION

AMS 2370

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Revised

QUALITY ASSURANCE SAMPLING OF CARBON AND LOW ALLOY STEELS
Wrought Products Except Forgings

1. APPLICATION: To provide users of Aerospace Material Specifications (AMS), Aerospace Material Documents (AMD), and other specifications in which this specification is referenced, quality assurance procedures which may be used to determine conformance to applicable specification requirements of wrought carbon and low alloy steel products, except forgings.

1.1 Omission from this specification of confirmatory tests of certain material properties or attributes controlled by the applicable specification for a material does not relieve the vendor of responsibility for furnishing materials which conform in all respects to the applicable specification.

1.2 In the event of a conflict between the requirements specified herein and the requirements of a particular material specification, the following rules shall apply:

1.2.1 When the requirements of the material specification are more stringent, they shall take precedence.

1.2.2 When the requirements of this AMS are more stringent, they shall take precedence.

1.2.3 If any tests mentioned in Table I are not required by the material specification, they shall not be considered a requirement.

1.2.4 When instructions are issued by the purchaser regarding quality assurance sampling procedures, such instructions shall take precedence over the requirements of either this specification or the particular specification in which this specification is invoked.

2. RESPONSIBILITY FOR TESTS: The vendor shall supply all samples and shall be responsible for accomplishing the required tests. Results of tests shall be reported to the purchaser as required by the applicable material specification.

3. TESTING: Test methods shall be in accordance with the requirements of the applicable material specification. If a test method is not specified, the method of test shall be as agreed upon by purchaser and vendor.

4. REQUIREMENTS:

4.1 Inspection Lot: An inspection lot shall be as defined in 4.1.1 or 4.1.2, the applicable definition being as specified in Table I for the type of test and type of product being tested.

4.1.1 An inspection lot shall consist of all material identifiable to a single heat or melt.

4.1.2 An inspection lot shall consist of a mill form of one composition, shape, condition, and nominal dimensions from a single heat or melt, heat-treated as a batch or sequentially heat treated in a continuous furnace. In the case of sheet and strip produced on continuous mills, a lot shall be considered the individual coil or product thereof in straight lengths, prior to shearing to narrower widths or cutting to individual lengths.

4.2 Location of Sample: The location from which the sample is taken shall be as specified in 4.2.1, 4.2.2, and/or 4.2.3, the applicable location being as specified in Table I for the type of test and type of product being tested. The orientation with respect to direction of predominant grain flow shall be as specified in the applicable specification for the material, or if not specified therein, shall be as agreed upon by purchaser and vendor.

4.2.1 The test samples shall be obtained during the pouring of steel from a ladle.

4.2.2 The sample shall consist of a section randomly selected from the product.

4.2.3 The sample shall consist of one or more sections of the product selected to represent a specific location or locations with respect to the order of pouring of the selected ingot or ingots and with respect to the location within the ingot, as agreed upon by purchaser and vendor.

4.3 Number of Samples: Unless otherwise specified, sampling shall be in accordance with Table I; the numerals under "Number of Samples" represent the minimum number of units of product representing the inspection lot.

Test	Product	Inspection Lot Definition	Sample Location	Minimum Number of Samples
Composition	All	4.1.1	4.2.1	2 (Note 1)
Response to Heat Treatment (Hardenability)	All	4.1.1	4.2.1 or 4.2.3	1
Tensile Test	All	4.1.2	4.2.2 or 4.2.3	2
Hardness	Bar, tubing, and plate	4.1.2	4.2.2	3
Grain Size	All	4.1.1	4.2.2 or 4.2.3	1
Decarburization	All	4.1.2	4.2.2	2 (Note 2)
Cleanliness (AMS 2300) (AMS 2301)	Bar, tubing, sheet, strip, and plate	4.1.1	Per AMS 2301 or 2300	Per AMS 2301 or 2300
Bend	Sheet, strip, and plate	4.1.2	4.2.2	1
Macroexamination	All	4.1.2	4.2.2 or 4.2.3	3
Inclusion Rating by Fracture or Micro Inclusion Test	Bar and tubing	4.1.1	4.2.3	6

Note 1. Only one value need be reported. For vacuum melted material, the chemical composition shall be checked and reported for carbon and manganese on each vacuum melted ingot and the balance of the composition shall be that of the parent air melt ladle analysis.

Note 2. Only one value need be reported.