



AEROSPACE MATERIAL SPECIFICATION

AMS2248™

REV. H

Issued 1960-01
Revised 2016-03

Superseding AMS2248G

Chemical Check Analysis Limits
Corrosion and Heat-Resistant Steels and Alloys, Maraging and
Other Highly-Alloyed Steels, and Iron Alloys

RATIONALE

AMS2248H revises check analysis limits for Silicon (Table 1), and is a Five Year Review and update of this specification.

1. SCOPE

1.1 This specification defines limits of variation for determining acceptability of composition of cast and wrought corrosion and heat-resistant steels and alloys, maraging and other highly alloyed steels, and iron alloy parts and materials acquired from a producer.

1.1.1 Check limits for elements or for ranges of elements not listed herein shall be as specified in the applicable material specification or as agreed upon by purchaser and producer.

1.2 Application

1.2.1 When specifically referenced in the material specification, the purchaser may apply check analysis limits to determine the acceptability of parts and materials at purchaser's final acceptance or verification testing operation.

1.2.2 Check analysis limits are not for producer's use at producer's acceptance testing.

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 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 E1806 Sampling Steel and Iron for Determination of Chemical Composition

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3. TECHNICAL REQUIREMENTS

3.1 Analytical Procedures

Referee analysis shall be by any method acceptable to purchaser and producer.

3.2 Check Analysis Limits

Shall be as shown in Table 1.

Table 1 - Check analysis variation limits

Element	Upper Limit or Max of Specified Range, %	Variation Under min	Variation Over max
Carbon	Up to 0.010, incl	0.002	0.002
	Over 0.010 to 0.030, incl	0.005	0.005
	Over 0.030 to 0.20, incl	0.01	0.01
	Over 0.20 to 0.60, incl	0.02	0.02
	Over 0.60 to 1.20, incl	0.03	0.03
Manganese	Up to 1.00, incl	0.03	0.03
	Over 1.00 to 3.00, incl	0.04	0.04
	Over 3.00 to 6.00, incl	0.05	0.05
	Over 6.00 to 10.00, incl	0.06	0.06
	Over 10.00 to 15.00, incl	0.10	0.10
Silicon	Up to 1.00, incl	0.05	0.05
	Over 1.00 to 3.00, incl	0.10	0.10
	Over 3.00 to 7.00, incl	0.15	0.15
Phosphorus	Up to 0.040, incl	0.005	0.005
	Over 0.040 to 0.20, incl	0.010	0.010
Sulfur	Up to 0.040, incl	0.005	0.005
	Over 0.040 to 0.20, incl	0.010	0.010
	Over 0.20 to 0.50, incl	0.020	0.020
Chromium	Up to 0.90, incl	0.03	0.03
	Over 0.90 to 2.10, incl	0.05	0.05
	Over 2.10 to 10.00, incl	0.10	0.10
	Over 10.00 to 15.00, incl	0.15	0.15
	Over 15.00 to 20.00, incl	0.20	0.20
Nickel	Over 20.00 to 30.00, incl	0.25	0.25
	Up to 1.00, incl	0.03	0.03
	Over 1.00 to 5.00, incl	0.07	0.07
	Over 5.00 to 10.00, incl	0.10	0.10
	Over 10.00 to 20.00, incl	0.15	0.15
	Over 20.00 to 30.00, incl	0.20	0.20
	Over 30.00 to 40.00, incl	0.25	0.25
	Over 40.00	0.30	0.30