
Welding — Grouping systems for materials — American materials

*Soudage — Systèmes de groupement des matériaux — Matériaux
américains*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 10, *Quality management in the field of welding*.

Any feedback, question or request for official interpretation related to any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 10 via your national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations, where they exist, are available from this page: <https://committee.iso.org/sites/tc44/home/interpretation.html>.

This third edition cancels and replaces the second edition (ISO/TR 20173:2009), which has been technically revised. The main changes compared to the previous edition are as follows:

- [Table 1](#) and [Table 2](#) have been completely revised;
- the layout has been editorially revised.

Welding — Grouping systems for materials — American materials

1 Scope

This document provides an American grouping system for materials for welding purposes, classified in accordance with the grouping system of ISO/TR 15608. A number of Canadian, Australian and New Zealand materials commonly used in North America are also included.

It can also apply for other purposes, such as heat treatment, forming, and non-destructive testing. Types of steels are listed in accordance with the grouping system of ISO/TR 15608:2017, Table 1.

This document covers grouping systems for the following standardized materials:

- steel;
- aluminium and its alloys;
- nickel and its alloys;
- copper and its alloys;
- titanium and its alloys;
- zirconium and its alloys;
- cast irons.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 American grouping system for materials

[Tables 1](#) and [2](#) give American grouping systems for ferrous and non-ferrous materials, respectively.

Materials from the following organizations are listed:

- AAR (Association of American Railroads);
- ABS (American Bureau of Shipping);
- API (American Petroleum Institute);
- AS/NZS (Australia. New Zealand Standards);

- ASTM (ASTM International, formerly the American Society for Testing of Materials);
- ASME (American Society of Mechanical Engineers);
- CSA (Canadian Standards Association);
- MSS (Manufacturers Standardization Society);
- NACE (NACE International, formerly the National Association of Corrosion Engineers).

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Table 1 — American grouping system for ferrous materials

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
AAR	AAR	TC-128		B	10C	1	11.1	C-Mn-Si
AAR	AAR	M-201		A	1	1	11.1	C-Mn-Si
AAR	AAR	M-201		B	1	2	11.1	C-Mn-Si
AAR	AAR	M-201		B+	1	3	11.1	C-Mn-Si
AAR	AAR	M-201		C	1	4	11.1	C-Mn-Si
ABS	ABS	ABS		CS	1	1	1.1	C-Mn-Si
ABS	ABS	ABS		DS	1	1	1.1	C-Mn-Si
ABS	ABS	ABS	K01801	E	1	1	1.1	C-Si
ABS	ABS	ABS	K02101	D	1	1	1.1	C-Si
ABS	ABS	ABS	K02102	B	1	1	1.1	C
ABS	ABS	ABS	K02300	A	1	1	1.1	C
ABS	ABS	ABS	K11846	AH32	1	1	1.2	C-Mn-Si
ABS	ABS	ABS	K11846	DH32	1	1	1.2	C-Mn-Si
ABS	ABS	ABS	K11846	EH32	1	1	1.2	C-Mn-Si
ABS	ABS	ABS	K11846	FH32	1	1	1.2	C-Mn-Si
ABS	ABS	ABS	K11852	AH36	1	2	1.2	C-Mn-Si
ABS	ABS	ABS	K11852	DH36	1	2	1.2	C-Mn-Si
ABS	ABS	ABS	K11852	EH36	1	2	1.2	C-Mn-Si
ABS	ABS	ABS	K11852	FH36	1	2	1.2	C-Mn-Si
ABS	ABS	ABS	K11857	AH40	1	2	1.3	C-Mn-Si
ABS	ABS	ABS	K11857	DH40	1	2	1.3	C-Mn-Si
ABS	ABS	ABS	K11857	EH40	1	2	1.3	C-Mn-Si
ABS	ABS	ABS	K11857	FH40	1	2	1.3	C-Mn-Si
API	API	2H		42	1	1	1.2	C-Mn
API	API	2H		50	1	2	1.2	C-Mn
API	API	2MT1		50	1	1	1.2	C-Mn
API	API	2W		50	1	1	1.2	C-Mn
API	API	2W		60	1	2	1.3	C-Mn
API	API	2Y		42	1	1	1.2	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
API	API	2Y		50	1	1	1.2	C-Mn
API	API	2Y		50T	1	2	1.2	C-Mn
API	API	2Y		60	1	2	1.3	C-Mn
API	API	5L		A	1	1	1.1	C-Mn
API	API	5L		A25	1	1	1.1	C-Mn
API	API	5L		A25, Cl. I	1	1	1.1	C-Mn
API	API	5L		A25, Cl. II	1	1	1.1	C-Mn
API	API	5L		A25P	1	1	1.1	C-Mn
API	API	5L		B	1	1	1.1.1	C-Mn
API	API	5L		BM	1	1	1.1	C-Mn
API	API	5L		BMO	1	1	1.1	C-Mn
API	API	5L		BMS	1	1	1.1	C-Mn
API	API	5L		BN	1	1	1.1	C-Mn
API	API	5L		BNO	1	1	1.1	C-Mn
API	API	5L		BNS	1	1	1.1	C-Mn
API	API	5L		BQ	1	1	1.1	C-Mn
API	API	5L		BQO	1	1	1.1	C-Mn
API	API	5L		BQS	1	1	1.1	C-Mn
API	API	5L		BR	1	1	1.1	C-Mn
API	API	5L		X42	1	1	1.1.1	C-Mn
API	API	5L		X42M	1	1	1.2	C-Mn
API	API	5L		X42MO	1	1	1.2	C-Mn
API	API	5L		X42MS	1	1	1.2	C-Mn
API	API	5L		X42N	1	1	1.2	C-Mn
API	API	5L		X42NO	1	1	1.2	C-Mn
API	API	5L		X42NS	1	1	1.2	C-Mn
API	API	5L		X42Q	1	1	1.2	C-Mn
API	API	5L		X42QO	1	1	1.2	C-Mn
API	API	5L		X42QS	1	1	1.2	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
API	API	5L		X42R	1	1	1.2	C-Mn
API	API	5L		X46	1	1	11.1	C-Mn
API	API	5L		X46M	1	1	1.2	C-Mn
API	API	5L		X46MO	1	1	1.2	C-Mn
API	API	5L		X46MS	1	1	1.2	C-Mn
API	API	5L		X46N	1	1	1.2	C-Mn
API	API	5L		X46NO	1	1	1.2	C-Mn
API	API	5L		X46NS	1	1	1.2	C-Mn
API	API	5L		X46Q	1	1	1.2	C-Mn
API	API	5L		X46QO	1	1	1.2	C-Mn
API	API	5L		X46QS	1	1	1.2	C-Mn
API	API	5L		X52	1	1	11.1	C-Mn
API	API	5L		X52M	1	1	1.2	C-Mn
API	API	5L		X52MO	1	1	1.2	C-Mn
API	API	5L		X52MS	1	1	1.2	C-Mn
API	API	5L		X52N	1	1	1.2	C-Mn
API	API	5L		X52NO	1	1	1.2	C-Mn
API	API	5L		X52NS	1	1	1.2	C-Mn
API	API	5L		X52Q	1	1	1.2	C-Mn
API	API	5L		X52QO	1	1	1.2	C-Mn
API	API	5L		X52QS	1	1	1.2	C-Mn
API	API	5L		X56	1	2	11.1	C-Mn
API	API	5L		X56M	1	2	2.1	C-Mn
API	API	5L		X56MO	1	2	2.1	C-Mn
API	API	5L		X56MS	1	2	2.1	C-Mn
API	API	5L		X56N	1	2	1.3	C-Mn
API	API	5L		X56Q	1	2	3.1	C-Mn
API	API	5L		X56QO	1	2	3.1	C-Mn
API	API	5L		X56QS	1	2	3.1	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
API	API	5L		X60	1	2	11.1	C-Mn
API	API	5L		X60M	1	2	2.1	C-Mn
API	API	5L		X60MO	1	2	2.1	C-Mn
API	API	5L		X60MS	1	2	2.1	C-Mn
API	API	5L		X60N	1	2	1.3	C-Mn
API	API	5L		X60Q	1	2	3.1	C-Mn
API	API	5L		X60QO	1	2	3.1	C-Mn
API	API	5L		X60QS	1	2	3.1	C-Mn
API	API	5L		X65	1	2	11.1	C-Mn
API	API	5L		X65M	1	2	2.1	C-Mn
API	API	5L		X65MO	1	2	2.1	C-Mn
API	API	5L		X65MS	1	2	2.1	C-Mn
API	API	5L		X65Q	1	2	3.1	C-Mn
API	API	5L		X65QO	1	2	3.1	C-Mn
API	API	5L		X65QS	1	2	3.1	C-Mn
API	API	5L		X70	1	3	11.1	C-Mn
API	API	5L		X70M	1	3	2.2	C-Mn
API	API	5L		X70MO	1	3	2.2	C-Mn
API	API	5L		X70MS	1	3	2.2	C-Mn
API	API	5L		X70Q	1	3	3.1	C-Mn
API	API	5L		X70QO	1	3	3.1	C-Mn
API	API	5L		X70QS	1	3	3.1	C-Mn
API	API	5L		X80M	1	4	2.2	C-Mn
API	API	5L		X80MO	1	4	2.2	C-Mn
API	API	5L		X80Q	1	4	3.1	C-Mn
API	API	5L		X80QO	1	4	3.1	C-Mn
API	API	5LS		X46	1	1	11.1	C-Mn
AS/ASTM	AS	945		50	1	2	1.2	C-Mn-Si
AS/ASTM	AS	945		65	1	2	1.3	C-Mn-Si-Ti

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
AS	AS	1548		5-490	1	2	1.2	C
AS	AS	1548		7-430	1	1	1.2	C
AS	AS	1548		7-460	1	1	1.2	C
AS	AS	1548		7-490	1	2	1.2	C
AS	AS	1548		PT430	1	1	1.2	C
AS	AS	1548		PT430	1	1	1.1	C
AS	AS	1548		PT460	1	1	1.1	C
AS	AS	1548		PT460	1	1	1.2	C
AS	AS	1548		PT490	1	2	1.2	C
AS	AS	1548		PT490	1	2	1.2	C
AS	AS	1548		PT540T	1	2	1.3	C-Mn
AS/NZS	AS/NZS	1594		HA200	1	1	1.1	C
AS/NZS	AS/NZS	1594		HA250	1	1	1.1	C
AS/NZS	AS/NZS	1594		HA300	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		HA300/1	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		HA350	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		HA400	1	1	2.1	C-Mn
AS/NZS	AS/NZS	1594		HU250	1	1	1.1	C
AS/NZS	AS/NZS	1594		HU300	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		HU300/1	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		HW350	1	1	1.4	C-Mn-Cr-Ni-Cu
AS/NZS	AS/NZS	1594		XF300	1	1	1.2	C-Mn
AS/NZS	AS/NZS	1594		XF400	1	1	2.1	C-Mn
AS/NZS	AS/NZS	1594		XF500	1	3	2.2	C-Mn
AS/NZS	AS/NZS	3597		500			3.1	C-Mn-1Cr.25Mo
AS/NZS	AS/NZS	3597		600			3.1	C-Mn-1Cr.25Mo
AS/NZS	AS/NZS	3597		700			3.1	C-Mn-1Cr.25Mo
AS/NZS	AS/NZS	3597		700PV	11B		3.1	C-Mn-1Cr.25Mo
AS/NZS	AS/NZS	3678		200	1	1	1.1	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
AS/NZS	AS/NZS	3678		250	1	1	1.2	C-Mn
AS/NZS	AS/NZS	3678		250L15	1	1	1.2	C-Mn
AS/NZS	AS/NZS	3678		300	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3678		300L15	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3678		350	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3678		350L15	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3678		400	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3678		400L15	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3678		450	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3678		450L15	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3678		WR350	3	1	1.4	C-Mn-Cr-Ni-Cu
AS/NZS	AS/NZS	3678		WR350L0	3	1	1.4	C-Mn-Cr-Ni-Cu
AS/NZS	AS/NZS	3679.1		250	1	1	1.1	C-Mn
AS/NZS	AS/NZS	3679.1		250L0	1	1	1.1	C-Mn
AS/NZS	AS/NZS	3679.1		250L15	1	1	1.1	C-Mn
AS/NZS	AS/NZS	3679.1		300	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		300L0	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		300L15	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		350	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		350L0	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		350L15	1	2	1.2	C-Mn
AS/NZS	AS/NZS	3679.1		400	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3679.1		400L0	1	2	1.3	C-Mn
AS/NZS	AS/NZS	3679.1		400L15	1	2	1.3	C-Mn
ASTM	A	27	J02501	70-40	1	2	1.1	C
ASTM	A	27	J03000	60-30	1	1	11.1	C
ASTM	A	27	J03000	U-60-30	1	1	1.1	C
ASTM	A	27	J03001	65-35	1	1	11.1	C
ASTM	A	27	J03501	70-36	1	2	11.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	31	K03100	B	1	1	11.1	C
ASTM/ASME	A/SA	36			1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	36			1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02595		1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02596		1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02597		1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02598		1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02599		1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	36	K02600		1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	53	K02504	E, A	1	1	1.1	C
ASTM/ASME	A/SA	53	K02504	S, A	1	1	1.1	C
ASTM/ASME	A/SA	53	K03005	E, B	1	1	11.1	C-Mn
ASTM/ASME	A/SA	53	K03005	F	1	1	11.1	C
ASTM/ASME	A/SA	53	K03005	S, B	1	1	11.1	C-Mn
ASTM/ASME	A/SA	105	K03504		1	2	11.1	C
ASTM/ASME	A/SA	106	K02501	A	1	1	1.1	C-Si
ASTM/ASME	A/SA	106	K03006	B	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	106	K03501	C	1	2	11.1	C-Mn-Si
ASTM	A	108	G10150	1015 CW	1	1	1.1	C
ASTM	A	108	G10180	1018 CW	1	1	1.1	C
ASTM	A	108	G10200	1020 CW	1	1	1.1	C
ASTM	A	108	G86200	8620 CW	3	3	4.1	0.5Ni-0.5Cr-Mo
ASTM	A	131		A	1	1	1.1	C
ASTM	A	131		AH32	1	2	1.2	C-Mn-Si
ASTM	A	131		AH36	1	2	1.2	C-Mn-Si
ASTM	A	131		B	1	1	1.1	C-Mn-Si
ASTM	A	131		CS	1	1	1.1	C-Mn-Si
ASTM	A	131		D	1	1	1.1	C-Mn-Si
ASTM	A	131		DH32	1	2	1.2	C-Mn-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	131		DH36	1	2	1.2	C-Mn-Si
ASTM	A	131		DS	1	1	1.1	C-Mn-Si
ASTM	A	131		E	1	2	1.1	C-Mn-Si
ASTM	A	131		EH32	1	2	1.2	C-Mn-Si
ASTM	A	131		EH36	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	134	K01400	SA283, A	1	1	1.1	C
ASTM/ASME	A/SA	134	K01700	SA285, A	1	1	1.1	C
ASTM/ASME	A/SA	134	K01702	SA283, B	1	1	1.1	C
ASTM/ASME	A/SA	134	K02200	SA285, B	1	1	1.1	C
ASTM/ASME	A/SA	134	K02401	SA283, C	1	1	1.1	C
ASTM/ASME	A/SA	134	K02599	SA366	1	1	1.1	C
ASTM/ASME	A/SA	134	K02702	SA283, D	1	1	1.1	C
ASTM/ASME	A/SA	134	K02801	SA285, C	1	1	1.1	C
ASTM/ASME	A/SA	135	K02509	A	1	1	1.1	C
ASTM/ASME	A/SA	135	K03018	B	1	1	1.1	C
ASTM	A	139	K02508	A	1	1	1.1	C
ASTM	A	139	K03003	B	1	1	1.1	C
ASTM	A	139	K03004	C	1	1	1.1	C
ASTM	A	139	K03010	D	1	1	1.1	C
ASTM	A	139	K03012	E	1	1	1.1	C
ASTM	A	161	K11522	T1	3	1	1.1	C-0.5Mo
ASTM	A	167	S30215	302B	8	1	8.1	18Cr-8Ni-2Si
ASTM	A	167	S30800	308	8	2	8.2	20Cr-10Ni
ASTM	A	167	S30900	309	8	2	8.2	23Cr-12Ni
ASTM	A	167	S31000	310	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	178	K01200	A	1	1	1.1	C
ASTM/ASME	A/SA	178	K02709	D	1	2	1.1	C-Mn-Si
ASTM/ASME	A/SA	178	K03503	C	1	1	1.1	C
ASTM/ASME	A/SA	179	K01200		1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	181	K03502	Cl. 60	1	1	11.1	C-Si
ASTM/ASME	A/SA	181	K03502	Cl. 70	1	2	11.1	C-Si
ASTM/ASME	A/SA	182	K04562	F12, Cl.1	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	182	K11564	F12, Cl.2	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	182	K11572	F11, Cl.2	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	182	K11572	F11, Cl.3	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	182	K11597	F11, Cl.1	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	182	K12122	F2	3	2	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	182	K12822	F1	3	2	1.1	C-0.5Mo
ASTM/ASME	A/SA	182	K21590	F22, Cl.1	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	182	K21590	F22, Cl.3	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	182	K22035	FR	9A	1	9.1	2Ni-1Cu
ASTM/ASME	A/SA	182	K31390	F3VCb	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	182	K31545	F21	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	182	K31830	F3V	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	182	K31835	F22V	5C	1	6.2	2.25Cr-1Mo-V
ASTM/ASME	A/SA	182	K41545	F5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	182	K42544	F5a	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	182	K90901	F91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	182	K90941	F9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	182	K92460	F92	15E	1	6.4	9Cr-2W
ASTM/ASME	A/SA	182	N08367		45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	182	N08904	F904L	45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	182	S20910	FXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	182	S21904	FXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	182	S30400	F304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	182	S30403	F304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	182	S30409	F304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	182	S30451	F304N	8	1	8.1	18Cr-8Ni-N

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	182	S30453	F304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	182	S30600	F46	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	182	S30815	F45	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	182	S31000	F310	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	182	S31050	F310MoLN	8	2	8.2	25Cr-22Ni-2Mo-N
ASTM/ASME	A/SA	182	S31200	F50	10H	1	10.2	25Cr-6Ni-Mo-N
ASTM/ASME	A/SA	182	S31254	F44	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	182	S31600	F316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	182	S31603	F316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	182	S31609	F316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	182	S31651	F316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	182	S31653	F316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	182	S31700	F317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	182	S31703	F317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	182	S31803	F51	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	182	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	182	S32100	F321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	182	S32109	F321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	182	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	182	S32205	F60	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	182	S32550	F61	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	182	S32750	F53	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	182	S32760	F55	10H	1	10.1	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	182	S33100	F10	8	2	8.1	20Ni-8Cr
ASTM/ASME	A/SA	182	S34565	F49	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	182	S34700	F347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	182	S34709	F347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	182	S34800	F348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	182	S34809	F348H	8	1	8.1	18Cr-10Ni-Cb

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	182	S39274	F54	10H	1	10.2	25Cr-7Ni-3Mo-2W-Cu-N
ASTM/ASME	A/SA	182	S41000	F6a, Cl.1	6	1	7.2	13Cr
ASTM/ASME	A/SA	182	S41000	F6a, Cl.2	6	3	7.2	13Cr
ASTM/ASME	A/SA	182	S41000	F6a, Cl.3	6	3	7.2	13Cr
ASTM/ASME	A/SA	182	S41000	F6a, Cl.4	6	3	7.2	13Cr
ASTM/ASME	A/SA	182	S41026	F6b	6	3	7.2	13Cr-0.5Mo
ASTM/ASME	A/SA	182	S41500	F6NM	6	4	7.2	13Cr-4.5Ni-Mo
ASTM/ASME	A/SA	182	S42900	F429	6	2	7.2	15Cr
ASTM/ASME	A/SA	182	S43000	F430	7	2	7.1	17Cr
ASTM/ASME	A/SA	182	S44627	FXM-27Cb	10I	1	7.1	27Cr-1Mo
ASTM/ASME	A/SA	192	K01201		1	1	1.1	C-Si
ASTM	A	199	K11597	T11	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM	A	199	K21590	T22	5A	1	5.2	2.25Cr-1Mo
ASTM	A	199	K41545	T5	5B	1	5.3	5Cr-0.5Mo
ASTM	A	199	K81590	T9	5B	1	5.4	9Cr-1Mo
ASTM	A	199	K90901	T91	15E	1	6.4	9Cr-1Mo-V
ASTM	A	200	K21590	T22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	202	K11742	A	4	1	4.2	0.5Cr-1.25Mn-Si
ASTM/ASME	A/SA	202	K12542	B	4	1	4.2	0.5Cr-1.25Mn-Si
ASTM/ASME	A/SA	203		F	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	203	K21703	A	9A	1	9.1	2.5Ni
ASTM/ASME	A/SA	203	K22103	B	9A	1	9.1	2.5Ni
ASTM/ASME	A/SA	203	K31718	D	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	203	K32018	E	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	204	K11820	A	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	204	K12020	B	3	2	1.1	C-0.5Mo
ASTM/ASME	A/SA	204	K12320	C	3	2	1.2	C-0.5Mo
ASTM/ASME	A/SA	209	K11422	T1b	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	209	K11522	T1	3	1	1.1	C-0.5Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	209	K12023	T1a	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	210	K02707	A-1	1	1	11.1	C-Si
ASTM/ASME	A/SA	210	K03501	C	1	2	11.1	C-Mn-Si
ASTM	A	211	K02502	A570-30	1	1	1.1	C
ASTM	A	211	K02502	A570-33	1	1	1.1	C
ASTM	A	211	K02502	A570-40	1	1	1.1	C
ASTM/ASME	A/SA	213	K11547	T2	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	213	K11562	T12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	213	K11597	T11	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	213	K12047	T17	10B	1	4.1	1Cr-V
ASTM/ASME	A/SA	213	K21590	T22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	213	K31545	T21	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	213	K41245	T5c	5B	1	5.3	5Cr-0.5Mo-Ti
ASTM/ASME	A/SA	213	K41545	T5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	213	K51545	T5b	5B	1	5.3	5Cr-0.5Mo-Si
ASTM/ASME	A/SA	213	K90901	T91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	213	K90941	T9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	213	K92460	T92	15E	1	6.4	9Cr-2W
ASTM/ASME	A/SA	213	S20100	TP201	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	213	S20200	TP202	8	3	8.3	18Cr-5Ni-9Mn
ASTM/ASME	A/SA	213	S20910	XM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	213	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	213	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	213	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	213	S30432		8	1	8.1	18Cr-9Ni-3Cu-Cb-N
ASTM/ASME	A/SA	213	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	213	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	213	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	213	S30908	TP309S	8	2	8.2	23Cr-12Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	213	S30909	TP309H	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	213	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	213	S30941	TP309HCb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	213	S31000	310	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	213	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	213	S31009	TP310H	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	213	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	213	S31041	TP310HCb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	213	S31042	TP310HCb-N	8	3	8.2	25Cr-20Ni-Cb-N
ASTM/ASME	A/SA	213	S31050	TP310MoLN	8	2	8.2	25Cr-22Ni-2Mo-N
ASTM/ASME	A/SA	213	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	213	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	213	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	213	S31635	TP316Ti	8	1	8.1	16Cr-12Ni-2Mo-Ti
ASTM/ASME	A/SA	213	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	213	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	213	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	213	S31703	TP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	213	S31725	TP317LM	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	213	S31726	TP317LMN	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	213	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	213	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	213	S32615	S32615	8	1	8.1	18Cr-20Ni-5.5Si
ASTM/ASME	A/SA	213	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	213	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	213	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	213	S34710	TP347HFG	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	213	S34751	TP347LN	8	1	8.1	18Cr-10Ni-Cb-N
ASTM/ASME	A/SA	213	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	213	S34809	TP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	213	S38100	XM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	214	K01807		1	1	1.1	C
ASTM/ASME	A/SA	216	J02502	WCA	1	1	1.1	C-Si
ASTM/ASME	A/SA	216	J02503	WCC	1	2	1.1	C-Mn-Si
ASTM/ASME	A/SA	216	J03002	WCB	1	2	1.1	C-Si
ASTM/ASME	A/SA	217	J12072	WC6	4	1	5.1	1.25Cr-0.5Mo
ASTM/ASME	A/SA	217	J12082	WC4	4	1	9.1	1Ni-0.5Cr-0.5Mo
ASTM/ASME	A/SA	217	J12524	WC1	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	217	J21890	WC9	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	217	J22000	WC5	4	1	4.2	0.75Ni-1Mo-0.75Cr
ASTM/ASME	A/SA	217	J42045	C5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	217	J82090	C12	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	217	J84090	C12A	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	217	J91150	CA15	6	3	7.2	13Cr
ASTM/ASME	A/SA	225	K12004	D	10A	1	2.1	Mn-0.5Ni-V
ASTM/ASME	A/SA	225	K12524	C	10A	1	4.1	Mn-0.5Ni-V
ASTM	A	226	K01201		1	1	1.1	C-Si
ASTM/ASME	A/SA	234		WP11, Cl.1	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	234		WP11, Cl.2	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	234		WP11, Cl.3	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	234	K03006	WPB	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	234	K03501	WPC	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	234	K12062	WP12, Cl.1	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	234	K12062	WP12, Cl.2	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	234	K12821	WP1	3	1	11.2	C-0.5Mo
ASTM/ASME	A/SA	234	K21590	WP22, Cl.1	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	234	K21590	WP22, Cl.3	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	234	K22035	WPR	9A	1	9.1	2Ni-1Cu

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	234	K41545	WP5, Cl.1	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	234	K41545	WP5, Cl.3	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	234	K90901	WP91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	234	K90941	WP9, Cl.1	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	234	K90941	WP9, Cl.3	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	240	N08367		45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	240	N08904	904L	45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	240	S20100	201-1	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	240	S20100	201-2	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	240	S20153	201LN	8	3	8.3	16Cr-4Ni-6Mn
ASTM/ASME	A/SA	240	S20200	202	8	3	8.3	18Cr-5Ni-9Mn
ASTM/ASME	A/SA	240	S20400		8	3	8.3	16Cr-9Mn-2Ni-N
ASTM/ASME	A/SA	240	S20910	XM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	240	S21600	XM-17	8	3	8.3	19Cr-8Mn-6Ni-Mo-N
ASTM/ASME	A/SA	240	S21603	XM-18	8	3	8.3	19Cr-8Mn-6Ni-Mo-N
ASTM/ASME	A/SA	240	S21800	S21800	8	3	8.1	18Cr-8Ni-4Si-N
ASTM/ASME	A/SA	240	S24000	XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	240	S30100	301	8	1	8.1	17Cr-7Ni
ASTM/ASME	A/SA	240	S30200	302	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	240	S30400	304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	240	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	240	S30409	304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	240	S30451	304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	240	S30452	XM-21	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	240	S30453	304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	240	S30500	305	8	1	8.1	18Cr-11Ni
ASTM/ASME	A/SA	240	S30600	S30600	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	240	S30601	S30601	8	1	8.1	17.5Cr-17.5Ni-5.3Si
ASTM/ASME	A/SA	240	S30815	S30815	8	2	8.2	21Cr-11Ni-N

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	240	S30908	309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	240	S30909	309H	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	240	S30940	309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	240	S30941	309HCb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	240	S31008	310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	240	S31009	310H	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	240	S31040	310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	240	S31041	310HCb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	240	S31050	310MoLN	8	2	8.2	25Cr-22Ni-2Mo-N
ASTM/ASME	A/SA	240	S31200	S31200	10H	1	10.2	25Cr-6Ni-Mo-N
ASTM/ASME	A/SA	240	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	240	S31260	S31260	10H	1	10.2	25Cr-6.5Ni-3Mo-N
ASTM/ASME	A/SA	240	S31277	S31277	45		8.2	27Ni-22Cr-7Mo-Mn-Cu
ASTM/ASME	A/SA	240	S31600	316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	240	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	240	S31609	316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	240	S31635	316Ti	8	1	8.1	16Cr-12Ni-2Mo-Ti
ASTM/ASME	A/SA	240	S31640	316Cb	8	1	8.1	16Cr-12Ni-2Mo-Cb
ASTM/ASME	A/SA	240	S31651	316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	240	S31653	316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	240	S31700	317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	240	S31703	317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	240	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	240	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	240	S31753	S31753	8	1	8.1	18Cr-13Ni-3Mo-N
ASTM/ASME	A/SA	240	S31803	S31803	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	240	S32003		10H	1	10.1	21Cr-3.5Ni-Mo-N
ASTM/ASME	A/SA	240	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	240	S32100	321	8	1	8.1	18Cr-10Ni-Ti

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	240	S32101		10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N
ASTM/ASME	A/SA	240	S32109	321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	240	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	240	S32205	2205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	240	S32550	S32550	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	240	S32615	S32615	8	1	8.1	18Cr-20Ni-5.5Si
ASTM/ASME	A/SA	240	S32750	S32750	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	240	S32760	S32760	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	240	S32900	329	10H	1	10.2	26Cr-4Ni-Mo
ASTM/ASME	A/SA	240	S32906	S32906	10H	1	10.2	29Cr-6.5Ni-2Mo-N
ASTM/ASME	A/SA	240	S32950	S32950	10H	1	10.2	26Cr-4Ni-Mo-N
ASTM/ASME	A/SA	240	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	240	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	240	S34709	347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	240	S34800	348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	240	S34809	348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	240	S38100	XM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	240	S40500	405	7	1	7.1	12Cr-1Al
ASTM/ASME	A/SA	240	S40910	409	7	1	7.1	11Cr-Ti
ASTM/ASME	A/SA	240	S40920	409	7	1	7.1	11Cr-Ti
ASTM/ASME	A/SA	240	S40930	409	7	1	7.1	11Cr-Ti
ASTM/ASME	A/SA	240	S41000	410	6	1	7.2	13Cr
ASTM/ASME	A/SA	240	S41008	410S	7	1	7.2	13Cr
ASTM/ASME	A/SA	240	S41500	S41500	6	4	7.2	13Cr-4.5Ni-Mo
ASTM/ASME	A/SA	240	S42900	429	6	2	7.2	15Cr
ASTM/ASME	A/SA	240	S43000	430	7	2	7.1	17Cr
ASTM/ASME	A/SA	240	S43035	439	7	2	7.1	18Cr-Ti
ASTM/ASME	A/SA	240	S43932	S43932	7	2	7.1	18Cr-Ti-Cb
ASTM/ASME	A/SA	240	S44400	S44400	7	2	7.1	18Cr-2Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	240	S44626	XM-33	10I	1	7.1	27Cr-1Mo-Ti
ASTM/ASME	A/SA	240	S44627	XM-27	10I	1	7.1	27Cr-1Mo
ASTM/ASME	A/SA	240	S44635	S44635	10I	1	7.1	25Cr-4Ni-4Mo-Ti
ASTM/ASME	A/SA	240	S44660	S44660	10K	1	7.1	26Cr-3Ni-3Mo
ASTM/ASME	A/SA	240	S44700	S44700	10J	1	7.1	29Cr-4Mo
ASTM/ASME	A/SA	240	S44800	S44800	10K	1	7.1	29Cr-4Mo-2Ni
ASTM	A	242	K11510	1	1	2	1.2	C
ASTM/ASME	A/SA	249	N08367		45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	249	N08904		45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	249	S20100	TP201	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	249	S20200	TP202	8	3	8.3	18Cr-5Ni-9Mn
ASTM/ASME	A/SA	249	S20910	TP XM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	249	S24000	TP XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	249	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	249	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	249	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	249	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	249	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	249	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	249	S30900	TP309	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	249	S30908	TP309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	249	S30909	TP309H	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	249	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	249	S30941	TP309HCb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	249	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	249	S31009	TP310H	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	249	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	249	S31041	TP310HCb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	249	S31050	TP310MoLN	8	2	8.2	25Cr-22Ni-2Mo-N

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	249	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	249	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	249	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	249	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	249	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	249	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	249	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	249	S31703	TP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	249	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	249	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	249	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	249	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	249	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	249	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	249	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	249	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	249	S34809	TP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	249	S38100	TP XM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	250	K11422	T1b	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	250	K11522	T1	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	250	K11547	T2	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	250	K11562	T12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	250	K11597	T11	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	250	K12023	T1a	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	250	K21590	T22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	266	K03017	4	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	266	K03506	1	1	1	11.1	C-Si
ASTM/ASME	A/SA	266	K03506	2	1	2	11.1	C-Si
ASTM/ASME	A/SA	266	K05001	3	1	2	11.2	C-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	268	S40500	TP405	7	1	7.1	12Cr-1Al
ASTM/ASME	A/SA	268	S40800	S40800	7	1	7.1	12Cr-Ti
ASTM/ASME	A/SA	268	S40900	TP409	7	1	7.1	11Cr-Ti
ASTM/ASME	A/SA	268	S41000	TP410	6	1	7.2	13Cr
ASTM/ASME	A/SA	268	S41500	S41500	6	4	7.2	13Cr-4.5Ni-Mo
ASTM/ASME	A/SA	268	S42900	TP429	6	2	7.2	15Cr
ASTM/ASME	A/SA	268	S43000	TP430	7	2	7.1	17Cr
ASTM/ASME	A/SA	268	S43035	TP439	7	2	7.1	18Cr-Ti
ASTM/ASME	A/SA	268	S43036	TP430Ti	7	2	7.1	18Cr-Ti
ASTM/ASME	A/SA	268	S44400	18Cr-2Mo	7	2	7.1	18Cr-2Mo
ASTM/ASME	A/SA	268	S44600	TP 446-1	10I	1	7.1	27Cr
ASTM/ASME	A/SA	268	S44600	TP 446-2	10I	1	7.1	27Cr
ASTM/ASME	A/SA	268	S44626	TP XM-33	10I	1	7.1	27Cr-1Mo-Ti
ASTM/ASME	A/SA	268	S44627	TP XM-27	10I	1	7.1	27Cr-1Mo
ASTM/ASME	A/SA	268	S44635	25-4-4	10I	1	7.1	25Cr-4Ni-4Mo-Ti
ASTM/ASME	A/SA	268	S44660	26-3-3	10K	1	7.1	26Cr-3Ni-3Mo
ASTM/ASME	A/SA	268	S44700	29-4	10J	1	7.1	29Cr-4Mo
ASTM/ASME	A/SA	268	S44735	S44735	10J	1	7.1	29Cr-4Mo-Ti
ASTM/ASME	A/SA	268	S44800	29-4-2	10K	1	7.1	29Cr-4Mo-2Ni
ASTM	A	269	S20910	TPXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM	A	269	S21900	TPXM-10	8	3	8.3	20Cr-6Ni-9Mn
ASTM	A	269	S21904	TPXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM	A	269	S24000	TPXM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM	A	269	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM	A	269	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM	A	269	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM	A	269	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	269	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	269	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	269	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM	A	269	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	269	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	269	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	269	S38100	TPXM-15	8	3	8.3	18Cr-18Ni-2Si
ASTM	A	270	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM	A	271	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM	A	271	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM	A	271	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	271	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	271	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	271	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	271	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	271	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	276	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	276	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	276	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	276	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	276	S32101		10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N
ASTM/ASME	A/SA	276	S32205	S32205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	276	S32550		10H	1	10.1	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	276	S41000	TP410	6	1	7.2	13Cr
ASTM/ASME	A/SA	283	K01400	A	1	1	1.1	C
ASTM/ASME	A/SA	283	K01702	B	1	1	1.1	C
ASTM/ASME	A/SA	283	K02401	C	1	1	1.1	C
ASTM/ASME	A/SA	283	K02702	D	1	1	1.1	C
ASTM/ASME	A/SA	285	K01700	A	1	1	1.1	C
ASTM/ASME	A/SA	285	K02200	B	1	1	1.1	C
ASTM/ASME	A/SA	285	K02801	C	1	1	11.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	297	J92603	HF	8	2	8.2	21Cr-10Ni-2Mn-2Si
ASTM	A	297	J93403	HE	8	2	8.2	28Cr-10Ni-2Mn-2Si
ASTM	A	297	J93503	HH	8	2	8.2	26Cr-13Ni-2Mn-2Si
ASTM	A	297	J94003	HI	8	2	8.2	28Cr-16Ni-2Mn-2Si
ASTM	A	297	J94224	HK	8	2	8.2	26Cr-20Ni-2Mn-2Si
ASTM/ASME	A/SA	299	K02803	A	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	299	K02803	B	1	3	11.1	C-Mn-Si
ASTM/ASME	A/SA	302	K12021	A	3	2	1.1	Mn-0.5Mo
ASTM/ASME	A/SA	302	K12022	B	3	3	1.2	Mn-0.5Mo
ASTM/ASME	A/SA	312	N08367	N08367	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	312	N08904		45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	312	S20910	TP XM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	312	S21904	TP XM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	312	S24000	TP XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	312	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	312	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	312	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	312	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	312	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	312	S30600	S30600	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	312	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	312	S30908	TP309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	312	S30909	TP309H	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	312	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	312	S30941	TP309HCb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	312	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	312	S31009	TP310H	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	312	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	312	S31041	TP310HCb	8	2	8.2	25Cr-20Ni-Cb

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	312	S31050	TP310MoLN	8	2	8.2	25Cr-22Ni-2Mo-N
ASTM/ASME	A/SA	312	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	312	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	312	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	312	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	312	S31635	TP316Ti	8	1	8.1	16Cr-12Ni-2Mo-Ti
ASTM/ASME	A/SA	312	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	312	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	312	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	312	S31703	TP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	312	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	312	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	312	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	312	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	312	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	312	S32615	S32615	8	1	8.1	18Cr-20Ni-5.5Si
ASTM/ASME	A/SA	312	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	312	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	312	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	312	S34751	TP347LN	8	1	8.1	18Cr-10Ni-Cb-N
ASTM/ASME	A/SA	312	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	312	S34809	TP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	312	S38100	TP XM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	333		10	1	3	11.1	C-Mn-Si
ASTM/ASME	A/SA	333	K03006	6	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	333	K03008	1	1	1	11.1	C-Mn
ASTM/ASME	A/SA	333	K11267	4	4	2	4.1	0.75Cr-0.75Ni-Cu-Al
ASTM/ASME	A/SA	333	K21903	7	9A	1	9.1	2.5Ni
ASTM/ASME	A/SA	333	K22035	9	9A	1	9.1	2Ni-1Cu

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	333	K31918	3	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	333	K81340	8	11A	1	9.3	9Ni
ASTM/ASME	A/SA	334	K03006	6	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	334	K03008	1	1	1	11.1	C-Mn
ASTM/ASME	A/SA	334	K21903	7	9A	1	9.1	2.5Ni
ASTM/ASME	A/SA	334	K22035	9	9A	1	9.1	2Ni-1Cu
ASTM/ASME	A/SA	334	K31918	3	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	334	K81340	8	11A	1	9.3	9Ni
ASTM/ASME	A/SA	335	K11522	P1	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	335	K11547	P2	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	335	K11562	P12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	335	K11597	P11	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	335	K21590	P22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	335	K31545	P21	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	335	K41245	P5c	5B	1	5.3	5Cr-0.5Mo-Ti
ASTM/ASME	A/SA	335	K41545	P5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	335	K51545	P5b	5B	1	5.3	5Cr-0.5Mo-Si
ASTM/ASME	A/SA	335	K90901	P91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	335	K90941	P9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	335	K92460	P92	15E	1	6.4	9Cr-2W
ASTM/ASME	A/SA	336	K11564	F12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	336	K11572	F11, Cl.2	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	336	K11572	F11, Cl.3	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	336	K11597	F11, Cl.1	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	336	K12520	F1	3	2	1.1	C-0.5Mo
ASTM/ASME	A/SA	336	K21590	F22, Cl.1	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	336	K21590	F22, Cl.3	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	336	K31390	F3VCb	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	336	K31545	F21, Cl.1	5A	1	5.2	3Cr-1Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	336	K31545	F21, Cl.3	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	336	K31830	F3V	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	336	K31835	F22V	5C	1	6.2	2.25Cr-1Mo-V
ASTM/ASME	A/SA	336	K41545	F5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	336	K42544	F5A	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	336	K90901	F91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	336	K90941	F9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	336	S20910	FXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	336	S21904	FXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	336	S30400	F304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	336	S30403	F304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	336	S30409	F304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	336	S30451	F304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	336	S30453	F304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	336	S30600	F46	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	336	S31000	F310	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	336	S31600	F316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	336	S31603	F316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	336	S31609	F316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	336	S31651	F316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	336	S31653	F316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	336	S32100	F321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	336	S32109	F321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	336	S34700	F347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	336	S34709	F347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	336	S34800	F348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	336	S34809	F348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	336	S41000	F6	6	3	7.2	13Cr
ASTM/ASME	A/SA	336	S44627	FXM-27Cb	10I	1	7.1	27Cr-1Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	350	K03009	LF1	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	350	K03011	LF2	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	350	K12202	LF6, Cl.1	1	1	1.2	C-Mn-Si-V
ASTM/ASME	A/SA	350	K12202	LF6, Cl.2	1	3	4.1	C-Mn-Si-V
ASTM/ASME	A/SA	350	K12202	LF6, Cl.3	1	2	1.3	C-Mn-Si-V
ASTM/ASME	A/SA	350	K13050	LF5 Cl.1	9A	1	9.1	1.5Ni
ASTM/ASME	A/SA	350	K13050	LF5 Cl.2	9A	1	9.1	1.5Ni
ASTM/ASME	A/SA	350	K20747	LF787, Cl.2	1	2	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM/ASME	A/SA	350	K20747	LF787, Cl.3	1	3	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM/ASME	A/SA	350	K22036	LF9	9A	1	9.1	2Ni-1Cu
ASTM/ASME	A/SA	350	K32025	LF3	9B	1	9.2	3.5Ni
ASTM	A	351	J91150	CA15	6	3	7.2	13Cr
ASTM/ASME	A/SA	351	J92500	CF3	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	351	J92500	CF3A	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	351	J92590	CF10	8	1	8.1	19Cr-9Ni-0.5Mo
ASTM/ASME	A/SA	351	J92600	CF8	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	351	J92600	CF8A	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	351	J92710	CF8C	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	351	J92800	CF3M	8	1	8.1	18Cr-12Ni-2Mo
ASTM/ASME	A/SA	351	J92802	CE20N	8	2	8.2	25Cr-8Ni-N
ASTM/ASME	A/SA	351	J92900	CF8M	8	1	8.1	18Cr-12Ni-2Mo
ASTM/ASME	A/SA	351	J92901	CF10M	8	1	8.1	19Cr-9Ni-2Mo
ASTM/ASME	A/SA	351	J92971	CF10MC	8	1	8.1	16Cr-14Ni-2Mo
ASTM/ASME	A/SA	351	J93000	CG8M	8	1	8.1	19Cr-10Ni-3Mo
ASTM/ASME	A/SA	351	J93254	CK3MCuN	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	351	J93345	CE8MN	10H	1	10.2	24Cr-10Ni-4Mo-N
ASTM/ASME	A/SA	351	J93370	CD4MCu	10H	1	10.2	26Cr-5Ni-2Mo-3Cu
ASTM/ASME	A/SA	351	J93380	CD3MWCuN	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	351	J93400	CH8	8	2	8.2	25Cr-12Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	351	J93401	CH10	8	2	8.2	25Cr-12Ni
ASTM/ASME	A/SA	351	J93402	CH20	8	2	8.2	25Cr-12Ni
ASTM/ASME	A/SA	351	J93790	CG6MMN	8	3	8.3	22Cr-12Ni-5Mn
ASTM/ASME	A/SA	351	J94202	CK20	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	351	J94203	HK30	8	2	8.2	25Cr-20Ni-0.5Mo
ASTM/ASME	A/SA	351	J94204	HK40	8	2	8.2	25Cr-20Ni-0.5Mo
ASTM/ASME	A/SA	351	J94651	CN3MN	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	351	N08007	CN7M	45		8.2	28Ni-19Cr-Cu-Mo
ASTM/ASME	A/SA	351	N08151	CT15C	45		45	32Ni-45Fe-20Cr-Cb
ASTM/ASME	A/SA	351	N08603	HT30	45		45	35Ni-15Cr-0.5Mo
ASTM/ASME	A/SA	352	J02504	LCA	1	1	11.1	C-Si
ASTM/ASME	A/SA	352	J02505	LCC	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	352	J03003	LCB	1	1	1.1	C-Si
ASTM/ASME	A/SA	352	J12522	LC1	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	352	J22500	LC2	9A	1	9.1	2.5Ni
ASTM/ASME	A/SA	352	J31550	LC3	9B	1	9.3	3.5Ni
ASTM/ASME	A/SA	352	J41500	LC4	9C	1	9.3	4.5Ni
ASTM/ASME	A/SA	352	J42215	LC2-1	11A	5	9.2	3Ni-1.5Cr-0.5Mo
ASTM/ASME	A/SA	352	J91540	CA6NM	6	4	7.2	13Cr-4Ni
ASTM/ASME	A/SA	353	K81340		11A	1	9.3	9Ni
ASTM	A	356	J03502	1	1	2	14.1	C-Si
ASTM	A	356	J11697	8	4	1	6.2	1Cr-1Mo-V
ASTM	A	356	J12073	6	4	1	5.1	1.25Cr-0.5Mo
ASTM	A	356	J12523	2	3	1	1.1	C-0.5Mo
ASTM	A	356	J21610	9	4	1	6.2	1Cr-1Mo-V
ASTM	A	356	J22090	10	5A	1	5.2	2.25Cr-1Mo
ASTM	A	356	J84090	12A	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	358	N08367	N08367	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	358	S20910	XM-19	8	3	8.3	22Cr-13Ni-5Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	358	S24000	XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	358	S30400	304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	358	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	358	S30409	304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	358	S30451	304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	358	S30453	304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	358	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	358	S30900	309	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	358	S30908	309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	358	S30940	309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	358	S31000	310	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	358	S31008	310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	358	S31040	310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	358	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	358	S31600	316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	358	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	358	S31609	316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	358	S31651	316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	358	S31653	316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	358	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	358	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	358	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	358	S32100	321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	358	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	358	S34800	348	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	366		CS	1	1	1.1	C
ASTM/ASME	A/SA	369	K02501	FPA	1	1	1.1	C-Si
ASTM/ASME	A/SA	369	K03006	FPB	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	369	K11522	FP1	3	1	1.1	C-0.5Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	369	K11547	FP2	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	369	K11562	FP12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	369	K41597	FP11	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	369	K21590	FP22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	369	K31545	FP21	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	369	K41545	FP5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	369	K90901	FP91	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	369	K90941	FP9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	369	K92460	FP92	15E	1	6.4	9Cr-2W
ASTM/ASME	A/SA	372	K03002	A	1	1	11.1	C-Si
ASTM/ASME	A/SA	372	K04001	B	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	376	S16800	16-8-2H	8	1	8.1	16Cr-8Ni-2Mo
ASTM/ASME	A/SA	376	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	376	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	376	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	376	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	376	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	376	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	376	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	376	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	376	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	376	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	376	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	376	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	376	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	376	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	376	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	376	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	381		Y35	1	1	11.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	381		Y42	1	1	11.1	C
ASTM	A	381		Y46	1	1	11.1	C
ASTM	A	381		Y48	1	1	11.1	C
ASTM	A	381		Y50	1	1	11.1	C
ASTM	A	381		Y52	1	2	11.1	C
ASTM	A	381		Y56	1	2	11.1	C
ASTM	A	381		Y60	1	2	11.1	C
ASTM	A	381		Y65	1	3	11.1	C
ASTM/ASME	A/SA	387	K11757	12, Cl. 1	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	387	K11757	12, Cl. 2	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	387	K11789	11, Cl. 1	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	387	K11789	11, Cl. 2	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	387	K12143	2, Cl. 1	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	387	K12143	2, Cl. 2	3	2	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	387	K21590	22, Cl. 1	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	387	K21590	22, Cl. 2	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	387	K31545	21, Cl. 1	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	387	K31545	21, Cl. 2	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	387	K41545	5, Cl. 1	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	387	K41545	5, Cl. 2	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	387	K90901	91, Cl. 2	15E	1	6.4	9Cr-1Mo-V
ASTM/ASME	A/SA	387	K90941	9, Cl. 1	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	387	K90941	9, Cl. 2	5B	1	5.4	9Cr-1Mo
ASTM	A	389	J12080	C23	4	1	6.2	1.25Cr-0.5Mo-V
ASTM	A	389	J12092	C24	4	1	6.2	1Cr-1Mo-V
ASTM	A	403	N08367		45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	403	N08904		45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	403	S20910	WPXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	403	S30400	WP304	8	1	8.1	18Cr-8Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	403	S30403	WP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	403	S30409	WP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	403	S30451	WP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	403	S30453	WP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	403	S30900	WP309	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	403	S31000	WP310	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	403	S31008	WP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	403	S31254		8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	403	S31600	WP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	403	S31603	WP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	403	S31609	WP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	403	S31651	WP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	403	S31653	WP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	403	S31700	WP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	403	S31703	WP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	403	S31726	WP S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	403	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	403	S32100	WP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	403	S32109	WP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	403	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	403	S34700	WP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	403	S34709	WP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	403	S34800	WP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	403	S34809	WP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	405	K11591	P24	4	1	6.2	1.25Cr-Mo
ASTM/ASME	A/SA	409	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	409	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	409	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	409	S30908	TP309S	8	2	8.2	23Cr-12Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	409	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	409	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	409	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	409	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	409	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	409	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	409	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	409	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	409	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	409	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	409	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	409	S34565	S34565	8	4	8.3	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	409	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	409	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	414	K01501	A	1	1	1.1	C
ASTM/ASME	A/SA	414	K02201	B	1	1	1.1	C
ASTM/ASME	A/SA	414	K02503	C	1	1	1.1	C
ASTM/ASME	A/SA	414	K02505	D	1	1	1.1	C-Mn
ASTM/ASME	A/SA	414	K02704	E	1	1	11.1	C-Mn
ASTM/ASME	A/SA	414	K03102	F	1	2	11.1	C-Mn
ASTM/ASME	A/SA	414	K03103	G	1	2	11.1	C-Mn
ASTM/ASME	A/SA	420	K03006	WPL6	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	420	K22035	WPL9	9A	1	9.1	2Ni-1Cu
ASTM/ASME	A/SA	420	K31918	WPL3	9B	1	9.2	3.5Ni
ASTM/ASME	A/SA	420	K81340	WPL8	11A	1	9.3	9Ni
ASTM/ASME	A/SA	423	K11535	1	4	2	5.1	0.75Cr-0.5Ni-Cu
ASTM/ASME	A/SA	423	K11540	2	4	2	5.1	0.75Ni-0.5Cu-Mo
ASTM/ASME	A/SA	426	J11522	CP15	3	1	1.1	C-0.5Mo-Si
ASTM/ASME	A/SA	426	J11547	CP2	3	1	4.2	0.5Cr-0.5Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	426	J11562	CP12	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	426	J12072	CP11	4	1	5.1	1.25Cr-0.5Mo
ASTM/ASME	A/SA	426	J12521	CP1	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	426	J21890	CP22	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	426	J31545	CP21	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	426	J42045	CP5	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	426	J51545	CP5b	5B	1	5.3	5Cr-1.5Si-0.5Mo
ASTM/ASME	A/SA	426	J82090	CP9	5B	1	5.4	9Cr-1Mo
ASTM/ASME	A/SA	426	J91150	CPCA15	6	3	7.2	13Cr
ASTM	A	430	S16800	FP16-8-2H	8	1	8.1	16Cr-8Ni-2Mo
ASTM	A	430	S30400	FP304	8	1	8.1	18Cr-8Ni
ASTM	A	430	S30409	FP304H	8	1	8.1	18Cr-8Ni
ASTM	A	430	S30451	FP304N	8	1	8.1	18Cr-8Ni-N
ASTM	A	430	S31600	FP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	430	S31609	FP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	430	S31651	FP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM	A	430	S32100	FP321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	430	S32109	FP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	430	S34700	FP347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	430	S34709	FP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	451	J92500	CPF3	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	451	J92500	CPF3A	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	451	J92600	CPF8	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	451	J92600	CPF8A	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	451	J92710	CPF8C	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	451	J92800	CPF3M	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	451	J92802	CPE20N	8	2	8.2	25Cr-8Ni-N
ASTM/ASME	A/SA	451	J92900	CPF8M	8	1	8.1	18Cr-12Ni-2Mo
ASTM/ASME	A/SA	451	J92971	CPF10MC	8	1	8.1	16Cr-14Ni-2Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	451	J93400	CPH8	8	2	8.2	25Cr-12Ni
ASTM/ASME	A/SA	451	J93402	CPH10	8	2	8.2	25Cr-12Ni
ASTM/ASME	A/SA	451	J93402	CPH20	8	2	8.2	25Cr-12Ni
ASTM/ASME	A/SA	451	J94202	CPK20	8	2	8.2	25Cr-20Ni
ASTM	A	452	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM	A	452	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	452	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	455	K03300		1	2	11.2	C-Mn-Si
ASTM	A	473	S20100	201	8	3	8.3	17Cr-4Ni-6Mn
ASTM	A	473	S20200	202	8	3	8.3	18Cr-5Ni-9Mn
ASTM	A	473	S21900	XM-10	8	3	8.3	20Cr-6Ni-9Mn
ASTM	A	473	S21904	XM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM	A	473	S30200	302	8	1	8.1	18Cr-8Ni
ASTM	A	473	S30215	302B	8	1	8.1	18Cr-8Ni-2Si
ASTM	A	473	S30300	303	8	1	8.1	18Cr-8Ni-S
ASTM	A	473	S30323	303Se	8	1	8.1	18Cr-8Ni-Se
ASTM	A	473	S30400	304	8	1	8.1	18Cr-8Ni
ASTM	A	473	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM	A	473	S30500	305	8	1	8.1	18Cr-11Ni
ASTM	A	473	S30800	308	8	2	8.2	20Cr-10Ni
ASTM	A	473	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM	A	473	S30900	309	8	2	8.2	23Cr-12Ni
ASTM	A	473	S30908	309S	8	2	8.2	23Cr-12Ni
ASTM	A	473	S31000	310	8	2	8.2	25Cr-20Ni
ASTM	A	473	S31008	310S	8	2	8.2	25Cr-20Ni
ASTM	A	473	S31400	314	8	2	8.2	25Cr-21Ni-S
ASTM	A	473	S31600	316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	473	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	473	S31700	317	8	1	8.1	18Cr-13Ni-3Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	473	S32100	321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	473	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	473	S34800	348	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	473	S40300	403	6	1	7.1	12Cr
ASTM	A	473	S40500	405	7	1	7.1	12Cr-1Al
ASTM	A	473	S41000	410	6	1	7.2	13Cr
ASTM	A	473	S41400	414	6	4	7.2	12.5Cr-2Ni-Si
ASTM	A	473	S42000	420	6	2	7.2	13Cr
ASTM	A	473	S42900	429	6	2	7.2	15Cr
ASTM	A	473	S43000	430	7	2	7.1	17Cr
ASTM/ASME	A/SA	479	N08367		45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM	A	479	N08904	904L	45		8.2	44Fe-25Ni-21Cr-Mo
ASTM/ASME	A/SA	479	S20910	XM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	479	S21600	XM-17	8	3	8.3	19Cr-8Mn-6Ni-Mo-N
ASTM/ASME	A/SA	479	S21603	XM-18	8	3	8.3	19Cr-8Mn-6Ni-Mo-N
ASTM/ASME	A/SA	479	S21800	S21800	8	3	8.1	18Cr-8Ni-4Si-N
ASTM/ASME	A/SA	479	S21904	XM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	479	S24000	XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	479	S30200	302	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	479	S30400	304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	479	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	479	S30409	304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	479	S30451	304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	479	S30453	304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	479	S30600	S30600	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	479	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	479	S30908	309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	479	S30940	309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	479	S31008	310S	8	2	8.2	25Cr-20Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	479	S31040	310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	479	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	479	S31600	316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	479	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	479	S31609	316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	479	S31635	316Ti	8	1	8.1	16Cr-12Ni-2Mo-Ti
ASTM/ASME	A/SA	479	S31640	316Cb	8	1	8.1	16Cr-12Ni-2Mo-Cb
ASTM/ASME	A/SA	479	S31651	316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	479	S31653	316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	479	S31725	S31725	8	4	8.1	19Cr-15Ni-4Mo
ASTM/ASME	A/SA	479	S31726	S31726	8	4	8.1	19Cr-15.5Ni-4Mo
ASTM/ASME	A/SA	479	S31803		10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	479	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	479	S32100	321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	479	S32101		10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N
ASTM/ASME	A/SA	479	S32109	321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	479	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	479	S32205	2205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	479	S32550	S32550	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	479	S32615	S32615	8	1	8.1	18Cr-20Ni-5.5Si
ASTM/ASME	A/SA	479	S32750	S32750	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	479	S32906	S32906	10H	1	10.2	29Cr-6.5Ni-2Mo-N
ASTM/ASME	A/SA	479	S34565	S34565	8	4	8.1	24Cr-17Ni-6Mn-4.5Mo-N
ASTM/ASME	A/SA	479	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	479	S34709	347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	479	S34800	348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	479	S34809	348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	479	S40300	403	6	1	7.1	12Cr
ASTM/ASME	A/SA	479	S40500	405	7	1	7.1	12Cr-1Al

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	479	S41000	410	6	1	7.2	13Cr
ASTM/ASME	A/SA	479	S41040	XM-30	6	1	7.2	13Cr-Cb
ASTM/ASME	A/SA	479	S41400	414	6	4	7.2	12.5Cr-2Ni-Si
ASTM/ASME	A/SA	479	S41500	S41500	6	4	7.2	13Cr-4.5Ni-Mo
ASTM/ASME	A/SA	479	S43000	430	7	2	7.1	17Cr
ASTM/ASME	A/SA	479	S43035	439	7	2	7.1	18Cr-Ti
ASTM/ASME	A/SA	479	S44400	S44400	7	2	7.1	18Cr-2Mo
ASTM/ASME	A/SA	479	S44627	XM-27	10I	1	7.1	27Cr-1Mo
ASTM/ASME	A/SA	479	S44700	S44700	10J	1	7.1	29Cr-4Mo
ASTM/ASME	A/SA	479	S44800	S44800	10K	1	7.1	29Cr-4Mo-2Ni
ASTM/ASME	A/SA	487	J13002	1, Cl. A	10A	1	2.1	Mn-V
ASTM/ASME	A/SA	487	J13002	1, Cl. B	10A	1	2.1	Mn-V
ASTM/ASME	A/SA	487	J13005	2, Cl. A	3	3	2.1	Mn-0.25Mo-V
ASTM/ASME	A/SA	487	J13005	2, Cl. B	3	3	2.1	Mn-0.25Mo-V
ASTM/ASME	A/SA	487	J13047	4, Cl. A	3	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM/ASME	A/SA	487	J13047	4, Cl. B	11A	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM/ASME	A/SA	487	J13047	4, Cl. C	3	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM/ASME	A/SA	487	J13047	4, Cl. E	11A	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM/ASME	A/SA	487	J22091	8, Cl. A	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	487	J22091	8, Cl. B	5C	4	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	487	J22091	8, Cl. C	5C	4	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	487	J31200	16, Cl. A	1	2	1.1	Low C-Mn-Ni
ASTM/ASME	A/SA	487	J91150	CA15 Cl. C	6	3	7.2	13Cr
ASTM/ASME	A/SA	487	J91151	CA15M Cl. A	6	3	7.2	13Cr-Mo
ASTM/ASME	A/SA	487	J91171	CA15 Cl. B	6	3	7.2	13Cr
ASTM/ASME	A/SA	487	J91171	CA15 Cl. D	6	3	7.2	13Cr
ASTM/ASME	A/SA	487	J91540	CA6NM Cl. A	6	4	7.2	13Cr-4Ni
ASTM/ASME	A/SA	487	J91540	CA6NM Cl. B	6	4	7.2	13Cr-4Ni
ASTM/ASME	A/SA	494	N04020	M35-2	42		42	67Ni-30Cu-Fe-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	494	N06040	CY40	43		43	72Ni-15Cr-8Fe-Si
ASTM/ASME	A/SA	494	N08826	CU5MCuC	45		45	42Ni-21.5Cr-3Mo-2.3Cu
ASTM/ASME	A/SA	494	N24130	M30C	42		42	67Ni-30Cu-2Fe-Cb
ASTM/ASME	A/SA	494	N24135	M35-1	42		42	67Ni-30Cu-2Fe-Cb
ASTM/ASME	A/SA	494	N26022	CX2MW	43		44	59Ni-22Cr-14Mo-4Fe-3W
ASTM/ASME	A/SA	494	N26455	CW2M	43		43	66Ni-16Mo-16Cr-Fe-W
ASTM/ASME	A/SA	494	N26625	CW6MC	43		43	60Ni-21.5Cr-9Mo-4Cb-Fe
ASTM/ASME	A/SA	494	N30007	N7M	44		44	65Ni-31.5Mo-1.5Fe-Cr
ASTM/ASME	A/SA	494	N30107	CW6M	44		44	56Ni-19Mo-18Cr-2Fe
ASTM	A	500	K02705	C	1	1	1.2	C
ASTM	A	500	K03000	A	1	1	11.1	C
ASTM	A	500	K03000	B	1	1	11.1	C
ASTM	A	500	K03000	D	1	1	11.1	C
ASTM	A	501	K03000	A	1	1	11.1	C
ASTM	A	501	K03000	B	1	1	1.2	C
ASTM/ASME	A/SA	508	K12042	3, Cl.1	3	3	3.1	0.75Ni-0.5Mo-Cr-V
ASTM/ASME	A/SA	508	K12042	3, Cl.2	3	3	3.1	0.75Ni-0.5Mo-Cr-V
ASTM/ASME	A/SA	508	K12766	2, Cl.1	3	3	3.1	0.75Ni-0.5Mo-0.3Cr-V
ASTM/ASME	A/SA	508	K12766	2, Cl.2	3	3	3.1	0.75Ni-0.5Mo-0.3Cr-V
ASTM/ASME	A/SA	508	K13502	1	1	2	11.1	C
ASTM/ASME	A/SA	508	K13502	1A	1	2	11.1	C
ASTM/ASME	A/SA	508	K21590	22, Cl. 3	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	508	K22375	4N, Cl.1	11A	5	3.1	3.5Ni-1.75Cr-0.5Mo-V
ASTM/ASME	A/SA	508	K22375	4N, Cl.2	11B	10	3.1	3.5Ni-1.75Cr-0.5Mo-V
ASTM/ASME	A/SA	508	K22375	4N, Cl.3	3	3	3.1	3.5Ni-1.75Cr-0.5Mo-V
ASTM/ASME	A/SA	508	K31390	3VCb	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	508	K31830	3V	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	508	K42365	5, Cl.1	11A	5	3.1	3.5Ni-1.75Cr-0.5Mo-V
ASTM/ASME	A/SA	508	K42365	5, Cl.2	11B	10	3.1	3.5Ni-1.75Cr-0.5Mo-V

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	511	S30200	MT 302	8	1	8.1	18Cr-8Ni
ASTM	A	511	S30400	MT 304	8	1	8.1	18Cr-8Ni
ASTM	A	511	S30403	MT 304L	8	1	8.1	18Cr-8Ni
ASTM	A	511	S30908	MT 309S	8	2	8.2	23Cr-12Ni
ASTM	A	511	S31008	MT 310S	8	2	8.2	25Cr-20Ni
ASTM	A	511	S31600	MT 316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	511	S31603	MT 316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	511	S31700	MT 317	8	1	8.1	18Cr-13Ni-3Mo
ASTM	A	511	S32100	MT 321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	511	S34700	MT 347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	512		MTX 1015	1	1	1.1	C
ASTM	A	512		MTX 1020	1	1	1.1	C
ASTM	A	512	G10080	1008	1	1	1.1	C
ASTM	A	512	G10100	1010	1	1	1.1	C
ASTM	A	512	G10100	MT 1010	1	1	1.1	C
ASTM	A	512	G10120	1012	1	1	1.1	C
ASTM	A	512	G10150	1015	1	1	1.1	C
ASTM	A	512	G10150	MT 1015	1	1	1.1	C
ASTM	A	512	G10180	1018	1	1	1.1	C
ASTM	A	512	G10200	1020	1	1	1.1	C
ASTM	A	512	G10200	MT 1020	1	1	1.1	C
ASTM	A	512	G10250	1025	1	2	11.1	C
ASTM	A	512	G10260	1026	1	1	11.1	C
ASTM	A	512	G10300	1030	1	2	11.1	C
ASTM/ASME	A/SA	513	G10080	1008	1	1	1.1	C
ASTM/ASME	A/SA	513	G10100	1010	1	1	1.1	C
ASTM/ASME	A/SA	513	G10100	MT 1010	1	1	1.1	C
ASTM/ASME	A/SA	513	G10150	1015	1	1	1.1	C
ASTM	A	513	G10150	1015 CW	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	513	G10150	MT 1015	1	1	1.1	C
ASTM/ASME	A/SA	513	G10180	1018	1	1	1.1	C
ASTM/ASME	A/SA	513	G10200	1020	1	1	1.1	C
ASTM	A	513	G10200	1020 CW	1	2	1.1	C
ASTM/ASME	A/SA	513	G10200	MT 1020	1	1	1.1	C
ASTM/ASME	A/SA	513	G10210	1021	1	1	1.1	C
ASTM/ASME	A/SA	513	G10220	1022	1	1	1.1	C
ASTM/ASME	A/SA	513	G10250	1025	1	2	1.1	C
ASTM	A	513	G10250	1025 CW	1	2	1.2	C
ASTM/ASME	A/SA	513	G10260	1026	1	1	1.1	C
ASTM	A	513	G10260	1026 CW	1	3	1.1	C
ASTM/ASME	A/SA	513	G10300	1030	1	2	1.1	C
ASTM	A	514		Q	11B	9	3.1	1.3Ni-1.3Cr-0.5Mo-V
ASTM	A	514		R	11B	12	3.1	C-Mn-Ni-Cu-V
ASTM	A	514		S	11B	6	3.1	Mn-Mo-B
ASTM	A	514		T	11B	6	3.1	Mn-Mo-B
ASTM	A	514	K11511	C	11B	6	3.1	1.2Mn-0.2Mo
ASTM	A	514	K11523	K	11B	6	3.1	Mn-Mo-B
ASTM	A	514	K11576	F	11B	3	3.1	0.75Ni-0.5Cr-0.5Mo-V
ASTM	A	514	K11625	J	11B	6	3.1	C-0.5Mo
ASTM	A	514	K11630	B	11B	4	3.1	0.5Cr-0.2Mo-V
ASTM	A	514	K11646	H	11B	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM	A	514	K11683	M	11B	10	3.1	1.3Ni-0.5Mo
ASTM	A	514	K11856	A	11B	1	3.1	0.5Cr-0.25Mo-Si
ASTM	A	514	K21604	E	11B	2	3.1	1.75Cr-0.5Mo-Cu
ASTM	A	514	K21650	P	11B	8	3.1	1.25Ni-1Cr-0.5Mo
ASTM	A	515	K02001	55	1	1	1.1	C-Si
ASTM/ASME	A/SA	515	K02401	60	1	1	1.1	C
ASTM/ASME	A/SA	515	K02800	65	1	1	1.1	C-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	515	K03101	70	1	2	11.1	C-Si
ASTM/ASME	A/SA	516	K01800	55	1	1	1.1	C-Si
ASTM/ASME	A/SA	516	K02100	60	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	516	K02403	65	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	516	K02700	70	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	517		Q	11B	9	3.1	1.3Ni-1.3Cr-0.5Mo-V
ASTM/ASME	A/SA	517		S	11B	6	3.1	Mn-Mo-B
ASTM	A	517		T	11B	6	3.1	Mn-Mo-B
ASTM	A	517	K11511	C	11B	14	3.1	1.2Mn-0.2Mo
ASTM	A	517	K11523	K	11B	6	3.1	Mn-Mo-B
ASTM/ASME	A/SA	517	K11576	F	11B	3	3.1	0.75Ni-0.5Cr-0.5Mo-V
ASTM	A	517	K11625	J	11B	6	3.1	C-0.5Mo
ASTM/ASME	A/SA	517	K11630	B	11B	4	3.1	0.5Cr-0.2Mo-V
ASTM/ASME	A/SA	517	K11646	H	11B	3	3.1	0.5Ni-0.5Cr-0.25Mo-V
ASTM	A	517	K11683	M	11B	10	3.1	1.3Ni-0.5Mo
ASTM/ASME	A/SA	517	K11856	A	11B	1	3.1	0.5Cr-0.25Mo-Si
ASTM/ASME	A/SA	517	K21604	E	11B	2	3.1	1.75Cr-0.5Mo-Cu
ASTM/ASME	A/SA	517	K21650	P	11B	8	3.1	1.25Ni-1Cr-0.5Mo
ASTM	A	519	G10080	1008	1	1	1.1	C
ASTM	A	519	G10100	MT 1010	1	1	1.1	C
ASTM	A	519	G10120	1012	1	1	1.1	C
ASTM	A	519	G10150	1015	1	1	1.1	C
ASTM	A	519	G10150	MT 1015	1	1	1.1	C
ASTM	A	519	G10180	1018	1	1	1.1	C
ASTM	A	519	G10180	1018 CW	1	2	1.1	C
ASTM	A	519	G10180	1018 HR	1	1	1.1	C
ASTM	A	519	G10200	1020	1	1	1.1	C
ASTM	A	519	G10200	1020 CW	1	2	1.1	C
ASTM	A	519	G10200	1020 HR	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	519	G10200	MT 1020	1	1	1.1	C
ASTM	A	519	G10220	1022	1	1	1.1	C
ASTM	A	519	G10220	1022 CW	1	2	1.1	C
ASTM	A	519	G10220	1022 HR	1	1	1.1	C
ASTM	A	519	G10250	1025	1	2	11.1	C
ASTM	A	519	G10250	1025 CW	1	2	1.2	C
ASTM	A	519	G10250	1025 HR	1	1	1.1	C
ASTM	A	519	G10260	1026 CW	1	2	11.1	C
ASTM	A	519	G10260	1026 HR	1	1	11.1	C
ASTM/ASME	A/SA	522	K71340	II	11A	1	9.3	8Ni
ASTM/ASME	A/SA	522	K81340	I	11A	1	9.3	9Ni
ASTM	A	523	K02504	A	1	1	1.1	C-Mn
ASTM	A	523	K03005	B	1	1	11.1	C-Mn
ASTM/ASME	A/SA	524	K02104	I	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	524	K02104	II	1	1	1.1	C-Mn-Si
ASTM	A	529		50	1	2	11.1	C-Mn
ASTM	A	529		55	1	2	11.1	C-Mn
ASTM	A	529	K02703	42	1	1	11.1	C-Mn
ASTM/ASME	A/SA	533	K12521	A, Cl. 1	3	3	3.1	Mn-0.5Mo
ASTM/ASME	A/SA	533	K12521	A, Cl. 2	3	3	3.1	Mn-0.5Mo
ASTM/ASME	A/SA	533	K12521	A, Cl. 3	11A	4	3.1	Mn-0.5Mo
ASTM/ASME	A/SA	533	K12529	D, Cl. 1	3	3	3.1	Mn-0.5Mo-0.25Ni
ASTM/ASME	A/SA	533	K12529	D, Cl. 2	3	3	3.1	Mn-0.5Mo-0.25Ni
ASTM/ASME	A/SA	533	K12529	D, Cl. 3	11A	4	3.1	Mn-0.5Mo-0.25Ni
ASTM/ASME	A/SA	533	K12539	B, Cl. 1	3	3	3.1	Mn-0.5Mo-0.5Ni
ASTM/ASME	A/SA	533	K12539	B, Cl. 2	3	3	3.1	Mn-0.5Mo-0.5Ni
ASTM/ASME	A/SA	533	K12539	B, Cl. 3	11A	4	3.2	Mn-0.5Mo-0.5Ni
ASTM/ASME	A/SA	533	K12554	C, Cl. 1	3	3	3.1	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	533	K12554	C, Cl. 2	3	3	3.1	Mn-0.5Mo-0.75Ni

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	533	K12554	C, Cl. 3	11A	4	3.2	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	533	K12554	E, Cl. 1	3	3	3.1	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	533	K12554	E, Cl. 2	3	3	3.1	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	537	K12437	Cl. 1	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	537	K12437	Cl. 2	1	3	1.2	C-Mn-Si
ASTM/ASME	A/SA	537	K12437	Cl. 3	1	3	1.2	C-Mn-Si
ASTM/ASME	A/SA	541	K03020	1A	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	541	K03506	1	1	2	11.1	C-Si
ASTM/ASME	A/SA	541	K11572	11, Cl. 4	4	1	5.2	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	541	K12045	3, Cl. 1	3	3	4.1	0.5Ni-0.5Mo-V
ASTM/ASME	A/SA	541	K12045	3, Cl. 2	3	3	4.1	0.5Ni-0.5Mo-V
ASTM/ASME	A/SA	541	K12765	2, Cl. 1	3	3	4.2	0.75Ni-0.5Mo-0.3Cr-V
ASTM/ASME	A/SA	541	K12765	2, Cl. 2	3	3	4.2	0.75Ni-0.5Mo-0.3Cr-V
ASTM/ASME	A/SA	541	K21390	22, Cl. 3	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	541	K21390	22, Cl. 4	5C	4	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	541	K21390	22, Cl. 5	5C	5	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	541	K31390	3VCb	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	541	K31830	3V	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	541	K31835	22V	5C	1	5.2	2.25Cr-1Mo-V
ASTM/ASME	A/SA	542	K21590	A, Cl. 1	5C	4	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	A, Cl. 2	5C	5	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	A, Cl. 3	5C	3	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	A, Cl. 4	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	A, Cl. 4a	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	B, Cl. 1	5C	4	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	B, Cl. 2	5C	5	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	B, Cl. 3	5C	3	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	B, Cl. 4	5C	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	542	K21590	B, Cl. 4a	5C	1	5.2	2.25Cr-1Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	542	K31390	E, Cl. 4a	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	542	K31830	C, Cl. 1	5C	4	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	542	K31830	C, Cl. 2	5C	5	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	542	K31830	C, Cl. 3	5C	3	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	542	K31830	C, Cl. 4	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	542	K31830	C, Cl. 4a	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	542	K31830	D, Cl. 4a	5C	1	6.3	2.25Cr-1Mo-V
ASTM/ASME	A/SA	543		C Cl. 1	11A	5	3.1	2.75Ni-1.5Cr-0.5Mo
ASTM/ASME	A/SA	543		C Cl. 2	11B	10	3.1	2.75Ni-1.5Cr-0.5Mo
ASTM/ASME	A/SA	543		C Cl. 3	3	3	3.1	2.75Ni-1.5Cr-0.5Mo
ASTM/ASME	A/SA	543	K42339	B Cl. 1	11A	5	3.1	3Ni-1.75Cr-0.5Mo
ASTM/ASME	A/SA	543	K42339	B Cl. 2	11B	10	3.1	3Ni-1.75Cr-0.5Mo
ASTM/ASME	A/SA	543	K42339	B Cl. 3	3	3	3.1	3Ni-1.75Cr-0.5Mo
ASTM/ASME	A/SA	553	K71340	II	11A	1	9.3	8Ni
ASTM/ASME	A/SA	553	K81340	I	11A	1	9.3	9Ni
ASTM	A	554	S30200	MT 302	8	1	8.1	18Cr-8Ni
ASTM	A	554	S30400	MT 304	8	1	8.1	18Cr-8Ni
ASTM	A	554	S30403	MT 304L	8	1	8.1	18Cr-8Ni
ASTM	A	554	S30908	MT 309S	8	2	8.2	23Cr-12Ni
ASTM	A	554	S30940	MT 309S-Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM	A	554	S31008	MT 310S	8	2	8.2	25Cr-20Ni
ASTM	A	554	S31600	MT 316	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	554	S31603	MT 316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	554	S31700	MT 317	8	1	8.1	18Cr-13Ni-3Mo
ASTM	A	554	S32100	MT 321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	554	S34700	MT 347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	556	K01807	A2	1	1	1.1	C
ASTM/ASME	A/SA	556	K02707	B2	1	1	11.1	C-Si
ASTM/ASME	A/SA	556	K03006	C2	1	2	11.1	C-Mn-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	557	K01807	A2	1	1	1.1	C
ASTM/ASME	A/SA	557	K03007	B2	1	1	11.1	C
ASTM/ASME	A/SA	557	K03505	C2	1	2	11.1	C-Mn
ASTM/ASME	A/SA	562	K10224		1	1	1.1	C-Mn-Ti
ASTM	A	569	K02502	30	1	1	1.1	C
ASTM	A	569	K02502	33	1	1	1.1	C
ASTM	A	569	K02502	36	1	1	1.1	C
ASTM	A	569	K02502	40	1	1	1.1	C
ASTM	A	569	K02502	45	1	1	1.2	C
ASTM	A	569	K02502	50	1	1	1.2	C
ASTM	A	570	K02502	30	1	1	1.1	C
ASTM	A	570	K02502	33	1	1	1.1	C
ASTM	A	570	K02502	36	1	1	1.1	C
ASTM	A	570	K02502	40	1	1	1.1	C
ASTM	A	570	K02502	45	1	1	1.2	C
ASTM	A	570	K02502	50	1	1	1.2	C
ASTM	A	570	K02502	55	1	1	1.3	C
ASTM/ASME	A/SA	572		42	1	1	1.2	C-Mn-Si
ASTM/ASME	A/SA	572		50	1	1	1.2	C-Mn-Si
ASTM	A	572		55	1	2	1.3	C-Mn-Si-Cb-V
ASTM/ASME	A/SA	572		60	1	2	1.1	C-Mn-Si
ASTM	A	572		65	1	3	11.1	C-Mn-Si-Cb-V
ASTM	A	573		58	1	1	11.1	C
ASTM	A	573		65	1	1	11.1	C
ASTM	A	573		70	1	2	11.1	C
ASTM	A	575		M1008	1	1	1.1	C
ASTM	A	575		M1010	1	1	1.1	C
ASTM	A	575		M1012	1	1	1.1	C
ASTM	A	575		M1015	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	575		M1017	1	1	1.1	C
ASTM	A	575		M1020	1	1	1.1.1	C
ASTM	A	575		M1023	1	1	1.1.1	C
ASTM	A	575		M1025	1	1	1.1.1	C
ASTM	A	576		G10080	1	1	1.1	C
ASTM	A	576		G10100	1	1	1.1	C
ASTM	A	576		G10120	1	1	1.1	C
ASTM	A	576		G10150	1	1	1.1	C
ASTM	A	576		G10160	1	1	1.1	C
ASTM	A	576		G10170	1	1	1.1	C
ASTM	A	576		G10180	1	1	1.1	C
ASTM	A	576		G10190	1	1	1.1	C
ASTM	A	576		G10200	1	1	1.1	C
ASTM	A	576		G10210	1	1	1.1.1	C
ASTM	A	576		G10220	1	1	1.1.1	C
ASTM	A	576		G10230	1	1	1.1.1	C
ASTM	A	576		G10250	1	1	1.1.1	C
ASTM/ASME	A/SA	587	K01807	A2	1	1	1.1	C
ASTM/ASME	A/SA	587	K11500		1	1	1.1	C
ASTM	A	588		K	3	1	1.4	Mn-0.6Cr-0.4Cu-Si-Nb
ASTM	A	588	K11430	A	3	1	1.4	Mn-0.5Cr-0.3Cu-Si-V
ASTM	A	588	K11538	C	3	1	1.4	Mn-0.4Cr-0.4Cu-Si-V
ASTM	A	588	K12043	B	3	1	1.4	Mn-0.6Cr-0.3Cu-Si-V
ASTM/ASME	A/SA	592	K11576	F	11B	3	3.1	0.75Ni-0.5Cr-0.5Mo-V
ASTM/ASME	A/SA	592	K11695	E	11B	2	3.1	1.75Cr-0.5Mo-Cu
ASTM/ASME	A/SA	592	K11856	A	11B	1	3.1	0.5Cr-0.25Mo-Si
ASTM	A	595	K02004	A	1	2	1.1.1	Low C
ASTM	A	595	K02005	B	1	2	1.1.1	Low C
ASTM	A	595	K11526	C	3	1	1.1.1	Low C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	606			1	2	1.4	C-Mn
ASTM	A	606		2, CR, AR	1	2	1.4	C-Mn
ASTM	A	606		2, HR, A	1	2	1.4	C-Mn
ASTM	A	606		2, HR, AR	1	2	1.4	C-Mn
ASTM	A	606		2, HR, N	1	2	1.4	C-Mn
ASTM	A	606		4, CR, AR	1	2	1.4	C-Mn
ASTM	A	606		4, HR, A	1	2	1.4	C-Mn
ASTM	A	606		4, HR, AR	1	2	1.4	C-Mn
ASTM	A	606		4, HR, N	1	2	1.4	C-Mn
ASTM	A	611	G10120	D	1	1	1.1	C
ASTM/ASME	A/SA	612	K02900		10C	1	1.3	C-Mn-Si
ASTM	A	618		Ia	1	2	1.2	Mn-Cu-V
ASTM	A	618		Ib	1	2	1.2	C-Mn
ASTM	A	618	K02601	Ib	1	2	1.2	Mn-Cu-V
ASTM	A	618	K12609	II	1	2	1.2	Mn-Cu-V
ASTM	A	618	K12700	III	1	1	1.2	Mn-V
ASTM	A	620	K00040	A	1	1	1.1	C
ASTM	A	620	K00040	B	1	1	1.1	C
ASTM	A	633	K01802	A	1	1	1.1	Mn-Cb
ASTM	A	633	K12000	C	1	2	1.1	Mn-Cb
ASTM	A	633	K12037	D	1	2	1.1	C-Mn-Si
ASTM	A	633	K12202	E	1	3	4.1	C-Mn-Si-V
ASTM/ASME	A/SA	645	K41583	A	11A	2	9.2	5Ni-0.25Mo
ASTM/ASME	A/SA	656		T3, 50	1	1	1.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T3, 60	1	2	1.3	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T3, 70	1	3	2.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T3, 80	1	4	2.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T7, 50	1	1	1.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T7, 60	1	2	1.3	C-Mn-Si-V-Cb

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	656		T7, 70	1	3	2.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656		T7, 80	1	4	2.2	C-Mn-Si-V-Cb
ASTM/ASME	A/SA	656	K11804	50	1	1	1.2	C-Mn-V
ASTM/ASME	A/SA	656	K11804	60	1	1	1.3	C-Mn-V
ASTM/ASME	A/SA	656	K11804	70	1	2	1.3	C-Mn-V
ASTM/ASME	A/SA	656	K11804	80	1	3	1.3	C-Mn-V
ASTM	A	659	G10150	1015	1	1	1.1	C
ASTM	A	659	G10180	1018	1	1	1.1	C
ASTM	A	659	G10200	1020	1	1	1.1	C
ASTM/ASME	A/SA	660	J02504	WCA	1	1	11.1	C-Si
ASTM/ASME	A/SA	660	J02505	WCC	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	660	J03003	WCB	1	2	1.1	C-Si
ASTM/ASME	A/SA	662	K01701	A	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	662	K02007	C	1	2	1.1	C-Mn-Si
ASTM/ASME	A/SA	662	K02203	B	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	666	S20100	201-1	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	666	S20100	201-2	8	3	8.3	17Cr-4Ni-6Mn
ASTM/ASME	A/SA	666	S21904	XM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	666	S30200	302	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	666	S30400	304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	666	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	666	S30451	304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	666	S30453	304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	666	S31600	316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	666	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	666	S31651	316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM	A	668		F	1	3	11.1	C
ASTM	A	668	G10200	B	1	1	1.1	C
ASTM	A	668	G10250	C	1	2	11.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	668	G10300	D	1	2	11.1	C
ASTM/ASME	A/SA	671	K02100	CC60	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	671	K02202	CE55	1	1	11.1	C
ASTM/ASME	A/SA	671	K02401	CB60	1	1	1.1	C
ASTM/ASME	A/SA	671	K02402	CE60	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	671	K02403	CC65	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	671	K02700	CC70	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	671	K02800	CB65	1	1	11.1	C-Si
ASTM/ASME	A/SA	671	K02801	CA55	1	1	11.1	C
ASTM/ASME	A/SA	671	K02803	CK75	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	671	K03101	CB70	1	2	11.1	C-Si
ASTM/ASME	A/SA	671	K12437	CD70	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	671	K12437	CD80	1	3	1.2	C-Mn-Si
ASTM/ASME	A/SA	672		J80	3	3	3.1	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	672		J90	3	3	3.1	Mn-0.5Mo-0.75Ni
ASTM/ASME	A/SA	672	K01700	A45	1	1	1.1	C
ASTM/ASME	A/SA	672	K01800	C55	1	1	1.1	C-Si
ASTM/ASME	A/SA	672	K02001	B55	1	1	1.1	C-Si
ASTM/ASME	A/SA	672	K02100	C60	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	672	K02200	A50	1	1	1.1	C
ASTM/ASME	A/SA	672	K02202	E55	1	1	1.1	C
ASTM/ASME	A/SA	672	K02401	B60	1	1	1.1	C
ASTM/ASME	A/SA	672	K02402	E60	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	672	K02403	C65	1	1	1.1	C-Mn-Si
ASTM/ASME	A/SA	672	K02700	C70	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	672	K02800	B65	1	1	11.1	C-Si
ASTM/ASME	A/SA	672	K02801	A55	1	1	11.1	C
ASTM/ASME	A/SA	672	K02803	N75	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	672	K03101	B70	1	2	11.1	C-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	672	K11820	L65	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	672	K12020	L70	3	2	1.2	C-0.5Mo
ASTM/ASME	A/SA	672	K12021	H75	3	2	1.1	Mn-0.5Mo
ASTM/ASME	A/SA	672	K12022	H80	3	3	1.2	Mn-0.5Mo
ASTM/ASME	A/SA	672	K12320	L75	3	2	1.2	C-0.5Mo
ASTM/ASME	A/SA	672	K12437	D70	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	672	K12437	D80	1	3	1.2	C-Mn-Si
ASTM/ASME	A/SA	672	K12521	J100	11A	4	3.2	Mn-0.5Mo
ASTM/ASME	A/SA	675		45	1	1	11.1	C
ASTM/ASME	A/SA	675		50	1	1	11.1	C
ASTM/ASME	A/SA	675		55	1	1	11.1	C
ASTM/ASME	A/SA	675		60	1	1	11.1	C
ASTM/ASME	A/SA	675		65	1	1	11.1	C
ASTM/ASME	A/SA	675		70	1	2	11.1	C
ASTM	A	678	K01600	A	1	2	1.2	C-Mn-Si
ASTM	A	678	K02002	B	1	3	1.3	C-Mn-Si
ASTM	A	678	K02204	C	1	4	1.3	C-Mn-Si
ASTM	A	678	K12202	D	1	4	1.3	C-Mn-Si-V-N
ASTM/ASME	A/SA	688	S24000	XM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	688	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	688	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	688	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	688	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	688	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	688	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	688	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	688	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM	A	690	K12249		1	2	1.4	0.75Mn-0.6Ni-0.12P
ASTM/ASME	A/SA	691	K02803	CMS-75	1	2	11.1	C-Mn-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	691	K11757	1CR, Cl. 1	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	691	K11757	1CR, Cl. 2	4	1	5.1	1Cr-0.5Mo
ASTM/ASME	A/SA	691	K11789	1.25CR, Cl. 1	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	691	K11789	1.25CR, Cl. 2	4	1	5.1	1.25Cr-0.5Mo-Si
ASTM/ASME	A/SA	691	K11820	CM-65	3	1	1.1	C-0.5Mo
ASTM/ASME	A/SA	691	K12020	CM-70	3	2	1.2	C-0.5Mo
ASTM/ASME	A/SA	691	K12143	0.5Cr, Cl. 1	3	1	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	691	K12143	0.5Cr, Cl. 2	3	2	4.2	0.5Cr-0.5Mo
ASTM/ASME	A/SA	691	K12320	CM-75	3	2	1.2	C-0.5Mo
ASTM/ASME	A/SA	691	K12437	CMSH-70	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	691	K12437	CMSH-80	1	3	1.2	C-Mn-Si
ASTM/ASME	A/SA	691	K21590	2.25CR, Cl. 1	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	691	K21590	2.25CR, Cl. 2	5A	1	5.2	2.25Cr-1Mo
ASTM/ASME	A/SA	691	K31545	3CR, Cl. 1	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	691	K31545	3CR, Cl. 2	5A	1	5.2	3Cr-1Mo
ASTM/ASME	A/SA	691	K41545	5CR, Cl. 1	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	691	K41545	5CR, Cl. 2	5B	1	5.3	5Cr-0.5Mo
ASTM/ASME	A/SA	691	K91560	91	15E	1	6.4	9Cr-1Mo-V
ASTM	A	694	K03014	F42	1	1	11.1	C-Mn
ASTM	A	694	K03014	F46	1	1	11.1	C-Mn
ASTM	A	694	K03014	F48	1	1	11.1	C-Mn
ASTM	A	694	K03014	F50	1	1	11.1	C-Mn
ASTM	A	694	K03014	F52	1	1	11.1	C-Mn
ASTM	A	694	K03014	F56	1	2	11.1	C-Mn
ASTM	A	694	K03014	F60	1	2	11.1	C-Mn
ASTM	A	694	K03014	F65	1	2	11.1	C-Mn
ASTM	A	694	K03014	F70	1	3	11.1	C-Mn
ASTM/ASME	A/SA	695	K03504	B, 35	1	1	11.1	C
ASTM/ASME	A/SA	695	K03504	B, 40	1	2	11.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	696	K03200	B	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	696	K03200	C	1	2	11.1	C-Mn-Si
ASTM	A	706		60	1A	4	1.3	C
ASTM	A	707	K02302	L1, Cl. 1	1	1	1.2	C-Mn
ASTM	A	707	K02302	L1, Cl. 2	1	1	1.2	C-Mn
ASTM	A	707	K03301	L2, Cl. 1	1	1	11.1	C-Mn
ASTM	A	707	K03301	L2, Cl. 2	1	1	11.1	C-Mn
ASTM	A	707	K03301	L2, Cl. 3	1	2	11.1	C-Mn
ASTM	A	707	K12510	L3, Cl. 1	1	1	1.2	C-Mn-V-N
ASTM	A	707	K12510	L3, Cl. 2	1	1	1.2	C-Mn-V-N
ASTM	A	707	K12510	L3, Cl. 3	1	2	1.3	C-Mn-V-N
ASTM	A	709		36	1	1	1.1	C-Mn
ASTM	A	709		50	1	1	1.2	C-Mn
ASTM	A	709		50S	1	1	1.2	C-Mn
ASTM	A	709		50W	1	2	1.4	C-Mn
ASTM	A	709		50W, A	1	2	1.4	C-Mn
ASTM	A	709		50W, B	1	2	1.4	C-Mn
ASTM	A	709		HPS 50W	1	2	1.4	C-Mn
ASTM	A	709		HPS 70W	11B	11	1.4	C-Mn
ASTM	A	710	K20747	A Cl. 1	12C	1	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM	A	710	K20747	A Cl. 2	12A	1	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM/ASME	A/SA	737	K12001	B	1	2	11.1	C-Mn-Si-Cb
ASTM/ASME	A/SA	737	K12202	C	1	3	4.1	C-Mn-Si-V
ASTM/ASME	A/SA	738	K02008	C	1	3	11.1	C-Mn-Si
ASTM/ASME	A/SA	738	K12007	B	1	3	11.1	C-Mn-Si-Cb
ASTM/ASME	A/SA	738	K12447	A	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	739	K11797	B11	4	1	5.1	1.25Cr-0.5Mo
ASTM/ASME	A/SA	739	K21390	B22	5A	1	5.2	2.25Cr-1Mo
ASTM	A	743	J91150	CA15	6	3	7.2	13Cr

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	743	J91151	CA15M	6	3	7.2	13Cr-Mo
ASTM	A	743	J91153	CA40	6	4	7.2	13Cr
ASTM	A	743	J91540	CA6NM	6	4	7.2	13Cr-4Ni
ASTM	A	743	J91804	CB6	6	4	7.2	17Cr-5Ni
ASTM	A	743	J92500	CF3	8	1	8.1	18Cr-8Ni
ASTM	A	743	J92600	CF8	8	1	8.1	18Cr-8Ni
ASTM	A	743	J92602	CF20	8	2	8.2	20Cr-10Ni
ASTM	A	743	J92615	CC50	7	1	7.1	28Cr-3Ni
ASTM	A	743	J92701	CF16F	8	1	8.2	20Cr-11Ni-0.3Se
ASTM	A	743	J92710	CF8C	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	743	J92800	CF3M	8	1	8.1	18Cr-12Ni-2Mo
ASTM	A	743	J92804	CF3MN	8	1	8.2	20Cr-11Ni-3Mo-N
ASTM	A	743	J92900	CF8M	8	1	8.1	18Cr-12Ni-2Mo
ASTM	A	743	J92972	CF10SMnN	8	1	8.1	17Cr-9Ni-8Mn-4Si-N
ASTM	A	743	J92999	CG3M	8	1	8.2	19Cr-11Ni-4Mo
ASTM	A	743	J93000	CG8M	8	1	8.1	19Cr-10Ni-3Mo
ASTM	A	743	J93001	CG12	8	2	8.2	22Cr-12Ni
ASTM	A	743	J93254	CK3MCuN	8	4	8.2	20Cr-18Ni-6Mo
ASTM	A	743	J93401	CH10	8	2	8.2	25Cr-12Ni
ASTM	A	743	J93402	CH20	8	2	8.2	25Cr-12Ni
ASTM	A	743	J93423	CE30	8	2	8.2	29Cr-9Ni-2Mn-2Si
ASTM	A	743	J94652	CN3M	8	2	8.2	25Ni-21Cr-5Mo
ASTM/ASME	A/SA	765	K02009	IV	1	3	1.1	C-Mn-Si
ASTM/ASME	A/SA	765	K03046	I	1	1	11.1	C-Mn-Si
ASTM/ASME	A/SA	765	K03047	II	1	2	11.1	C-Mn-Si
ASTM/ASME	A/SA	765	K32026	III	9B	1	9.2	3.5Ni
ASTM	A	774	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM	A	774	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	774	S31703	F317L	8	1	8.1	18Cr-13Ni-3Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	774	S32100	321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	774	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	778	S30403	304L	8	1	8.1	18Cr-8Ni
ASTM	A	778	S31603	316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM	A	778	S31703	F317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM	A	778	S32100	321	8	1	8.1	18Cr-10Ni-Ti
ASTM	A	778	S34700	347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	789	S31200	S31200	10H	1	10.2	25Cr-6Ni-Mo-N
ASTM/ASME	A/SA	789	S31260	S31260	10H	1	10.2	25Cr-6.5Ni-3Mo-N
ASTM/ASME	A/SA	789	S31500	S31500	10H	1	10.1	18Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	789	S31803	S31803	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	789	S32003	S32003	10H	1	10.1	21Cr-3.5Ni-Mo-N
ASTM/ASME	A/SA	789	S32101	S32101	10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N
ASTM/ASME	A/SA	789	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	789	S32205	S32205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	789	S32304	S32304	10H	1	10.1	23Cr-4Ni-Mo-Cu-N
ASTM/ASME	A/SA	789	S32550	S32550	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	789	S32750	S32750	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	789	S32760	S32760	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	789	S32900	S32900	10H	1	10.2	26Cr-4Ni-Mo
ASTM/ASME	A/SA	789	S32906	S32906	10H	1	10.2	29Cr-6.5Ni-2Mo-N
ASTM/ASME	A/SA	789	S32950	S32950	10H	1	10.2	26Cr-4Ni-Mo-N
ASTM/ASME	A/SA	789	S39274	S39274	10H	1	10.2	25Cr-7Ni-3Mo-2W-Cu-N
ASTM/ASME	A/SA	790	S31200	S31200	10H	1	10.2	25Cr-6Ni-Mo-N
ASTM/ASME	A/SA	790	S31260	S31260	10H	1	10.2	25Cr-6.5Ni-3Mo-N
ASTM/ASME	A/SA	790	S31500	S31500	10H	1	10.1	18Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	790	S31803	S31803	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	790	S32003	S32003	10H	1	10.1	21Cr-3.5Ni-Mo-N
ASTM/ASME	A/SA	790	S32101	S32101	10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	790	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	790	S32205	S32205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	790	S32304	S32304	10H	1	10.1	23Cr-4Ni-Mo-Cu-N
ASTM/ASME	A/SA	790	S32350	S32550	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	790	S32750	S32750	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	790	S32760	S32760	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	790	S32900	S32900	10H	1	10.2	26Cr-4Ni-Mo
ASTM/ASME	A/SA	790	S32906	S32906	10H	1	10.2	29Cr-6.5Ni-2Mo-N
ASTM/ASME	A/SA	790	S32950	S32950	10H	1	10.2	26Cr-4Ni-Mo-N
ASTM/ASME	A/SA	790	S39274	S39274	10H	1	10.2	25Cr-7Ni-3Mo-2W-Cu-N
ASTM/ASME	A/SA	803	S43035	TP439	7	2	7.1	18Cr-Ti
ASTM/ASME	A/SA	803	S44660	26-3-3	10K	1	7.1	26Cr-3Ni-3Mo
ASTM	A	808	K11852		1	1	1.4	C-Mn-Cb-V
ASTM/ASME	A/SA	813	N08367	N08367	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	813	S20910	TPXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	813	S21904	TPXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	813	S24000	TPXM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	813	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	813	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	813	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	813	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	813	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	813	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	813	S30908	TP309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	813	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	813	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	813	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	813	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo
ASTM/ASME	A/SA	813	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	813	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	813	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	813	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	813	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	813	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	813	S31703	TP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	813	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	813	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	813	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	813	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	813	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	813	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	813	S34809	TP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	813	S38100	TPXM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	814	N08367	N08367	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	814	S20910	TPXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	814	S21904	TPXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	814	S24000	TPXM-29	8	3	8.3	18Cr-3Ni-12Mn
ASTM/ASME	A/SA	814	S30400	TP304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	814	S30403	TP304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	814	S30409	TP304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	814	S30451	TP304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	814	S30453	TP304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	814	S30815	S30815	8	2	8.2	21Cr-11Ni-N
ASTM/ASME	A/SA	814	S30908	TP309S	8	2	8.2	23Cr-12Ni
ASTM/ASME	A/SA	814	S30940	TP309Cb	8	2	8.2	23Cr-12Ni-Cb
ASTM/ASME	A/SA	814	S31008	TP310S	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	814	S31040	TP310Cb	8	2	8.2	25Cr-20Ni-Cb
ASTM/ASME	A/SA	814	S31254	S31254	8	4	8.2	20Cr-18Ni-6Mo

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	814	S31600	TP316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	814	S31603	TP316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	814	S31609	TP316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	814	S31651	TP316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	814	S31653	TP316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	814	S31700	TP317	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	814	S31703	TP317L	8	1	8.1	18Cr-13Ni-3Mo
ASTM/ASME	A/SA	814	S32053		8	4	8.2	23Cr-25Ni-5.5Mo-N
ASTM/ASME	A/SA	814	S32100	TP321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	814	S32109	TP321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	814	S34700	TP347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	814	S34709	TP347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	814	S34800	TP348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	814	S34809	TP348H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	814	S38100	TPXM-15	8	1	8.1	18Cr-18Ni-2Si
ASTM/ASME	A/SA	815	S31803	S31803	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	815	S32101		10H	1	10.1	21Cr-5Mn-1.5Ni-Cu-N
ASTM/ASME	A/SA	815	S32202		10H	1	10.1	22Cr-2Ni-Mo-N
ASTM/ASME	A/SA	815	S32205	S32205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	815	S32550	S32550	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM	A	815	S32750	2507	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	815	S32750	S32750	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	815	S32760	S32760	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	815	S41500	S41500	6	4	7.2	13Cr-4.5Ni-Mo
ASTM	A	830	G10060	1006	1	1	1.1	C
ASTM	A	830	G10080	1008	1	1	1.1	C
ASTM	A	830	G10090	1009	1	1	1.1	C
ASTM	A	830	G10100	1010	1	1	1.1	C
ASTM	A	830	G10120	1012	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	830	G10150	1015	1	1	1.1	C
ASTM	A	830	G10160	1016	1	1	1.1	C
ASTM	A	830	G10170	1017	1	1	1.1	C
ASTM	A	830	G10180	1018	1	1	1.1	C
ASTM	A	830	G10190	1019	1	1	1.1	C
ASTM	A	830	G10200	1020	1	1	1.1	C
ASTM	A	830	G10210	1021	1	1	1.1	C
ASTM	A	830	G10220	1022	1	1	1.1	C
ASTM	A	830	G10230	1023	1	1	1.1	C
ASTM	A	830	G10250	1025	1	2	1.1	C
ASTM/ASME	A/SA	832		23V	5C	1	6.2	3Cr-1Mo-0.25V-Cb-Ca
ASTM/ASME	A/SA	832	K31830	21V	5C	1	6.2	3Cr-1Mo-V-Ti-B
ASTM/ASME	A/SA	832	K31835	22V	5C	1	6.2	2.25Cr-1Mo-V
ASTM/ASME	A/SA	836			1	1	1.1	C-Si-Ti
ASTM/ASME	A/SA	841		A, Cl. 1	1	2	1.2	C-Mn-Si
ASTM/ASME	A/SA	841		B, Cl. 2	1	3	1.3	C-Mn-Si
ASTM	A	844	K81340		11A	1	9.3	9Ni
ASTM	A	852	K12043		11B	1	4.2	C-Mn
ASTM	A	857		25	1	1	1.1	C
ASTM	A	857		30	1	1	1.1	C
ASTM	A	857		33	1	1	1.1	C
ASTM	A	857		36	1	1	1.1	C
ASTM/ASME	A/SA	859	K20747	A Cl.1	11C	1	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM/ASME	A/SA	859	K20747	A Cl.2	11C	1	3.3	1Ni-1Cu-0.75Cr-Mo-Nb
ASTM	A	860		WP HY 42	1	1	1.2	C-Mn
ASTM	A	860		WP HY 46	1	1	1.2	C-Mn
ASTM	A	860		WP HY 52	1	1	1.2	C-Mn
ASTM	A	860		WP HY 60	1	2	1.3	C-Mn
ASTM	A	860		WP HY 65	1	2	1.3	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	860		WPHY 70	1	3	1.3	C-Mn
ASTM	A	871		60	3	2	4.2	C-Mn-Ni-Cr-Cu-V
ASTM	A	871		65	3	3	4.2	C-Mn-Ni-Cr-Cu-V
ASTM	A	890	J92205	4A	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM	A	890	J93345	2A	10H	1	10.2	24Cr-10Ni-4Mo-N
ASTM	A	890	J93370	1A	10H	1	10.2	26Cr-5Ni-2Mo-3Cu
ASTM	A	890	J93371	3A	10H	1	10.2	25Cr-5Ni-2Mo-N
ASTM	A	890	J93372	1B	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM	A	890	J93373	1C	10H	1	10.2	25Cr-6Ni-3Mo-Cu-N
ASTM	A	890	J93380	6A	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM	A	890	J93404	5A	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM	A	913		50	1	2	1.2	C-Mn-Ni-Cr-Cb-V
ASTM	A	913		60	1	3	2.1	C-Mn-Ni-Cr-Cb-V
ASTM	A	913		65	1	3	2.1	C-Mn-Ni-Cr-Cb-V
ASTM	A	913		70	1	4	2.2	C-Mn-Ni-Cr-Cb-V
ASTM	A	928	S31803	S31803	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM	A	928	S32003	S32003	10H	1	10.1	21Cr-3.5Ni-Mo-N
ASTM	A	928	S32205	2205	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM	A	928	S32304	2304	10H	1	10.1	23Cr-4Ni-Mo-Cu-N
ASTM	A	928	S32550	255	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM	A	928	S32750	2507	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM	A	928	S32760		10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM	A	935		45 Cl. 1	1	1	1.2	C-Mn-Cb-V
ASTM	A	935		45 Cl. 2	1	1	1.2	C-Mn-Cb-V
ASTM	A	935		50 Cl. 1	1	1	1.2	C-Mn-Cb-V
ASTM	A	935		50 Cl. 2	1	1	1.2	C-Mn-Cb-V
ASTM	A	935		55 Cl. 1	1	2	1.3	C-Mn-Cb-V
ASTM	A	935		55 Cl. 2	1	1	1.3	C-Mn-Cb-V
ASTM	A	935		60 Cl. 1	1	2	11.1	C-Mn-Cb-V

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	935		60 Cl. 2	1	2	1.3	C-Mn-Cb-V
ASTM	A	935		65 Cl. 1	1	3	11.1	C-Mn-Cb-V
ASTM	A	935		65 Cl. 2	1	2	1.3	C-Mn-Cb-V
ASTM	A	935		70 Cl. 1	1	3	11.1	C-Mn-Cb-V
ASTM	A	935		70 Cl. 2	1	3	1.3	C-Mn-Cb-V
ASTM/ASME	A/SA	965	S20910	FXM-19	8	3	8.3	22Cr-13Ni-5Mn
ASTM/ASME	A/SA	965	S21904	FXM-11	8	3	8.3	21Cr-6Ni-9Mn
ASTM/ASME	A/SA	965	S30400	F304	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	965	S30403	F304L	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	965	S30409	F304H	8	1	8.1	18Cr-8Ni
ASTM/ASME	A/SA	965	S30451	F304N	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	965	S30453	F304LN	8	1	8.1	18Cr-8Ni-N
ASTM/ASME	A/SA	965	S30600	F46	8	1	8.1	18Cr-15Ni-4Si
ASTM/ASME	A/SA	965	S31000	F310	8	2	8.2	25Cr-20Ni
ASTM/ASME	A/SA	965	S31600	F316	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	965	S31603	F316L	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	965	S31609	F316H	8	1	8.1	16Cr-12Ni-2Mo
ASTM/ASME	A/SA	965	S31651	F316N	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	965	S31653	F316LN	8	1	8.1	16Cr-12Ni-2Mo-N
ASTM/ASME	A/SA	965	S32100	F321	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	965	S32109	F321H	8	1	8.1	18Cr-10Ni-Ti
ASTM/ASME	A/SA	965	S34700	F347	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	965	S34709	F347H	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	965	S34800	F348	8	1	8.1	18Cr-10Ni-Cb
ASTM/ASME	A/SA	965	S34809	F348H	8	1	8.1	18Cr-10Ni-Cb
ASTM	A	984		35	1	1	1.1	C
ASTM	A	984		50	1	2	1.2	C
ASTM	A	984		60	1	2	1.3	C
ASTM	A	992			1	1	1.2	C-Mn-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	A/SA	995	J92205	4A	10H	1	10.1	22Cr-5Ni-3Mo-N
ASTM/ASME	A/SA	995	J93345	2A	10H	1	10.2	24Cr-10Ni-4Mo-N
ASTM/ASME	A/SA	995	J93371	3A	10H	1	10.2	25Cr-5Ni-2Mo-N
ASTM/ASME	A/SA	995	J93372	1B	10H	1	10.2	25Cr-5Ni-3Mo-2Cu
ASTM/ASME	A/SA	995	J93380	6A	10H	1	10.2	25Cr-8Ni-3Mo-W-Cu-N
ASTM/ASME	A/SA	995	J93404	5A	10H	1	10.2	25Cr-7Ni-4Mo-N
ASTM/ASME	A/SA	1008		CS, A	1	1	1.1	C
ASTM/ASME	A/SA	1008		CS, B	1	1	1.1	C
ASTM	A	1008		CS, C	1	1	1.1	C
ASTM	A	1008		DS, A	1	1	1.1	C
ASTM/ASME	A/SA	1008		DS, B	1	1	1.1	C
ASTM	A	1008		HSLAS 45 Cl. 1	1	1	1.2	C
ASTM	A	1008		HSLAS 45 Cl. 2	1	1	1.2	C
ASTM	A	1008		HSLAS 50 Cl. 1	1	1	1.2	C
ASTM	A	1008		HSLAS 50 Cl. 2	1	1	1.2	C
ASTM	A	1008		HSLAS 55 Cl. 1	1	2	1.3	C
ASTM	A	1008		HSLAS 55 Cl. 2	1	1	1.3	C
ASTM	A	1008		HSLAS 60 Cl. 1	1	2	11.1	C
ASTM	A	1008		HSLAS 60 Cl. 2	1	2	1.3	C
ASTM	A	1008		HSLAS 65 Cl. 1	1	3	11.1	C
ASTM	A	1008		HSLAS 65 Cl. 2	1	2	1.3	C
ASTM	A	1008		HSLAS 70 Cl. 1	1	3	11.1	C
ASTM	A	1008		HSLAS 70 Cl. 2	1	3	1.3	C
ASTM	A	1008		HSLAS-F 50	1	1	1.2	C
ASTM	A	1008		HSLAS-F 60	1	2	1.3	C
ASTM	A	1008		HSLAS-F 70	1	3	1.3	C
ASTM	A	1008		HSLAS-F 80	1	4	1.3	C
ASTM	A	1008		SS 25	1	1	1.1	C
ASTM	A	1008		SS 30	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	1008		SS 33, 1	1	1	1.1	C
ASTM	A	1008		SS 33, 2	1	1	1.1	C
ASTM	A	1008		SS 40, 1	1	1	1.1	C
ASTM	A	1008		SS 40, 2	1	1	1.1	C
ASTM	A	1008		SS 80	1	3	1.3	C
ASTM/ASME	A/SA	1010	S41003	40	7	1	7.2	12Cr-1Ni
ASTM/ASME	A/SA	1010	S41003	50	7	1	7.2	12Cr-1Ni
ASTM	A	1011		CS, A	1	1	1.1	C
ASTM/ASME	A/SA	1011		CS, B	1	1	1.1	C
ASTM	A	1011		CS, C	1	1	1.1	C
ASTM	A	1011		CS, D	1	1	1.1	C
ASTM	A	1011		DS, A	1	1	1.1	C
ASTM/ASME	A/SA	1011		DS, B	1	1	1.1	C
ASTM	A	1011		HSLAS 45 Cl. 1	1	1	1.2	C
ASTM	A	1011		HSLAS 45 Cl. 2	1	1	1.2	C
ASTM	A	1011		HSLAS 50 Cl. 1	1	1	1.2	C
ASTM	A	1011		HSLAS 50 Cl. 2	1	1	1.2	C
ASTM	A	1011		HSLAS 55 Cl. 1	1	2	1.3	C
ASTM	A	1011		HSLAS 55 Cl. 2	1	1	1.3	C
ASTM	A	1011		HSLAS 60 Cl. 1	1	2	11.1	C
ASTM	A	1011		HSLAS 60 Cl. 2	1	2	1.3	C
ASTM	A	1011		HSLAS 65 Cl. 1	1	3	11.1	C
ASTM	A	1011		HSLAS 65 Cl. 2	1	2	1.3	C
ASTM	A	1011		HSLAS 70 Cl. 1	1	3	11.1	C
ASTM	A	1011		HSLAS 70 Cl. 2	1	3	1.3	C
ASTM	A	1011		HSLAS-F 50	1	1	1.2	C
ASTM	A	1011		HSLAS-F 60	1	2	1.3	C
ASTM	A	1011		HSLAS-F 70	1	3	1.3	C
ASTM	A	1011		HSLAS-F 80	1	4	1.3	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	1011		SS 30	1	1	1.1	C
ASTM	A	1011		SS 33	1	1	1.1	C
ASTM	A	1011		SS 36, 1	1	1	1.1	C
ASTM	A	1011		SS 36, 2	1	1	1.1	C
ASTM	A	1011		SS 40	1	1	1.1	C
ASTM	A	1011		SS 45, 1	1	1	1.2	C
ASTM	A	1011		SS 45, 2	1	1	1.2	C
ASTM	A	1011		SS 50	1	1	1.2	C
ASTM	A	1011		SS 55	1	2	1.3	C
ASTM	A	1011		SS 60	1	2	1.3	C
ASTM	A	1011		SS 70	1	3	1.3	C
ASTM	A	1011		SS 80	1	4	1.3	C
ASTM	A	1018		HSLAS 45 Cl. 1	1	1	1.2	C
ASTM	A	1018		HSLAS 45 Cl. 2	1	1	1.2	C
ASTM	A	1018		HSLAS 50 Cl. 1	1	1	1.2	C
ASTM	A	1018		HSLAS 50 Cl. 2	1	1	1.2	C
ASTM	A	1018		HSLAS 55 Cl. 1	1	2	1.3	C
ASTM	A	1018		HSLAS 55 Cl. 2	1	1	1.3	C
ASTM	A	1018		HSLAS 60 Cl. 1	1	2	1.1	C
ASTM	A	1018		HSLAS 60 Cl. 2	1	2	1.3	C
ASTM	A	1018		HSLAS 65 Cl. 1	1	2	1.1	C
ASTM	A	1018		HSLAS 65 Cl. 2	1	2	1.3	C
ASTM	A	1018		HSLAS 70 Cl. 1	1	3	1.1	C
ASTM	A	1018		HSLAS 70 Cl. 2	1	3	1.3	C
ASTM	A	1018		HSLAS-F 50	1	1	1.2	C
ASTM	A	1018		HSLAS-F 60	1	3	1.3	C
ASTM	A	1018		HSLAS-F 70	1	3	1.3	C
ASTM	A	1018		HSLAS-F 80	1	4	1.3	C
ASTM	A	1018		SS 30	1	1	1.1	C

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	A	1018		SS 33	1	1	1.1	C
ASTM	A	1018		SS 36, 1	1	1	1.1	C
ASTM	A	1018		SS 36, 2	1	1	1.1	C
ASTM	A	1018		SS 40	1	1	1.1	C
ASTM	A	1085			1	1	11.1	C-Mn-Si
CSA	CSA	G30.18		400W	1A	4	11.1	C
CSA	CSA	G30.18		500W	1A	4	11.1	C
CSA	CSA	G40.21		260W	1	1	1.1	C-Mn
CSA	CSA	G40.21		260WT	1	1	1.1	C-Mn-Si-Cb-V
CSA	CSA	G40.21		300W	1	1	1.2	C-Mn
CSA	CSA	G40.21		300WT	1	1	1.2	C-Mn-Si-Cb-V
CSA	CSA	G40.21		350A	1	2	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		350AT	1	2	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		350R	1	2	1.4	C-Mn-P
CSA	CSA	G40.21		350W	1	1	1.2	C-Mn
CSA	CSA	G40.21		350WT	1	2	1.2	C-Mn-Si-Cb-V
CSA	CSA	G40.21		380W	1	2	1.3	C-Mn
CSA	CSA	G40.21		380WT	1	2	1.3	C-Mn-Si-Cb-V
CSA	CSA	G40.21		400A	1	2	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		400AT	1	2	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		400W	1	2	1.3	C-Mn
CSA	CSA	G40.21		400WT	1	2	1.3	C-Mn-Si-Cb-V
CSA	CSA	G40.21		480A	1	3	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		480AT	1	3	1.4	C-Mn-Si-Cb-V
CSA	CSA	G40.21		480W	1	3	11.1	C-Mn
CSA	CSA	G40.21		480WT	1	3	11.1	C-Mn-Si-Cb-V
CSA	CSA	G40.21		550A	1	4	1.4	C-Mn-Si
CSA	CSA	G40.21		550AT	1	4	1.4	C-Mn-Si
CSA	CSA	G40.21		550W	1	4	1.3	C-Mn

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
CSA	CSA	G40.21		550WT	1	4	1.3	C-Mn-Si
CSA	CSA	G40.21		38W	1	1	1.1	C-Mn-Si
CSA	CSA	G40.21		44W	1	1	1.2	C-Mn-Si
CSA	CSA	G40.21		50W	1	1	1.2	C-Mn-Si
CSA	CSA	Z245.1		172	1	1	11.1	C
CSA	CSA	Z245.1		207	1	1	11.1	C
CSA	CSA	Z245.1		241	1	1	11.1	C
CSA	CSA	Z245.1		290	1	1	11.1	C
CSA	CSA	Z245.1		317	1	2	11.1	C-Mn
CSA	CSA	Z245.1		359	1	2	11.1	C-Mn
CSA	CSA	Z245.1		386	1	2	11.1	C-Mn
CSA	CSA	Z245.1		414	1	3	11.1	C-Mn
CSA	CSA	Z245.1		448	1	3	11.1	C-Mn
CSA	CSA	Z245.1		483	1	3	11.1	C-Mn
CSA	CSA	Z245.1		550	1	4	11.1	C-Mn
CSA	CSA	Z245.11		207	1	1	11.1	C-Mn-Si
CSA	CSA	Z245.11		241	1	1	11.1	C-Mn-Si
CSA	CSA	Z245.11		290	1	1	11.1	C-Mn-Si
CSA	CSA	Z245.11		317	1	2	11.1	C-Mn-Si
CSA	CSA	Z245.11		359	1	2	11.1	C-Mn-Si
CSA	CSA	Z245.11		386	1	2	11.1	C-Mn-Si
CSA	CSA	Z245.11		414	1	3	11.1	C-Mn-Si
CSA	CSA	Z245.11		448	1	3	11.1	C-Mn-Si
CSA	CSA	Z245.11		483	1	3	11.1	C-Mn-Si
CSA	CSA	Z245.11		550	1	4	11.1	C-Mn-Si
CSA	CSA	Z245.12		248	1	1	11.1	C-Mn-Si
CSA	CSA	Z245.12		290	1	1	11.1	C-Mn-Si
CSA	CSA	Z245.12		317	1	2	11.1	C-Mn-Si
CSA	CSA	Z245.12		359	1	2	11.1	C-Mn-Si

Table 1 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
CSA	CSA	Z245.12		386	1	2	11.1	C-Mn-Si
CSA	CSA	Z245.12		414	1	3	11.1	C-Mn-Si
CSA	CSA	Z245.12		448	1	3	11.1	C-Mn-Si
CSA	CSA	Z245.12		483	1	3	11.1	C-Mn-Si
MSS	MSS	MSS SP-75		WPHY-42	1	1	11.1	C-Mn
MSS	MSS	MSS SP-75		WPHY-46	1	1	11.1	C-Mn
MSS	MSS	MSS SP-75		WPHY-52	1	1	11.1	C-Mn
MSS	MSS	MSS SP-75		WPHY-56	1	2	11.1	C-Mn
MSS	MSS	MSS SP-75		WPHY-60	1	2	11.1	C-Mn
MSS	MSS	MSS SP-75		WPHY-65	1	2	11.1	C-Mn

Table 2 — American grouping system for non-ferrous materials

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
AMS	AMS	4914	R58153		53		54	Ti-15V-3Al-3Cr-3Sn
AMS	AMS	4915	R54810		54		52	Ti-8Al-1Mo-1V
AMS	AMS	4919	R54620		54		52	Ti-6Al-4Zr-2Mo-2Sn
AMS	AMS	4973	R54810		54		52	Ti-8Al-1Mo-1V
AMS	AMS	4975	R54620		54		52	Ti-6Al-4Zr-2Mo-2Sn
AMS	AMS	4976	R54620		54		52	Ti-6Al-4Zr-2Mo-2Sn
AMS	AMS	5711	N06635		44		43	62Ni-16Cr-15Mo-3Fe-2Co-1W-Mn-Si-Al
ASTM/ASME	A/SA	240	S31277		45		8.2	27Ni-22Cr-7Mo-Mn-Cu
ASTM/ASME	A/SA	351	J94651	CN3MN	45		8.2	46Fe-24Ni-21Cr-6Mo-Cu-N
ASTM/ASME	A/SA	351	N08007	CN7M	45		8.2	28Ni-19Cr-Cu-Mo
ASTM/ASME	A/SA	351	N08151	CT15C	45		45	32Ni-45Fe-20Cr-Cb
ASTM/ASME	A/SA	351	N08603	HT30	45		45	35Ni-15Cr-0.5Mo
ASTM/ASME	A/SA	494	N26022	CX2MW	43		44	59Ni-22Cr-14Mo-4Fe-3W
ASTM	B	21	C46400		32		32.2	60Cu-39Zn-Sn
ASTM/ASME	B/SB	26	A02080	208.0	26		25	Al-3Si-4Cu
ASTM/ASME	B/SB	26	A03190	319.0, F	26		25	Al-6Si-3Cu
ASTM/ASME	B/SB	26	A03190	319.0, T5	26		25	Al-6Si-3Cu
ASTM/ASME	B/SB	26	A03190	319.0, T6	26		25	Al-6Si-3Cu
ASTM/ASME	B/SB	26	A03280	328.0, F	26		25	Al-8Si-1Cu-Mn-Mg
ASTM/ASME	B/SB	26	A03280	328.0, T6	26		25	Al-8Si-1Cu-Mn-Mg
ASTM/ASME	B/SB	26	A03560	356.0, F	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	356.0, T6	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	356.0, T7	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	356.0, T51	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	356.0, T71	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	T6	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A03560	T71	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A04430	443.0	26		24.1	Al-Si

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	26	A05120	512.0	26		23.1	Al-4Mg-2Si
ASTM/ASME	B/SB	26	A05140	514.0	26		23.1	Al-4Mg-Si
ASTM/ASME	B/SB	26	A07050	705.0, T5	26		23.2	Al-3Zn-Mg-Mn-Cr
ASTM/ASME	B/SB	26	A07100	710.0, T5	26		23.2	Al-6Zn-Mg
ASTM/ASME	B/SB	26	A13560	A356.0, T6	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A13560	A356.0, T61	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	26	A24430		26		24.1	Al-Si
ASTM/ASME	B/SB	26	A24430	B443.0	26		24.1	Al-Si
ASTM/ASME	B/SB	42	C10200		31		31	99.95Cu-P
ASTM/ASME	B/SB	42	C10300		31		31	99.95Cu-P
ASTM/ASME	B/SB	42	C10800		31		31	99.95Cu-P
ASTM/ASME	B/SB	42	C12000		31		31	99.9Cu-P
ASTM/ASME	B/SB	42	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	43	C23000		32		32.1	85Cu-15Zn
ASTM	B	68	C10200		31		31	99.95Cu-P
ASTM	B	68	C10300		31		31	99.95Cu-P
ASTM	B	68	C10800		31		31	99.95Cu-P
ASTM	B	68	C12000		31		31	99.9Cu-P
ASTM	B	68	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	75	C10100		31		31	99.99Cu-P
ASTM/ASME	B/SB	75	C10200		31		31	99.95Cu-P
ASTM/ASME	B/SB	75	C10300		31		31	99.95Cu-P
ASTM/ASME	B/SB	75	C10800		31		31	99.95Cu-P
ASTM/ASME	B/SB	75	C12000		31		31	99.9Cu-P
ASTM/ASME	B/SB	75	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	75	C14200		31		31	99.40Cu-P
ASTM	B	88	C10200		31		31	99.95Cu-P
ASTM	B	88	C12000		31		31	99.9Cu-P
ASTM	B	88	C12200		31		31	99.9Cu-P

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	96	C65100		33		37	98.5Cu-1.5Si
ASTM/ASME	B/SB	96	C65400		33		37	98.5Cu-3Si-1.5Sn-Cr
ASTM/ASME	B/SB	96	C65500		33		37	97Cu-3Si
ASTM/ASME	B/SB	98	C65100		33		37	98.5Cu-1.5Si
ASTM/ASME	B/SB	98	C65500		33		37	97Cu-3Si
ASTM/ASME	B/SB	98	C66100		33		37	94Cu-3Si
ASTM/ASME	B/SB	108	A03080	308.0	26		25	Al-5.5Si-4.5Cu
ASTM/ASME	B/SB	108	A03190	319.0	26		25	Al-6Si-3Cu
ASTM/ASME	B/SB	108	A03330	333.0, F	26		25	Al-9Si-3.5Cu-Mg
ASTM/ASME	B/SB	108	A03330	333.0, T5	26		25	Al-9Si-3.5Cu-Mg
ASTM/ASME	B/SB	108	A03330	333.0, T6	26		25	Al-9Si-3.5Cu-Mg
ASTM/ASME	B/SB	108	A03330	333.0, T7	26		25	Al-9Si-3.5Cu-Mg
ASTM/ASME	B/SB	108	A03560	356.0, F	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	108	A03560	356.0, T6	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	108	A03560	356.0, T71	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	108	A04430	443.0	26		24.1	Al-Si
ASTM/ASME	B/SB	108	A05130	513.0	26		23.2	Al-4Mg-Zn
ASTM/ASME	B/SB	108	A13560	A356.0	26		24.2	Al-Si-Mg
ASTM/ASME	B/SB	108	A14440	A444.0	26		24.1	Al-7Si
ASTM/ASME	B/SB	108	A24430	B443.0	26		24.1	Al-Si
ASTM/ASME	B/SB	111	C10100		31		31	99.99Cu-P
ASTM/ASME	B/SB	111	C10200		31		31	99.95Cu-P
ASTM/ASME	B/SB	111	C10300		31		31	99.95Cu-P
ASTM/ASME	B/SB	111	C10800		31		31	99.95Cu-P
ASTM/ASME	B/SB	111	C12000		31		31	99.9Cu-P
ASTM/ASME	B/SB	111	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	111	C14200		31		31	99.4Cu-As-P
ASTM/ASME	B/SB	111	C19200		31		31	99.7Cu-Fe-P
ASTM/ASME	B/SB	111	C23000		32		32.1	85Cu-15Zn

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	111	C28000		32		32.1	60Cu-40Zn
ASTM/ASME	B/SB	111	C44300		32		32.2	71Cu-28Zn-1Sn-0.06As
ASTM/ASME	B/SB	111	C44400		32		32.2	71Cu-28Zn-1Sn-0.06Sb
ASTM/ASME	B/SB	111	C44500		32		32.2	71Cu-28Zn-1Sn-0.06P
ASTM/ASME	B/SB	111	C60800		35		35	95Cu-5Al
ASTM/ASME	B/SB	111	C61300		35		35	90Cu-7Al-2.5Fe-Sn
ASTM/ASME	B/SB	111	C61400		35		35	90Cu-7Al-3Fe
ASTM/ASME	B/SB	111	C68700		32		32.2	78Cu-20Zn-2Al
ASTM/ASME	B/SB	111	C70400		34		34	95Cu-5Ni
ASTM/ASME	B/SB	111	C70600		34		34	90Cu-10Ni
ASTM/ASME	B/SB	111	C71000		34		34	80Cu-20Ni
ASTM/ASME	B/SB	111	C71500		34		34	70Cu-30Ni
ASTM/ASME	B/SB	111	C71640		34		34	66Cu-30Ni-2Fe-2Mn
ASTM/ASME	B/SB	111	C72200		34		34	80Cu-16Ni-0.75Fe-0.5Cr
ASTM/ASME	B/SB	127	N04400		42		42	67Ni-30Cu
ASTM/ASME	B/SB	135	C22000		32		32.1	90Cu-10Zn
ASTM/ASME	B/SB	135	C23000		32		32.1	85Cu-15Zn
ASTM/ASME	B/SB	148	C95200		35		35	88Cu-9Al-3Fe
ASTM/ASME	B/SB	148	C95300		35		35	89Cu-10Al-1Fe
ASTM/ASME	B/SB	148	C95400		35		35	85Cu-11Al-4Fe
ASTM/ASME	B/SB	148	C95410		35		35	84Cu-10Al-4Fe-2Ni
ASTM/ASME	B/SB	148	C95500		35		35	82Cu-11Al-4Fe-3Mn
ASTM/ASME	B/SB	148	C95600		35		35	90Cu-7Al-3Si
ASTM/ASME	B/SB	148	C95700		35		35	75Cu-8Al-3Fe-2-Ni-12Mn
ASTM/ASME	B/SB	148	C95800		35		35	81Cu-9Al-4.5Ni-4Fe-1.2Mn
ASTM/ASME	B/SB	150	C61300		35		35	90Cu-7Al-2.5Fe-Sn
ASTM/ASME	B/SB	150	C61400		35		35	90Cu-7Al-3Fe
ASTM/ASME	B/SB	150	C61900		35		35	87Cu-9Al-4Fe
ASTM/ASME	B/SB	150	C62300		35		35	88Cu-9Al-3Fe

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	150	C62400		35		35	87Cu-10Al-3Fe
ASTM/ASME	B/SB	150	C63000		35		35	81Cu-10Al-5Ni-3Fe
ASTM/ASME	B/SB	150	C63020		35		35	80Cu-10Al-5Ni-5Fe
ASTM/ASME	B/SB	150	C64200		35		35	91Cu-7Al-2Si
ASTM/ASME	B/SB	151	C70600		34		34	90Cu-10Ni
ASTM/ASME	B/SB	151	C71500		34		34	70Cu-30Ni
ASTM/ASME	B/SB	151	C71500		34		34	70Cu-30Ni
ASTM/ASME	B/SB	152	C10100		31		31	99.99Cu-P
ASTM/ASME	B/SB	152	C10200		31		31	99.95Cu-P
ASTM/ASME	B/SB	152	C10300		31		31	99.95Cu-P
ASTM/ASME	B/SB	152	C10400		31		31	99.95Cu + Ag
ASTM/ASME	B/SB	152	C10500		31		31	99.95Cu + Ag
ASTM/ASME	B/SB	152	C10700		31		31	99.95Cu + Ag
ASTM/ASME	B/SB	152	C10800		31		31	99.95Cu-P
ASTM/ASME	B/SB	152	C11000		31		31	99.90Cu
ASTM/ASME	B/SB	152	C12000		31		31	99.9Cu-P
ASTM/ASME	B/SB	152	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	152	C12300		31		31	99.9Cu-P
ASTM/ASME	B/SB	152	C14200		31		31	99.4Cu-As-P
ASTM/ASME	B/SB	152	C14420		31		31	99.99Cu-Sn-Te
ASTM/ASME	B/SB	160	N02200		41		41	99.0Ni
ASTM/ASME	B/SB	160	N02201		41		41	99.0Ni-Low C
ASTM/ASME	B/SB	161	N02200		41		41	99.0Ni
ASTM/ASME	B/SB	161	N02201		41		41	99.0Ni-Low C
ASTM/ASME	B/SB	162	N02200		41		41	99.0Ni
ASTM/ASME	B/SB	162	N02201		41		41	99.0Ni-Low C
ASTM/ASME	B/SB	163	N02200		41		41	99.0Ni
ASTM/ASME	B/SB	163	N02201		41		41	99.0Ni-Low C
ASTM/ASME	B/SB	163	N04400		42		42	67Ni-30Cu

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	163	N06025		43		43	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
ASTM/ASME	B/SB	163	N06045		46		45	46Ni-27Cr-23Fe-2.75Si
ASTM/ASME	B/SB	163	N06600		43		43	72Ni-15Cr-8Fe
ASTM/ASME	B/SB	163	N06601		43		43	60Ni-23Cr-12Fe-Al
ASTM/ASME	B/SB	163	N06690		43		43	58Ni-29Cr-9Fe
ASTM/ASME	B/SB	163	N08120		45		45	37Ni-33Fe-25Cr
ASTM/ASME	B/SB	163	N08800		45		45	33Ni-42Fe-21Cr
ASTM/ASME	B/SB	163	N08801		45		45	32Ni-45Fe-20.5Cr-Ti
ASTM/ASME	B/SB	163	N08810		45		45	33Ni-42Fe-21Cr
ASTM/ASME	B/SB	163	N08811		45		45	33Ni-42Fe-21Cr-Al-Ti
ASTM/ASME	B/SB	163	N08825		45		45	42Ni-21.5Cr-3Mo-2.3Cu
ASTM/ASME	B/SB	164	N04400		42		42	67Ni-30Cu
ASTM/ASME	B/SB	164	N04405		42		42	67Ni-30Cu
ASTM/ASME	B/SB	165	N04400		42		42	67Ni-30Cu
ASTM/ASME	B/SB	166	N06025		43		43	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
ASTM/ASME	B/SB	166	N06045		46		45	46Ni-27Cr-23Fe-2.75Si
ASTM/ASME	B/SB	166	N06600		43		43	72Ni-15Cr-8Fe
ASTM/ASME	B/SB	166	N06601		43		43	60Ni-23Cr-12Fe-Al
ASTM/ASME	B/SB	166	N06617		43		46	52Ni-22Cr-13Co-9Mo
ASTM/ASME	B/SB	166	N06690		43		43	58Ni-29Cr-9Fe
ASTM/ASME	B/SB	167	N06025		43		43	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
ASTM/ASME	B/SB	167	N06045		46		45	46Ni-27Cr-23Fe-2.75Si
ASTM/ASME	B/SB	167	N06600		43		43	72Ni-15Cr-8Fe
ASTM/ASME	B/SB	167	N06601		43		43	60Ni-23Cr-12Fe-Al
ASTM/ASME	B/SB	167	N06617		43		46	52Ni-22Cr-13Co-9Mo
ASTM/ASME	B/SB	167	N06690		43		43	58Ni-29Cr-9Fe
ASTM/ASME	B/SB	168	N06025		43		43	63Ni-25Cr-10Fe-2Al-Ti-Y-Zr
ASTM/ASME	B/SB	168	N06045		46		45	46Ni-27Cr-23Fe-2.75Si
ASTM/ASME	B/SB	168	N06600		43		43	72Ni-15Cr-8Fe

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	168	N06601		43		43	60Ni-23Cr-12Fe-Al
ASTM/ASME	B/SB	168	N06617		43		46	52Ni-22Cr-13Co-9Mo
ASTM/ASME	B/SB	168	N06690		43		43	58Ni-29Cr-9Fe
ASTM/ASME	B/SB	169	C61300		35		35	90Cu-7Al-2.5Fe-Sn
ASTM/ASME	B/SB	169	C61400		35		35	90Cu-7Al-3Fe
ASTM	B	170	C10100	1	31		31	99.99Cu-P
ASTM	B	170	C10200	2	31		31	99.95Cu-P
ASTM/ASME	B/SB	171	C36500		32		32.2	60Cu-39Zn-Pb
ASTM/ASME	B/SB	171	C44300		32		32.2	71Cu-28Zn-1Sn-0.06As
ASTM/ASME	B/SB	171	C44400		32		32.2	71Cu-28Zn-1Sn-0.06Sb
ASTM/ASME	B/SB	171	C44500		32		32.2	71Cu-28Zn-1Sn-0.06P
ASTM/ASME	B/SB	171	C46400		32		32.2	60Cu-39Zn-Sn
ASTM/ASME	B/SB	171	C46500		32		32.2	60Cu-39Zn-As
ASTM/ASME	B/SB	171	C61300		35		35	90Cu-7Al-2.5Fe-Sn
ASTM/ASME	B/SB	171	C61400		35		35	90Cu-7Al-3Fe
ASTM/ASME	B/SB	171	C63000		35		35	81Cu-10Al-5Ni-3Fe
ASTM/ASME	B/SB	171	C63200		35		35	83Cu-9Al-4Ni-4Fe
ASTM/ASME	B/SB	171	C70600		34		34	90Cu-10Ni
ASTM/ASME	B/SB	171	C71500		34		34	70Cu-30Ni
ASTM/ASME	B/SB	171	C72200		34		34	80Cu-16Ni-0.75Fe-0.5Cr
ASTM/ASME	B/SB	187	C10100		31		31	99.99Cu-P
ASTM/ASME	B/SB	187	C10200		31		31	99.95Cu-P
ASTM/ASME	B/SB	187	C10200	060	31		31	99.95Cu-P
ASTM/ASME	B/SB	187	C10300		31		31	99.95Cu-P
ASTM/ASME	B/SB	187	C10400		31		31	99.95Cu + Ag
ASTM/ASME	B/SB	187	C10700		31		31	99.95Cu + Ag
ASTM/ASME	B/SB	187	C10940		31		31	99.90Cu + Ag
ASTM/ASME	B/SB	187	C11000		31		31	99.9Cu
ASTM/ASME	B/SB	187	C11000	060	31		31	99.9Cu

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	187	C14420		31		31	99.99Cu-Sn-Te
ASTM/ASME	B/SB	209	A91060	1060	21		21	99.60Al
ASTM/ASME	B/SB	209	A91100	1100	21		21	99.0Al-Cu
ASTM/ASME	B/SB	209	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	209	A92219	2219	24		26	Al-6Cu-0.3Mn-Ti-Zr
ASTM/ASME	B/SB	209	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	209	A93004	3004	22		22.2	Al-Mn-Mg
ASTM/ASME	B/SB	209	A93005	3005	22		22.2	Al-Mn-Mg
ASTM/ASME	B/SB	209	A93105	3105	22		22.2	Al-Mn-Mg
ASTM/ASME	B/SB	209	A95005	5005	22		22.2	Al-1.5Mg
ASTM/ASME	B/SB	209	A95010	5010	22		22.2	Al-0.4Mg-0.2Mn
ASTM/ASME	B/SB	209	A95050	5050	21		22.2	Al-1.5Mg
ASTM/ASME	B/SB	209	A95052	5052	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	209	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM/ASME	B/SB	209	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM/ASME	B/SB	209	A95154	5154	22		22.4	Al-3.5Mg
ASTM/ASME	B/SB	209	A95252	5252	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	209	A95254	5254	22		22.4	Al-3.5Mg
ASTM/ASME	B/SB	209	A95454	5454	22		22.3	Al-2.7Mg-Mn
ASTM/ASME	B/SB	209	A95456	5456	25		22.4	Al-5.1Mg-Mn
ASTM/ASME	B/SB	209	A95457	5457	22		22.2	Al-1Mg-0.3Mn
ASTM/ASME	B/SB	209	A95652	5652	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	209	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	210	A91060	1060	21		21	99.60Al
ASTM	B	210	A91100	1100	21		21	99.0Al-Cu
ASTM	B	210	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	210	A93003	3003	21		22.1	Al-Mn-Cu
ASTM	B	210	A93102	3102	21		22.1	Al-0.3Mg
ASTM	B	210	A95005	5005	22		22.2	Al-1.5Mg

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	B	210	A95050	5050	21		22.2	Al-1.5Mg
ASTM/ASME	B/SB	210	A95052	5052	22		22.3	Al-2.5Mg
ASTM	B	210	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM	B	210	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM/ASME	B/SB	210	A95154	5154	22		22.4	Al-3.5Mg
ASTM	B	210	A95456	5456	25		22.4	Al-5.1Mg-Mn
ASTM/ASME	B/SB	210	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	210	A96063	6063	23		23.1	Al-Mg-Si
ASTM/ASME	B/SB	211	A91060	1060	21		21	99.60Al
ASTM/ASME	B/SB	211	A91100	1100	21		21	99.0Al-Cu
ASTM/ASME	B/SB	211	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	211	A92219	2219	24		26	Al-6Cu-0.3Mn-Ti-Zr
ASTM/ASME	B/SB	211	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	211	A95052	5052	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	211	A95056	5056	25		22.4	Al-5Mg-Mn-Cr
ASTM/ASME	B/SB	211	A95154	5154	22		22.4	Al-3.5Mg
ASTM/ASME	B/SB	211	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	221	A91060	1060	21		21	99.60Al
ASTM/ASME	B/SB	221	A91100	1100	21		21	99.0Al-Cu
ASTM/ASME	B/SB	221	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	221	A92219	2219	24		26	Al-6Cu-0.3Mn-Ti-Zr
ASTM/ASME	B/SB	221	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	221	A93004	3004	22		22.2	Al-Mn-Mg
ASTM/ASME	B/SB	221	A93102	3102	21		22.1	Al-0.3Mg
ASTM/ASME	B/SB	221	A95052	5052	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	221	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM/ASME	B/SB	221	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM/ASME	B/SB	221	A95154	5154	22		22.4	Al-3.5Mg
ASTM/ASME	B/SB	221	A95454	5454	22		22.3	Al-2.7Mg-Mn

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	221	A95456	5456	25		22.4	Al-5.1Mg-Mn
ASTM/ASME	B/SB	221	A96005	6005	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	221	A96005	6005A	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	221	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	221	A96063	6063	23		23.1	Al-Mg-Si
ASTM/ASME	B/SB	221	A96105	6105	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	221	A96162	6162	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	221	A96351	6351	23		23.1	Al-Si-Mg-Mn
ASTM/ASME	B/SB	221	A96463	6463	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	221	A97005	7005	27		23.2	Al-Zn-Mg-Mn-Cr-Ti
ASTM	B	230	A91350	1350	21		21	99.50Al
ASTM/ASME	B/SB	234	A91060	1060	21		21	99.60Al
ASTM/ASME	B/SB	234	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	234	A95052	5052	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	234	A95454	5454	22		22.3	Al-2.7Mg-Mn
ASTM/ASME	B/SB	234	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM	B	236	A91350	1350	21		21	99.50Al
ASTM/ASME	B/SB	241	A91060	1060	21		21	99.60Al
ASTM/ASME	B/SB	241	A91100	1100	21		21	99.0Al-Cu
ASTM/ASME	B/SB	241	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	241	A92219	2219	24		26	Al-6Cu-0.3Mn-Ti-Zr
ASTM/ASME	B/SB	241	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	241	A95052	5052	22		22.3	Al-2.5Mg
ASTM/ASME	B/SB	241	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM/ASME	B/SB	241	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM/ASME	B/SB	241	A95454	5454	22		22.3	Al-2.7Mg-Mn
ASTM/ASME	B/SB	241	A95456	5456	25		22.4	Al-5.1Mg-Mn
ASTM/ASME	B/SB	241	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	241	A96063	6063	23		23.1	Al-Mg-Si

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	241	A96162	6162	23		23.1	Al-Si-Mg
ASTM/ASME	B/SB	241	A96351	6351	23		23.1	Al-Si-Mg-Mn
ASTM/ASME	B/SB	247	A91100	1100	21		21	99.0Al-Cu
ASTM/ASME	B/SB	247	A92014	2014	24		26	Al-4.5Cu-1Si-0.8Mn-0.6Mg
ASTM/ASME	B/SB	247	A92219	2219	24		26	Al-6Cu-0.3Mn-Ti-Zr
ASTM/ASME	B/SB	247	A93003	3003	21		22.1	Al-Mn-Cu
ASTM/ASME	B/SB	247	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM/ASME	B/SB	247	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	247	A96151	6151	23		23.1	Al-Mg-Si-Cr
ASTM/ASME	B/SB	265	R50250	1	51		51.1	Ti
ASTM/ASME	B/SB	265	R50400	2	51		51.2	Ti
ASTM/ASME	B/SB	265	R50400	2H	51		51.2	Ti
ASTM/ASME	B/SB	265	R50550	3	52		51.3	Ti
ASTM/ASME	B/SB	265	R50700	4	53		51.4	Ti
ASTM/ASME	B/SB	265	R52250	11	51		52	Ti-Pd
ASTM/ASME	B/SB	265	R52252	17	51		51.1	Ti-Pd
ASTM/ASME	B/SB	265	R52254	27	51		51.1	Ti-Ru
ASTM/ASME	B/SB	265	R52400	7	51		52	Ti-Pd
ASTM/ASME	B/SB	265	R52400	7H	51		52	Ti-Pd
ASTM/ASME	B/SB	265	R52402	16	51		51.2	Ti-Pd
ASTM/ASME	B/SB	265	R52402	16H	51		51.2	Ti-Pd
ASTM/ASME	B/SB	265	R52404	26	51		51.2	Ti-Ru
ASTM/ASME	B/SB	265	R52404	26H	51		51.2	Ti-Ru
ASTM/ASME	B/SB	265	R53400	12	52		52	Ti-0.3Mo-0.8Ni
ASTM/ASME	B/SB	265	R53413	13	51		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	265	R53414	14	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	265	R53415	15	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	265	R53442	33	51		54	Ti-Ni-Pd-Ru-Cr
ASTM/ASME	B/SB	265	R53445	34	52		54	Ti-Ni-Pd-Ru-Cr

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	265	R53530	30	51		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	265	R53532	31	52		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	265	R54520	6	54		52	Ti-5Al-2.5Sn
ASTM/ASME	B/SB	265	R55111	32	53		52	Ti-5Al-1Sn-1Zr-1V-Mo
ASTM/ASME	B/SB	265	R56320	9	53		53	Ti-3Al-2.5V
ASTM/ASME	B/SB	265	R56322	18	53		53	Ti-3Al-2.5V-Pd
ASTM/ASME	B/SB	265	R56323	28	53		53	Ti-3Al-2.5V-0.1Ru
ASTM/ASME	B/SB	265	R56340	35	54		53	Ti-4Al-2.5V-1.5Fe
ASTM/ASME	B/SB	265	R56400	5	54		53	Ti-6Al-4V
ASTM/ASME	B/SB	265	R56403	25	54		53	Ti-6Al-4V-Ni-Pd
ASTM/ASME	B/SB	265	R56404	29	54		53	Ti-6Al-4V-Pd-ELI-Ru
ASTM/ASME	B/SB	265	R56405	24	54		53	Ti-6Al-4V-Pd
ASTM/ASME	B/SB	265	R56407	23	54		53	Ti-6Al-4V-ELI
ASTM/ASME	B/SB	265	R58210	21	53		54	Ti-15Mo-3Al-2.7Nb-Si
ASTM/ASME	B/SB	265	R58640	19	53		54	Ti-3Al-8V-6Cr-4Zr-4Mo
ASTM/ASME	B/SB	265	R58645	20	53		54	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
ASTM/ASME	B/SB	271	C95200		35		35	88Cu-9Al-3Fe
ASTM/ASME	B/SB	271	C95300		35		35	89Cu-10Al-1Fe
ASTM/ASME	B/SB	271	C95400		35		35	85Cu-11Al-4Fe
ASTM/ASME	B/SB	271	C95410		35		35	84Cu-10Al-4Fe-2Ni
ASTM/ASME	B/SB	271	C95500		35		35	82Cu-11Al-4Fe-3Mn
ASTM	B	280	C10200	102	31		31	99.95Cu-P
ASTM	B	280	C12000	120	31		31	99.9Cu-P
ASTM	B	280	C12200	122	31		31	99.9Cu-P
ASTM/ASME	B/SB	283	C11000	Cu	31		31	99.9Cu
ASTM/ASME	B/SB	283	C46400	Naval Brass	32		32.2	60Cu-39Zn-Sn
ASTM/ASME	B/SB	283	C64200		35		35	91Cu-7Al-2Si
ASTM/ASME	B/SB	283	C65500		33		31	97Cu-3Si
ASTM/ASME	B/SB	283	C65500	High Si Bronze	33		31	97Cu-3Si

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	283	C67500	Mn Bronze	32		32.2	59Cu-39Zn-Fe-Sn
ASTM	B	302	C12000		31		31	99.9Cu-P
ASTM	B	302	C12200		31		31	99.9Cu-P
ASTM/ASME	B/SB	308	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM	B	313	A91100	1100	21		21	99.0Al-Cu
ASTM	B	313	A93003	3003	21		22.1	Al-Mn-Cu
ASTM	B	313	A93004	3004	22		22.2	Al-Mn-Mg
ASTM	B	313	A93005	3005	22		22.2	Al-Mn-Mg
ASTM	B	313	A95050	5050	21		22.2	Al-1.5Mg
ASTM	B	313	A95052	5052	22		22.3	Al-2.5Mg
ASTM	B	313	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM	B	313	A95154	5154	22		22.4	Al-3.5Mg
ASTM	B	313	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM/ASME	B/SB	315	C61300		35		35	90Cu-7Al-2.5Fe-Sn
ASTM/ASME	B/SB	315	C61400		35		35	90Cu-7Al-3Fe
ASTM/ASME	B/SB	315	C65100		33		37	98.5Cu-1.5Si
ASTM/ASME	B/SB	315	C65500		33		33	97Cu-3Si
ASTM	B	317	A96101	6101	23		23.1	Al-Mg-Si
ASTM	B	324	A91350	1350	21		21	99.50Al
ASTM/ASME	B/SB	333	N10001		44		44	62Ni-28Mo-5Fe
ASTM/ASME	B/SB	333	N10624		44		44	60Ni-23Mo-8Cr-6.5Fe
ASTM/ASME	B/SB	333	N10629		44		44	66Ni-28Mo-3Fe-1.3Cr-0.25Al
ASTM/ASME	B/SB	333	N10665		44		44	65Ni-28Mo-2Fe
ASTM/ASME	B/SB	333	N10675		44		44	65Ni-29.5Mo-2Fe-2Cr
ASTM/ASME	B/SB	335	N10001		44		44	62Ni-28Mo-5Fe
ASTM/ASME	B/SB	335	N10624		44		44	60Ni-23Mo-8Cr-6.5Fe
ASTM/ASME	B/SB	335	N10629		44		44	66Ni-28Mo-3Fe-1.3Cr-0.25Al
ASTM/ASME	B/SB	335	N10665		44		44	65Ni-28Mo-2Fe
ASTM/ASME	B/SB	335	N10675		44		44	65Ni-29.5Mo-2Fe-2Cr

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	B	337	R50250	1	51		51	Ti
ASTM	B	337	R50400	2	51		51	Ti
ASTM	B	337	R50550	3	52		52	Ti
ASTM	B	337	R52250	11	51		51	Ti-Pd
ASTM	B	337	R52400	7	51		51	Ti-Pd
ASTM	B	337	R53400	12	52		52	Ti-0.3Mo-0.8Ni
ASTM	B	337	R56320	9	53		53	Ti-3Al-2.5V
ASTM/ASME	B/SB	338	R50250	1	51		51.1	Ti
ASTM/ASME	B/SB	338	R50400	2	51		51.2	Ti
ASTM/ASME	B/SB	338	R50400	2H	51		51.2	Ti
ASTM/ASME	B/SB	338	R50550	3	52		51.3	Ti
ASTM/ASME	B/SB	338	R52250	11	51		51	Ti-Pd
ASTM/ASME	B/SB	338	R52252	17	51		51	Ti-Pd
ASTM/ASME	B/SB	338	R52254	27	51		51	Ti-Ru
ASTM/ASME	B/SB	338	R52400	7	51		52	Ti-Pd
ASTM/ASME	B/SB	338	R52400	7H	51		52	Ti-Pd
ASTM/ASME	B/SB	338	R52402	16	51		51.2	Ti-Pd
ASTM/ASME	B/SB	338	R52402	16H	51		51.2	Ti-Pd
ASTM/ASME	B/SB	338	R52404	26	51		51.2	Ti-Ru
ASTM/ASME	B/SB	338	R52404	26H	51		51.2	Ti-Ru
ASTM/ASME	B/SB	338	R53400	12	52		52	Ti-0.3Mo-0.8Ni
ASTM/ASME	B/SB	338	R53413	13	51		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	338	R53414	14	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	338	R53415	15	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	338	R53442	33	51		54	Ti-Ni-Pd-Ru-Cr
ASTM/ASME	B/SB	338	R53445	34	52		54	Ti-Ni-Pd-Ru-Cr
ASTM/ASME	B/SB	338	R53530	30	51		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	338	R53532	31	52		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	338	R56320	9	53		53	Ti-3Al-2.5V

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	338	R56322	18	53		53	Ti-3Al-2.5V-Pd
ASTM/ASME	B/SB	338	R56323	28	53		53	Ti-3Al-2.5V-0.1Ru
ASTM/ASME	B/SB	338	R56340	35	54		53	Ti-4Al-2.5V-1.5Fe
ASTM	B	345	A91060	1060	21		21	99.60Al
ASTM	B	345	A93003	3003	21		22.1	Al-Mn-Cu
ASTM	B	345	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM	B	345	A95086	5086	25		22.4	Al-4.0Mg-Mn
ASTM	B	345	A96061	6061	23		23.1	Al-Mg-Si-Cu
ASTM	B	345	A96063	6063	23		23.1	Al-Mg-Si
ASTM	B	345	A96351	6351	23		23.1	Al-Si-Mg-Mn
ASTM/ASME	B/SB	348	R50250	1	51		51.1	Ti
ASTM/ASME	B/SB	348	R50400	2	51		51.2	Ti
ASTM/ASME	B/SB	348	R50400	2H	51		51.2	Ti
ASTM/ASME	B/SB	348	R50550	3	52		51.3	Ti
ASTM/ASME	B/SB	348	R50700	4	53		51.4	Ti
ASTM/ASME	B/SB	348	R52250	11	51		51	Ti-Pd
ASTM/ASME	B/SB	348	R52252	17	51		51	Ti-Pd
ASTM/ASME	B/SB	348	R52400	7	51		52	Ti-Pd
ASTM/ASME	B/SB	348	R52400	7H	51		52	Ti-Pd
ASTM/ASME	B/SB	348	R52402	16	51		51.2	Ti-Pd
ASTM/ASME	B/SB	348	R52402	16H	51		51.2	Ti-Pd
ASTM/ASME	B/SB	348	R52404	26	51		51.2	Ti-Ru
ASTM/ASME	B/SB	348	R52404	26H	51		51.2	Ti-Ru
ASTM/ASME	B/SB	348	R53400	12	52		52	Ti-0.3Mo-0.8Ni
ASTM/ASME	B/SB	348	R53413	13	51		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	348	R53414	14	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	348	R53415	15	52		52	Ti-0.5Ni-Ru
ASTM/ASME	B/SB	348	R53442	33	51		54	Ti-Ni-Pd-Ru-Cr
ASTM/ASME	B/SB	348	R53445	34	52		54	Ti-Ni-Pd-Ru-Cr

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM/ASME	B/SB	348	R53530	30	51		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	348	R53532	31	52		52	Ti-0.3Co-Pd
ASTM/ASME	B/SB	348	R54520	6	54		52	Ti-5Al-2.5Sn
ASTM/ASME	B/SB	348	R55111	32	53		52	Ti-5Al-1Sn-1Zr-1V-Mo
ASTM/ASME	B/SB	348	R56320	9	53		53	Ti-3Al-2.5V
ASTM/ASME	B/SB	348	R56322	18	53		53	Ti-3Al-2.5V-Pd
ASTM/ASME	B/SB	348	R56323	28	53		53	Ti-3Al-2.5V-0.1Ru
ASTM/ASME	B/SB	348	R56340	35	54		53	Ti-4Al-2.5V-1.5Fe
ASTM/ASME	B/SB	348	R56400	5	54		53	Ti-6Al-4V
ASTM/ASME	B/SB	348	R56403	25	54		53	Ti-6Al-4V-Ni-Pd
ASTM/ASME	B/SB	348	R56405	24	54		53	Ti-6Al-4V-Pd
ASTM/ASME	B/SB	348	R56407	23	54		53	Ti-6Al-4V-ELI
ASTM/ASME	B/SB	348	R58210	21	53		54	Ti-15Mo-3Al-2.7Nb-Si
ASTM/ASME	B/SB	348	R58640	19	53		54	Ti-3Al-8V-6Cr-4Zr-4Mo
ASTM/ASME	B/SB	348	R58645	20	53		54	Ti-3Al-8V-6Cr-4Zr-4Mo-Pd
ASTM	B	351	R60001	R60001	61		61	99.9Zr
ASTM	B	351	R60802	R60802	61		61	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
ASTM	B	351	R60804	R60804	61		61	98.2Zr-1.5Sn-0.32(Fe+Cr)
ASTM	B	351	R60901	R60901	62		62	97.3Zr-2.6Cb
ASTM	B	352	R60001	R60001	61		61	99.9Zr
ASTM	B	352	R60802	R60802	61		61	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
ASTM	B	352	R60804	R60804	61		61	98.2Zr-1.5Sn-0.32(Fe+Cr)
ASTM	B	352	R60804	R60804	61		61	98.2Zr-1.5Sn-0.32(Fe+Cr)
ASTM	B	352	R60901	R60901	62		62	97.3Zr-2.6Cb
ASTM	B	353	R60001	R60001	61		61	99.9Zr
ASTM	B	353	R60802	R60802	61		61	98Zr-1.45Sn-0.28(Fe+Ni+Cr)
ASTM	B	353	R60804	R60804	61		61	98.2Zr-1.5Sn-0.32(Fe+Cr)
ASTM	B	353	R60901	R60901	62		62	97.3Zr-2.6Cb
ASTM	B	353	R60904	R60904	62		62	97.35Zr-2.65Cb

Table 2 (continued)

Standard	Specification	No.	UNS	Type/Grade	ASME/AWS P/M-No.	Group No.	ISO/TR 15608:2017 Group	Nominal composition
ASTM	B	359	C10100		31		31	99.99Cu-P
ASTM	B	359	C10200		31		31	99.95Cu-P
ASTM	B	359	C10300		31		31	99.95Cu-P
ASTM	B	359	C10800		31		31	99.95Cu-P
ASTM	B	359	C12000		31		31	99.9Cu-P
ASTM/ASME	B/SB	359	C12200		31		31	99.9Cu-P
ASTM	B	359	C14200		31		31	99.40Cu-P
ASTM	B	359	C19200		31		31	99.7Cu-Fe-P
ASTM	B	359	C23000		32		32.1	85Cu-15Zn
ASTM/ASME	B/SB	359	C44300		32		32.2	71Cu-28Zn-1Sn-0.06As
ASTM/ASME	B/SB	359	C44400		32		32.2	71Cu-28Zn-1Sn-0.06Sb
ASTM/ASME	B/SB	359	C44500		32		32.2	71Cu-28Zn-1Sn-0.06P
ASTM	B	359	C60800		35		35	95Cu-5Al
ASTM	B	359	C68700		32		32.2	78Cu-20Zn-2Al
ASTM	B	359	C70400		34		34	95Cu-5Ni
ASTM/ASME	B/SB	359	C70600		34		34	90Cu-10Ni
ASTM/ASME	B/SB	359	C71000		34		34	80Cu-20Ni
ASTM/ASME	B/SB	359	C71500		34		34	70Cu-30Ni
ASTM	B	359	C72200		34		34	80Cu-16Ni-0.75Fe-0.5Cr
ASTM	B	361	A91060	WP1060	21		21	99.60Al
ASTM	B	361	A91100	WP1100	21		21	99.0Al-Cu
ASTM	B	361	A93003	WP3003	21		22.1	Al-Mn-Cu
ASTM	B	361	A95083	5083	25		22.4	Al-4.4Mg-Mn
ASTM	B	361	A95154	5154	22		22.3	Al-3.5Mg
ASTM	B	361	A96061	WP6061	23		23.1	Al-Mg-Si-Cu
ASTM	B	361	A96063	WP6063	23		23.1	Al-Mg-Si
ASTM/ASME	B/SB	363	R50250	WPT 1	51		51.1	Ti
ASTM/ASME	B/SB	363	R50400	WPT 2	51		51.2	Ti
ASTM/ASME	B/SB	363	R50550	WPT 3	52		51.3	Ti