

Base Metal Grouping for Welding Procedure and Performance Qualification



AWS B2.1/B2.1M-BMG:2021

Base Metal Grouping for Welding Procedure and Performance Qualification

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Prepared by the
American Welding Society (AWS) B2 Committee on Procedure and Performance Qualification

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This document provides the AWS base metal grouping for welding procedure and performance qualification and is identical to Annex C of AWS B2.1/B2.1M:2021, *Specification for Welding Procedure and Performance Qualification*.



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Base Metal Grouping for Welding Procedure and Performance Qualification

1. Scope

This publication is an extract of AWS B2.1/B2.1M:2021, *Specification for Welding Procedure and Performance Qualification*, and is identical to Annex C, Base Metal Grouping, in the 2021 edition of that standard. This publication revises AWS B2.1/B2.1M-BMG:2014. Underlined text or a vertical line in the margin indicates a revision from the 2014 edition.

This publication may be referred to by other codes and standards that have welding procedure and performance requirements in order to avoid duplication of materials tables in those publications.

Base metals and filler metals have been grouped into categories that will minimize the number of qualification tests required. Substitution of one base metal or filler metal for another, even when within the allowable rules, should only be made after an evaluation of the factors involved. For some materials, additional tests may be required. Materials not listed require separate qualification.

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Annex C (Normative)

Base Metal Grouping

(see 3, 4.3.12, 4.3.15, and Table 5.3)

This annex is part of this standard and includes mandatory elements for use with this standard.

C1. Base Metal Specifications

Table C.1 indexes ASTM, ABS, API, AS, AS/NZS, CSA, AMS, ISO, NACE, and MSS base metals in numerical order to provide ease of reference when determining into what grouping a particular base metal specification falls.

Table C.2 groups base metals for welding procedure and performance qualification on the basis of mechanical properties, chemical composition, and metallurgical compatibility to minimize the number of welding qualification where this can logically be done.

The column “ISO/TR 15608 Group” in Table C.1 and C.2 is a listing of the assignments of materials in accordance with the grouping criteria of ISO/TR 15608, *Welding — Guidelines for a metallic materials grouping system*, and it is consistent with the assignments found in ISO/TR 20173, *Grouping systems for materials — American materials*. While this listing is provided as a convenience to users worldwide, it is provided for information only. AWS B2.1 does not refer to this grouping as a basis for establishing the range of base metals qualified for either procedure or performance qualification.

Table C.3 lists base metal specifications for iron castings in accordance with AWS D11.2 groups.

C2. Material Number (M-Number) Groupings

Base metal has been divided into general categories, e.g., Material Numbers (M-Numbers) 1, 1A, 3, 3A, 4, 4A, etc., and further divided into groups within each general category.

The category grouping does not imply that base metals may be substituted for other base metals within the same Material Number (M-Number) without consideration for weldability.

C3. Iron Castings Specifications

Base metal specifications for iron castings are divided into D11.2 groups.

C4. Base Metal Specifications for Standard Welding Procedure Specifications for Naval Applications

List of base metal specifications for Standard Welding Procedure Specifications for naval applications—ferrous alloys.

Table C.1
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AAR	TC128	10C	1	11.1	B	—	Plate
AAR	M201	1	1	11.1	A	—	Castings
AAR	M201	1	2	11.1	B	—	Castings
AAR	M201	1	3	11.1	B+	—	Castings
AAR	M201	1	4	11.1	C	—	Castings
ABS	ABS	1	1	1.1	E	K01801	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	D	K02101	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	B	K02102	Plate, Bar & Shapes
ABS	ABS	1	1	1.1	A	K02300	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	AH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	DH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	EH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	1	1.2	FH32	K11846	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	AH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	DH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	EH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.2	FH36	K11852	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	AH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	DH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	EH40	K11857	Plate, Bar & Shapes
ABS	ABS	1	2	1.3	FH40	K11857	Plate, Bar & Shapes
API	2H	1	1	1.2	42	—	Plate
API	2H	1	2	1.2	50	—	Plate
API	2MT1	1	1	1.2	50	—	Plate
API	2W	1	1	1.2	50	—	Plate
API	2W	1	2	1.3	60	—	Plate
API	2Y	1	1	1.2	42	—	Plate
API	2Y	1	1	1.2	50	—	Plate
API	2Y	1	2	1.2	50T	—	Plate
API	2Y	1	2	1.3	60	—	Plate
API	5L	1	1	1.1	A	—	Seamless & Welded Pipe
API	5L	1	1	1.1	A25	—	Seamless & Welded Pipe
API	5L	1	1	1.1	A25, Cl. I	—	Seamless & Welded Pipe & Tube
API	5L	1	1	1.1	A25, Cl. II	—	Seamless & Welded Pipe & Tube
API	5L	1	1	1.1	A25P	—	Seamless & Welded Pipe
API	5L	1	1	11.1	B	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BM	—	Welded Pipe
API	5L	1	1	1.1	BMO	—	Welded Pipe
API	5L	1	1	1.1	BMS	—	Welded Pipe
API	5L	1	1	1.1	BN	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BNO	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BNS	—	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
API	5L	1	1	1.1	BQ	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BQO	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BQS	—	Seamless & Welded Pipe
API	5L	1	1	1.1	BR	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X42	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42M	—	Welded Pipe
API	5L	1	1	1.2	X42MO	—	Welded Pipe
API	5L	1	1	1.2	X42MS	—	Welded Pipe
API	5L	1	1	1.2	X42N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42QS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X42R	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X46	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46M	—	Welded Pipe
API	5L	1	1	1.2	X46MO	—	Welded Pipe
API	5L	1	1	1.2	X46MS	—	Welded Pipe
API	5L	1	1	1.2	X46N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X46QS	—	Seamless & Welded Pipe
API	5L	1	1	11.1	X52	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52M	—	Welded Pipe
API	5L	1	1	1.2	X52MO	—	Welded Pipe
API	5L	1	1	1.2	X52MS	—	Welded Pipe
API	5L	1	1	1.2	X52N	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52NO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52NS	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52Q	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52QO	—	Seamless & Welded Pipe
API	5L	1	1	1.2	X52QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X56	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X56M	—	Welded Pipe
API	5L	1	2	2.1	X56MO	—	Welded Pipe
API	5L	1	2	2.1	X56MS	—	Welded Pipe
API	5L	1	2	1.3	X56N	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X56Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X56QO	—	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
API	5L	1	2	3.1	X56QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X60	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X60M	—	Welded Pipe
API	5L	1	2	2.1	X60MO	—	Welded Pipe
API	5L	1	2	2.1	X60MS	—	Welded Pipe
API	5L	1	2	1.3	X60N	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60QO	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X60QS	—	Seamless & Welded Pipe
API	5L	1	2	11.1	X65	—	Seamless & Welded Pipe
API	5L	1	2	2.1	X65M	—	Welded Pipe
API	5L	1	2	2.1	X65MO	—	Welded Pipe
API	5L	1	2	2.1	X65MS	—	Welded Pipe
API	5L	1	2	3.1	X65Q	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X65QO	—	Seamless & Welded Pipe
API	5L	1	2	3.1	X65QS	—	Seamless & Welded Pipe
API	5L	1	3	11.1	X70	—	Seamless & Welded Pipe
API	5L	1	3	2.2	X70M	—	Welded Pipe
API	5L	1	3	2.2	X70MO	—	Welded Pipe
API	5L	1	3	2.2	X70MS	—	Welded Pipe
API	5L	1	3	3.1	X70Q	—	Seamless & Welded Pipe
API	5L	1	3	3.1	X70QO	—	Seamless & Welded Pipe
API	5L	1	3	3.1	X70QS	—	Seamless & Welded Pipe
API	5L	1	4	2.2	X80M	—	Welded Pipe
API	5L	1	4	2.2	X80MO	—	Welded Pipe
API	5L	1	4	3.1	X80Q	—	Seamless & Welded Pipe
API	5L	1	4	3.1	X80QO	—	Seamless & Welded Pipe
API	5LS	1	1	11.1	X46	—	Spiral Welded Pipe
AS ASTM	A945	1	2	1.2	50	—	Plate
AS ASTM	A945	1	2	1.3	65	—	Plate
AS	1448	1	1	1.1	K3	—	Forgings
AS	1448	1	2	11.2	K4	—	Forgings
AS	1448	1	2	11.2	K5	—	Forgings
AS	1448	1	3	11.2	K6	—	Forgings
AS	1448	1	1	1.2	K8	—	Forgings
AS	1448	1	2	1.2	K9	—	Forgings
AS	1448	1	3	11.1	K10	—	Forgings
AS	1448	1	1	1.1	S1	—	Forgings
AS	1448	1	1	1.1	S3	—	Forgings
AS	1448	1	2	11.2	S4	—	Forgings
AS	1448	1	2	11.2	S5	—	Forgings
AS	1448	1	3	11.2	S6	—	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS	1548	1	2	1.2	5-490	—	Plate
AS	1548	1	1	1.2	7-430	—	Plate
AS	1548	1	1	1.2	7-460	—	Plate
AS	1548	1	2	1.2	7-490	—	Plate
AS	1548	1	1	1.2	PT430	—	Plate
AS	1548	1	1	1.2	PT460	—	Plate
AS	1548	1	2	1.2	PT490	—	Plate
AS	4728	1	1	1.1	200 L0	—	E.R.W. Pipe
AS	4728	1	1	1.1	240 L0	—	E.R.W. Pipe
AS	4728	1	1	1.2	290 L0	—	E.R.W. Pipe
AS/NZS	1594	1	1	1.1	HA1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA3	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA4N	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA200	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA250	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HA250/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA300/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HA350	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	2.1	HA400	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.1	HU250	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HU300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	HU300/1	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.4	HW350	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	1.2	XF300	—	Plate, Sheet & Strip
AS/NZS	1594	1	1	2.1	XF400	—	Plate, Sheet & Strip
AS/NZS	1594	1	3	2.2	XF500	—	Plate, Sheet & Strip
AS/NZS	3597	11B	—	3.1	700PV	—	Plate
AS/NZS	3678	1	1	1.1	200	—	Plate
AS/NZS	3678	1	1	1.2	250	—	Plate
AS/NZS	3678	1	1	1.2	250L15	—	Plate
AS/NZS	3678	1	2	1.2	300	—	Plate
AS/NZS	3678	1	2	1.2	300L15	—	Plate
AS/NZS	3678	1	2	1.2	350	—	Plate
AS/NZS	3678	1	2	1.2	350L15	—	Plate
AS/NZS	3678	1	2	1.3	400	—	Plate
AS/NZS	3678	1	2	1.3	400L15	—	Plate
AS/NZS	3678	1	2	1.3	450	—	Plate
AS/NZS	3678	1	2	1.3	450L15	—	Plate
AS/NZS	3678	3	1	1.4	WR350	—	Plate
AS/NZS	3678	3	1	1.4	WR350L0	—	Plate
AS/NZS	3679.1	1	1	1.1	250	—	Bar & Sections

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
AS/NZS	3679.1	1	1	1.1	250L0	—	Bar & Sections
AS/NZS	3679.1	1	1	1.1	250L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	300L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.2	350L15	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400L0	—	Bar & Sections
AS/NZS	3679.1	1	2	1.3	400L15	—	Bar & Sections
ASTM	A27	1	2	1.1	70-40	J02501	Castings
ASTM	A27	1	1	11.1	60-30	J03000	Castings
ASTM	A27	1	1	1.1	U-60-30	J03000	Castings
ASTM	A27	1	1	11.1	65-35	J03001	Castings
ASTM	A27	1	2	11.1	70-36	J03501	Castings
ASTM/ASME	A/SA-31	1	1	11.1	B	K03100	Rivets
ASTM/ASME	A/SA-36	1	1	11.1	—	—	Bar
ASTM/ASME	A/SA-36	1	1	11.1	—	K02595	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02596	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02597	Plates
ASTM/ASME	A/SA-36	1	1	1.1	—	K02598	Plates
ASTM/ASME	A/SA-36	1	1	1.1	—	K02599	Plates
ASTM/ASME	A/SA-36	1	1	11.1	—	K02600	Shapes
ASTM/ASME	A/SA-53	1	1	1.1	E, A	K02504	Resistance Welded Pipe
ASTM/ASME	A/SA-53	1	1	1.1	S, A	K02504	Seamless Pipe
ASTM/ASME	A/SA-53	1	1	11.1	E, B	K03005	Resistance Welded Pipe
ASTM/ASME	A/SA-53	1	1	11.1	F	K03005	Furnace Welded Pipe
ASTM/ASME	A/SA-53	1	1	11.1	S, B	K03005	Seamless Pipe
ASTM/ASME	A/SA-105	1	2	11.1	—	K03504	Flanges & Fittings
ASTM/ASME	A/SA-106	1	1	1.1	A	K02501	Seamless Pipe
ASTM/ASME	A/SA-106	1	1	11.1	B	K03006	Seamless Pipe
ASTM/ASME	A/SA-106	1	2	11.1	C	K03501	Seamless Pipe
ASTM	A108	1	1	1.1	1015	G10150	Bar
ASTM	A108	1	1	1.1	1018	G10180	Bar
ASTM	A108	1	1	1.1	1020	G10200	Bar
ASTM	A108	3	3	4.1	8620	G86200	Bar
ASTM	A131	1	1	1.1	A	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	AH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	AH36	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	B	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	CS	—	Plate, Shapes, Bar & Rivets

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A131	1	1	1.1	D	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	DH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	DH36	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	1	1.1	DS	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.1	E	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	EH32	—	Plate, Shapes, Bar & Rivets
ASTM	A131	1	2	1.2	EH36	—	Plate, Shapes, Bar & Rivets
ASTM/ASME	A/SA-134	1	1	1.1	SA283, A	K01400	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA285, A	K01700	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA283, B	K01702	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA285, B	K02200	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA283, C	K02401	Welded Pipe
ASTM/ASME	A/SA-134	1	1	1.1	SA36	K02599	Welded Pipe
ASTM/ASME	A/SA-134	1	1	11.1	SA283, D	K02702	Welded Pipe
ASTM/ASME	A/SA-134	1	1	11.1	SA285, C	K02801	Welded Pipe
ASTM/ASME	A/SA-135	1	1	1.1	A	K02509	E.R.W. Pipe
ASTM/ASME	A/SA-135	1	1	11.1	B	K03018	E.R.W. Pipe
ASTM	A139	1	1	1.1	A	K02508	Welded Pipe
ASTM	A139	1	1	11.1	B	K03003	Welded Pipe
ASTM	A139	1	1	11.1	C	K03004	Welded Pipe
ASTM	A139	1	1	11.1	D	K03010	Welded Pipe
ASTM	A139	1	1	11.1	E	K03012	Welded Pipe
ASTM	A148	4	3	—	90-60	D50600	Castings
ASTM	A161	1	1	—	Low Carbon	K01504	Tube
ASTM	A161	3	1	1.1	T1	K11522	Tube
ASTM	A167	8	1	8.1	302B	S30215	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	308	S30800	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	309	S30900	Plate, Sheet & Strip
ASTM	A167	8	2	8.2	310	S31000	Plate, Sheet & Strip
ASTM/ASME	A/SA-178	1	1	1.1	A	K01200	E.R.W. Tube
ASTM/ASME	A/SA-178	1	2	11.1	D	K02709	E.R.W. Tube
ASTM/ASME	A/SA-178	1	1	11.1	C	K03503	E.R.W. Tube
ASTM/ASME	A/SA-179	1	1	1.1	—	K01200	Seamless Tube
ASTM/ASME	A/SA-181	1	1	11.1	Cl. 60	K03502	Pipe Flange & Fittings
ASTM/ASME	A/SA-181	1	2	11.1	Cl. 70	K03502	Pipe Flange & Fittings
ASTM/ASME	A/SA-182	4	1	5.1	F12, Cl.1	K11562	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F12, Cl.2	K11564	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.2	K11572	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.3	K11572	Forgings
ASTM/ASME	A/SA-182	4	1	5.1	F11, Cl.1	K11597	Forgings
ASTM/ASME	A/SA-182	3	2	4.2	F2	K12122	Forgings
ASTM/ASME	A/SA-182	3	2	1.1	F1	K12822	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-182	5A	1	5.2	F22, Cl.1	K21590	Forgings
ASTM/ASME	A/SA-182	5A	1	5.2	F22, Cl.3	K21590	Forgings
ASTM/ASME	A/SA-182	9A	1	9.1	FR	K22035	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F3VCb	K31390	Forgings
ASTM/ASME	A/SA-182	5A	1	5.2	F21	K31545	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F3V	K31830	Forgings
ASTM/ASME	A/SA-182	5C	1	6.2	F22V	K31835	Forgings
ASTM/ASME	A/SA-182	5B	1	5.3	F5	K41545	Forgings
ASTM/ASME	A/SA-182	5B	1	5.3	F5a	K42544	Forgings
ASTM/ASME	A/SA-182	15E	1	6.4	F91	K90901	Forgings
ASTM/ASME	A/SA-182	5B	1	5.4	F9	K90941	Forgings
ASTM/ASME	A/SA-182	15E	1	6.4	F92	K92460	Forgings
ASTM/ASME	A/SA-182	8	3	8.3	FXM-19	S20910	Forgings
ASTM/ASME	A/SA-182	8	3	8.3	FXM-11	S21904	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304	S30400	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304L	S30403	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304H	S30409	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304N	S30451	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F304LN	S30453	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F46	S30600	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F45	S30815	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310	S31000	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310H	S31009	Forgings
ASTM/ASME	A/SA-182	8	2	8.2	F310MoLN	S31050	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F50	S31200	Forgings
ASTM/ASME	A/SA-182	8	4	8.2	F44	S31254	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316	S31600	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316L	S31603	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316H	S31609	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316N	S31651	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F316LN	S31653	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F317	S31700	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F317L	S31703	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F51	S31803	Forgings
ASTM/ASME	A/SA-182	8	4	8.2	—	S32053	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F321	S32100	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F321H	S32109	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	—	S32202	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F60	S32205	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F61	S32550	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F53	S32750	Forgings
ASTM/ASME	A/SA-182	10H	1	10.1	F55	S32760	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-182	8	2	8.1	F10	S33100	Forgings
ASTM/ASME	A/SA-182	8	4	8.3	F49	S34565	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F347	S34700	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F347H	S34709	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F348	S34800	Forgings
ASTM/ASME	A/SA-182	8	1	8.1	F348H	S34809	Forgings
ASTM/ASME	A/SA-182	10H	1	10.2	F54	S39274	Forgings
ASTM/ASME	A/SA-182	6	1	7.2	F6a, Cl.1	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.2	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.3	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6a, Cl.4	S41000	Forgings
ASTM/ASME	A/SA-182	6	3	7.2	F6b	S41026	Forgings
ASTM/ASME	A/SA-182	6	4	7.2	F6NM	S41500	Forgings
ASTM/ASME	A/SA-182	6	2	7.2	F429	S42900	Forgings
ASTM/ASME	A/SA-182	7	2	7.1	F430	S43000	Forgings
ASTM/ASME	A/SA-182	10I	1	7.1	FXM-27Cb	S44627	Forgings
ASTM/ASME	A/SA-192	1	1	1.1	—	K01201	Seamless Tube
ASTM	A199	4	1	5.1	T11	K11597	Seamless Tube
ASTM	A199	5A	1	5.2	T22	K21590	Seamless Tube
ASTM	A199	5A	1	—	T4	K31509	Seamless Tube
ASTM	A199	5A	1	—	T21	K31545	Seamless Tube
ASTM	A199	5B	1	5.3	T5	K41545	Seamless Tube
ASTM	A199	5B	1	5.4	T9	K81590	Seamless Tube
ASTM	A199	15E	1	6.4	T91	K90901	Seamless Tube
ASTM	A200	5A	1	5.2	T22	K21590	Tube
ASTM	A200	5A	1	—	T4	K31509	Tube
ASTM	A200	5A	1	—	T21	K31545	Tube
ASTM/ASME	A/SA-202	4	1	4.2	A	K11742	Plate
ASTM/ASME	A/SA-202	4	1	4.2	B	K12542	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	F	—	Plate
ASTM/ASME	A/SA-203	9A	1	9.1	A	K21703	Plate
ASTM/ASME	A/SA-203	9A	1	9.1	B	K22103	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	D	K31718	Plate
ASTM/ASME	A/SA-203	9B	1	9.2	E	K32018	Plate
ASTM/ASME	A/SA-204	3	1	1.1	A	K11820	Plate
ASTM/ASME	A/SA-204	3	2	1.1	B	K12020	Plate
ASTM/ASME	A/SA-204	3	2	1.2	C	K12320	Plate
ASTM/ASME	A/SA-209	3	1	1.1	T1b	K11422	Seamless Tube
ASTM/ASME	A/SA-209	3	1	1.1	T1	K11522	Seamless Tube
ASTM/ASME	A/SA-209	3	1	1.1	T1a	K12023	Seamless Tube
ASTM/ASME	A/SA-210	1	1	11.1	A-1	K02707	Seamless Tube
ASTM/ASME	A/SA-210	1	2	11.1	C	K03501	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A211	1	1	1.1	A570-30	K02502	Welded Pipe
ASTM	A211	1	1	1.1	A570-33	K02502	Welded Pipe
ASTM	A211	1	1	1.1	A570-40	K02502	Welded Pipe
ASTM/ASME	A/SA-213	3	1	4.2	T2	K11547	Seamless Tube
ASTM/ASME	A/SA-213	4	1	5.1	T12	K11562	Seamless Tube
ASTM/ASME	A/SA-213	4	1	5.1	T11	K11597	Seamless Tube
ASTM/ASME	A/SA-213	10B	1	4.1	T17	K12047	Seamless Tube
ASTM/ASME	A/SA-213	5A	1	5.2	T22	K21590	Seamless Tube
ASTM/ASME	A/SA-213	5A	1	5.2	T21	K31545	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5c	K41245	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5	K41545	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.3	T5b	K51545	Seamless Tube
ASTM/ASME	A/SA-213	15E	1	6.4	T91	K90901	Seamless Tube
ASTM/ASME	A/SA-213	5B	1	5.4	T9	K90941	Seamless Tube
ASTM/ASME	A/SA-213	15E	1	6.4	T92	K92460	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	TP201	S20100	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	TP202	S20200	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.3	XM-19	S20910	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304	S30400	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304L	S30403	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304H	S30409	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	—	S30432	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304N	S30451	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP304LN	S30453	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	S30815	S30815	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309S	S30908	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309H	S30909	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309Cb	S30940	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP309HCb	S30941	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	310	S31000	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310S	S31008	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310H	S31009	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310Cb	S31040	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310HCb	S31041	Seamless Tube
ASTM/ASME	A/SA-213	8	3	8.2	TP310HCbN	S31042	Seamless Tube
ASTM/ASME	A/SA-213	8	2	8.2	TP310MoLN	S31050	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.2	—	S31254	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316	S31600	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316L	S31603	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316H	S31609	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316Ti	S31635	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP316N	S31651	Seamless Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-213	8	1	8.1	TP316LN	S31653	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP317	S31700	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP317L	S31703	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.1	TP317LM	S31725	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.1	TP317LMN	S31726	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP321	S32100	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP321H	S32109	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	S32615	S32615	Seamless Tube
ASTM/ASME	A/SA-213	8	4	8.3	S34565	S34565	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347	S34700	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347H	S34709	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347HFG	S34710	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP347LN	S34751	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP348	S34800	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	TP348H	S34809	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	XM-15	S38100	Seamless Tube
ASTM/ASME	A/SA-213	8	1	8.1	—	S38815	Seamless Tube
ASTM/ASME	A/SA-214	1	1	1.1	—	K01807	E.R.W. Tube
ASTM/ASME	A/SA-216	1	1	1.1	WCA	J02502	Castings
ASTM/ASME	A/SA-216	1	2	1.1	WCC	J02503	Castings
ASTM/ASME	A/SA-216	1	2	1.1	WCB	J03002	Castings
ASTM/ASME	A/SA-217	4	1	5.1	WC6	J12072	Castings
ASTM/ASME	A/SA-217	4	1	9.1	WC4	J12082	Castings
ASTM/ASME	A/SA-217	3	1	1.1	WC1	J12524	Castings
ASTM/ASME	A/SA-217	5A	1	5.2	WC9	J21890	Castings
ASTM/ASME	A/SA-217	4	1	4.2	WC5	J22000	Castings
ASTM/ASME	A/SA-217	5B	1	5.3	C5	J42045	Castings
ASTM/ASME	A/SA-217	5B	1	5.4	C12	J82090	Castings
ASTM/ASME	A/SA-217	15E	1	6.4	C12A	J84090	Castings
ASTM/ASME	A/SA-217	6	3	7.2	CA15	J91150	Castings
ASTM/ASME	A/SA-225	10A	1	2.1	D	K12004	Plate
ASTM/ASME	A/SA-225	10A	1	4.1	C	K12524	Plate
ASTM	A226	1	1	1.1	—	K01201	E.R.W. Tube
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.1	—	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.2	—	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP11, Cl.3	—	Piping Fittings
ASTM/ASME	A/SA-234	1	1	11.1	WPB	K03006	Piping Fittings
ASTM/ASME	A/SA-234	1	2	11.1	WPC	K03501	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP12, Cl.1	K12062	Piping Fittings
ASTM/ASME	A/SA-234	4	1	5.1	WP12, Cl.2	K12062	Piping Fittings
ASTM/ASME	A/SA-234	3	1	11.2	WP1	K12821	Piping Fittings
ASTM/ASME	A/SA-234	5A	1	5.2	WP22, Cl.1	K21590	Piping Fittings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-234	5A	1	5.2	WP22, Cl.3	K21590	Piping Fittings
ASTM/ASME	A/SA-234	9A	1	9.1	WPR	K22035	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.3	WP5, Cl.1	K41545	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.3	WP5, Cl.3	K41545	Piping Fittings
ASTM/ASME	A/SA-234	15E	1	6.4	WP91	K90901	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.4	WP9, Cl.1	K90941	Piping Fittings
ASTM/ASME	A/SA-234	5B	1	5.4	WP9, Cl.3	K90941	Piping Fittings
ASTM	A234	15E	1	6.4	WP92	K92460	Piping Fittings
ASTM/ASME	A/SA-240	8	3	8.3	201-1	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	201-2	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	201LN	S20153	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	202	S20200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	—	S20400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-19	S20910	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-19	S20910	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-17	S21600	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-17	S21600	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-18	S21603	Plate
ASTM/ASME	A/SA-240	8	3	8.3	XM-18	S21603	Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.1	S21800	S21800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	3	8.3	XM-29	S24000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	301	S30100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	302	S30200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304	S30400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304L	S30403	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304H	S30409	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304N	S30451	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	XM-21	S30452	Plate
ASTM/ASME	A/SA-240	8	1	8.1	XM-21	S30452	Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	304LN	S30453	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	305	S30500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S30600	S30600	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S30601	S30601	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	S30815	S30815	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309S	S30908	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309H	S30909	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309Cb	S30940	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	309HCb	S30941	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310S	S31008	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310H	S31009	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310Cb	S31040	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	2	8.2	310HCb	S31041	Plate, Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-240	8	2	8.2	310MoLN	S31050	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S31200	S31200	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	S31254	S31254	Plate
ASTM/ASME	A/SA-240	8	4	8.2	S31254	S31254	Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S31260	S31260	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316	S31600	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316L	S31603	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316H	S31609	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316Ti	S31635	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316Cb	S31640	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316N	S31651	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	316LN	S31653	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	317	S31700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	317L	S31703	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.1	S31725	S31725	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.1	S31726	S31726	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S31753	S31753	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	S31803	S31803	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32003	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	—	S32053	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	321	S32100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32101	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	321H	S32109	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32202	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	2205	S32205	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S32304	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32550	S32550	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	S32615	S32615	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.2	—	S32654	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32750	S32750	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32760	S32760	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	329	S32900	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32906	S32906	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.2	S32950	S32950	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	4	8.3	S34565	S34565	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	347	S34700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	347H	S34709	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	348	S34800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	348H	S34809	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	XM-15	S38100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	8	1	8.1	—	S38815	Plate, Sheet & Strip
ASTM/ASME	A/SA-249	8	1	8.1	—	S38815	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-240	7	1	7.1	405	S40500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40910	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40920	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.1	409	S40930	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	1	7.2	410	S41000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	1	7.2	410S	S41008	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	4	7.2	S41500	S41500	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	6	2	7.2	429	S42900	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	430	S43000	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	439	S43035	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S43932	S43932	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S43940	S43940	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	—	S44100	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	7	2	7.1	S44400	S44400	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	XM-33	S44626	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	XM-27	S44627	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10I	1	7.1	S44635	S44635	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10K	1	7.1	S44660	S44660	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10J	1	7.1	S44700	S44700	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10K	1	7.1	S44800	S44800	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82012	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82031	Plate, Sheet & Strip
ASTM/ASME	A/SA-240	10H	1	10.1	—	S82441	Seamless & Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP 201	S20100	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP 202	S20200	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP XM-19	S20910	Welded Tube
ASTM/ASME	A/SA-249	8	3	8.3	TP XM-29	S24000	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304H	S30409	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	S30815	S30815	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309	S30900	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309S	S30908	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309H	S30909	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309Cb	S30940	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP309HCb	S30941	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310S	S31008	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310H	S31009	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310Cb	S31040	Welded Tube
ASTM/ASME	A/SA-249	8	2	8.2	TP310HCb	S31041	Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-249	8	2	8.2	TP310MoLN	S31050	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.2	S31254	S31254	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316H	S31609	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP317	S31700	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP317L	S31703	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.1	S31725	S31725	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.1	S31726	S31726	Welded Tube
ASTM/ASME	A/SA-249	8	4	8.2	—	S32053	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP321	S32100	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP321H	S32109	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP347	S34700	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP347H	S34709	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP348	S34800	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP348H	S34809	Welded Tube
ASTM/ASME	A/SA-249	8	1	8.1	TP XM-15	S38100	Welded Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1b	K11422	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1	K11522	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	4.2	T2	K11547	E.R.W. Tube
ASTM/ASME	A/SA-250	4	1	5.1	T12	K11562	E.R.W. Tube
ASTM/ASME	A/SA-250	4	1	5.1	T11	K11597	E.R.W. Tube
ASTM/ASME	A/SA-250	3	1	1.1	T1a	K12023	E.R.W. Tube
ASTM/ASME	A/SA-250	5A	1	5.2	T22	K21590	E.R.W. Tube
ASTM	A252	1	1	—	1	—	Pipe Piles
ASTM	A252	1	1	—	2	—	Pipe Piles
ASTM	A252	1	1	—	3	—	Pipe Piles
ASTM/ASME	A/SA-266	1	2	11.1	4	K03017	Forgings
ASTM/ASME	A/SA-266	1	1	11.1	1	K03506	Forgings
ASTM/ASME	A/SA-266	1	2	11.1	2	K03506	Forgings
ASTM/ASME	A/SA-266	1	2	11.2	3	K05001	Forgings
ASTM/ASME	A/SA-268	7	1	7.1	TP405	S40500	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	1	7.1	S40800	S40800	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	1	7.1	TP409	S40900	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	1	7.2	TP410	S41000	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	4	7.2	S41500	S41500	Seamless & Welded Tube
ASTM/ASME	A/SA-268	6	2	7.2	TP429	S42900	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP430	S43000	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP439	S43035	Seamless & Welded Tube
ASTM/ASME	A/SA-268	7	2	7.1	TP430Ti	S43036	Seamless & Welded Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-268	7	2	7.1	18Cr-2Mo	S44400	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP 446-1	S44600	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP 446-2	S44600	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP XM-33	S44626	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	TP XM-27	S44627	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10I	1	7.1	25-4-4	S44635	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10K	1	7.1	26-3-3	S44660	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10J	1	7.1	29-4	S44700	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10J	1	7.1	S44735	S44735	Seamless & Welded Tube
ASTM/ASME	A/SA-268	10K	1	7.1	29-4-2	S44800	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-19	S20910	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-10	S21900	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-11	S21904	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-29	S24000	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304	S30400	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304L	S30403	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP304LN	S30453	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316	S31600	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316L	S31603	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP316LN	S31653	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP317	S31700	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP321	S32100	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP347	S34700	Seamless & Welded Tube
ASTM	A269	8	1	8.1	TP348	S34800	Seamless & Welded Tube
ASTM	A269	8	3	8.3	TPXM-15	S38100	Seamless & Welded Tube
ASTM	A270	8	1	8.1	TP304	S30400	Seamless & Welded Tube
ASTM	A271	8	1	8.1	TP304	S30400	Seamless Tube
ASTM	A271	8	1	8.1	TP304H	S30409	Seamless Tube
ASTM	A271	8	1	8.1	TP316	S31600	Seamless Tube
ASTM	A271	8	1	8.1	TP316H	S31609	Seamless Tube
ASTM	A271	8	1	8.1	TP321	S32100	Seamless Tube
ASTM	A271	8	1	8.1	TP321H	S32109	Seamless Tube
ASTM	A271	8	1	8.1	TP347	S34700	Seamless Tube
ASTM	A271	8	1	8.1	TP347H	S34709	Seamless Tube
ASTM/ASME	A/SA-276	8	1	8.1	TP304	S30400	Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP304L	S30403	Bar
ASTM/ASME	A/SA-276	8	2	8.2	314	S31400	Hot-finished Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP316	S31600	Bar
ASTM/ASME	A/SA-276	8	1	8.1	TP316L	S31603	Bar
ASTM	A276	10H	1	10.1	—	S32101	Bar
ASTM/ASME	A/SA-276	10H	1	10.1	S32205	S32205	Bar
ASTM/ASME	A/SA-276	10H	1	10.1	—	S32550	Bars & Shapes

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-276	6	1	7.2	TP410	S41000	Bar
ASTM/ASME	A/SA-283	1	1	1.1	A	K01400	Plate
ASTM/ASME	A/SA-283	1	1	1.1	B	K01702	Plate
ASTM/ASME	A/SA-283	1	1	1.1	C	K02401	Plate
ASTM/ASME	A/SA-283	1	1	1.1	D	K02702	Plate
ASTM/ASME	A/SA-285	1	1	1.1	A	K01700	Plate
ASTM/ASME	A/SA-285	1	1	1.1	B	K02200	Plate
ASTM/ASME	A/SA-285	1	1	11.1	C	K02801	Plate
ASTM	A297	8	2	8.2	HF	J92603	Castings
ASTM	A297	8	2	8.2	HE	J93403	Castings
ASTM	A297	8	2	8.2	HH	J93503	Castings
ASTM	A297	8	2	8.2	HI	J94003	Castings
ASTM	A297	8	2	8.2	HK	J94224	Castings
ASTM/ASME	A/SA-299	1	2	11.1	A	K02803	Plate
ASTM/ASME	A/SA-299	1	3	11.1	B	K02803	Plate
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-19	S20910	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-11	S21904	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	3	8.3	TP XM-29	S24000	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304	S30400	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304L	S30403	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304H	S30409	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304N	S30451	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP304LN	S30453	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	S30600	S30600	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	S30815	S30815	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309S	S30908	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309H	S30909	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309Cb	S30940	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP309HCb	S30941	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310S	S31008	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310H	S31009	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310Cb	S31040	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310HCb	S31041	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	2	8.2	TP310MoLN	S31050	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.2	S31254	S31254	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316	S31600	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316L	S31603	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316H	S31609	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316Ti	S31635	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316N	S31651	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP316LN	S31653	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP317	S31700	Seamless & Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-312	8	1	8.1	TP317L	S31703	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.1	S31725	S31725	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.1	S31726	S31726	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.2	—	S32053	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP321	S32100	Seamless Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP321H	S32109	Seamless Pipe
ASTM/ASME	A/SA-312	8	1	8.1	S32615	S32615	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	4	8.3	S34565	S34565	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347	S34700	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347H	S34709	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP347LN	S34751	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP348	S34800	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP348H	S34809	Seamless & Welded Pipe
ASTM/ASME	A/SA-312	8	1	8.1	TP XM-15	S38100	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	3	11.1	10	—	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	1	11.1	6	K03006	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	1	1	11.1	1	K03008	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	4	2	4.1	4	K11267	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9A	1	9.1	7	K21903	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9A	1	9.1	9	K22035	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	9B	1	9.2	3	K31918	Seamless & Welded Pipe
ASTM/ASME	A/SA-333	11A	1	9.3	8	K81340	Seamless & Welded Pipe
ASTM/ASME	A/SA-334	1	1	11.1	6	K03006	Welded Tube
ASTM/ASME	A/SA-334	1	1	11.1	1	K03008	Welded Tube
ASTM/ASME	A/SA-334	9A	1	9.1	7	K21903	Welded Tube
ASTM/ASME	A/SA-334	9A	1	9.1	9	K22035	Welded Tube
ASTM/ASME	A/SA-334	9B	1	9.2	3	K31918	Welded Tube
ASTM/ASME	A/SA-334	11A	1	9.3	8	K81340	Welded Tube
ASTM/ASME	A/SA-335	3	1	1.1	P1	K11522	Seamless Pipe
ASTM/ASME	A/SA-335	3	1	4.2	P2	K11547	Seamless Pipe
ASTM/ASME	A/SA-335	4	1	5.1	P12	K11562	Seamless Pipe
ASTM/ASME	A/SA-335	3	1	—	P15	K11578	Seamless Pipe
ASTM/ASME	A/SA-335	4	1	5.1	P11	K11597	Seamless Pipe
ASTM/ASME	A/SA-335	5A	1	5.2	P22	K21590	Seamless Pipe
ASTM/ASME	A/SA-335	5A	1	5.2	P21	K31545	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5c	K41245	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5	K41545	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.3	P5b	K51545	Seamless Pipe
ASTM/ASME	A/SA-335	15E	1	6.4	P91	K90901	Seamless Pipe
ASTM/ASME	A/SA-335	5B	1	5.4	P9	K90941	Seamless Pipe
ASTM/ASME	A/SA-335	15E	1	6.4	P92	K92460	Seamless Pipe
ASTM/ASME	A/SA-336	4	1	5.1	F12	K11564	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.2	K11572	Forgings
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.3	K11572	Forgings
ASTM/ASME	A/SA-336	4	1	5.1	F11, Cl.1	K11597	Forgings
ASTM/ASME	A/SA-336	3	2	1.1	F1	K12520	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F22, Cl.1	K21590	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F22, Cl.3	K21590	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F3VCb	K31390	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F21, Cl.1	K31545	Forgings
ASTM/ASME	A/SA-336	5A	1	5.2	F21, Cl.3	K31545	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F3V	K31830	Forgings
ASTM/ASME	A/SA-336	5C	1	6.2	F22V	K31835	Forgings
ASTM/ASME	A/SA-336	5B	1	5.3	F5	K41545	Forgings
ASTM/ASME	A/SA-336	5B	1	5.3	F5A	K42544	Forgings
ASTM/ASME	A/SA-336	15E	1	6.4	F91	K90901	Forgings
ASTM/ASME	A/SA-336	5B	1	5.4	F9	K90941	Forgings
ASTM/ASME	A/SA-336	15E	1	6.4	F92	K92460	Forgings
ASTM/ASME	A/SA-336	8	3	8.3	FXM-19	S20910	Forgings
ASTM/ASME	A/SA-336	8	3	8.3	FXM-11	S21904	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304	S30400	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304L	S30403	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304H	S30409	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304N	S30451	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F304LN	S30453	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F46	S30600	Forgings
ASTM/ASME	A/SA-336	8	2	8.2	F310	S31000	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316	S31600	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316L	S31603	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316H	S31609	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316N	S31651	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F316LN	S31653	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F321	S32100	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F321H	S32109	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F347	S34700	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F347H	S34709	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F348	S34800	Forgings
ASTM/ASME	A/SA-336	8	1	8.1	F348H	S34809	Forgings
ASTM/ASME	A/SA-336	6	3	7.2	F6	S41000	Forgings
ASTM/ASME	A/SA-336	10I	1	7.1	FXM-27Cb	S44627	Forgings
ASTM/ASME	A/SA-350	1	1	11.1	LF1	K03009	Forgings
ASTM/ASME	A/SA-350	1	2	11.1	LF2	K03011	Forgings
ASTM/ASME	A/SA-350	1	1	1.2	LF6, Cl.1	K12202	Forgings
ASTM/ASME	A/SA-350	1	3	4.1	LF6, Cl.2	K12202	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-350	1	2	1.3	LF6, Cl.3	K12202	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF5 Cl.1	K13050	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF5 Cl.2	K13050	Forgings
ASTM/ASME	A/SA-350	1	2	3.3	LF787, Cl.2	K20747	Forgings
ASTM/ASME	A/SA-350	1	3	3.3	LF787, Cl.3	K20747	Forgings
ASTM/ASME	A/SA-350	9A	1	9.1	LF9	K22036	Forgings
ASTM/ASME	A/SA-350	9B	1	9.2	LF3	K32025	Forgings
ASTM/ASME	A/SA-351	8	1	8.1	CF3	J92500	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF3A	J92500	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10	J92590	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8	J92600	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8A	J92600	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8C	J92710	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF3M	J92800	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CE20N	J92802	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF8M	J92900	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10M	J92901	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CF10MC	J92971	Castings
ASTM/ASME	A/SA-351	8	1	8.1	CG8M	J93000	Castings
ASTM/ASME	A/SA-351	8	4	8.2	CK3MCuN	J93254	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CE8MN	J93345	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CD4MCu	J93370	Castings
ASTM/ASME	A/SA-351	10H	1	10.2	CD3MWCuN	J93380	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH8	J93400	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH10	J93401	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CH20	J93402	Castings
ASTM/ASME	A/SA-351	8	3	8.3	CG6MMN	J93790	Castings
ASTM/ASME	A/SA-351	8	2	8.2	CK20	J94202	Castings
ASTM/ASME	A/SA-351	8	2	8.2	HK30	J94203	Castings
ASTM/ASME	A/SA-351	8	2	8.2	HK40	J94204	Castings
ASTM/ASME	A/SA-352	1	1	11.1	LCA	J02504	Castings
ASTM/ASME	A/SA-352	1	2	11.1	LCC	J02505	Castings
ASTM/ASME	A/SA-352	1	1	1.1	LCB	J03003	Castings
ASTM/ASME	A/SA-352	3	1	1.1	LC1	J12522	Castings
ASTM/ASME	A/SA-352	9A	1	9.1	LC2	J22500	Castings
ASTM/ASME	A/SA-352	9B	1	9.3	LC3	J31550	Castings
ASTM/ASME	A/SA-352	9C	1	9.3	LC4	J41500	Castings
ASTM/ASME	A/SA-352	11A	5	9.2	LC2-1	J42215	Castings
ASTM/ASME	A/SA-352	6	4	7.2	CA6NM	J91540	Castings
ASTM/ASME	A/SA-353	11A	1	9.3	—	K81340	Plate
ASTM	A356	1	2	11.1	1	J03502	Castings
ASTM	A356	4	1	6.2	8	J11697	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A356	4	1	5.1	6	J12073	Castings
ASTM	A356	3	1	1.1	2	J12523	Castings
ASTM	A356	4	1	6.2	9	J21610	Castings
ASTM	A356	5A	1	5.2	10	J22090	Castings
ASTM	A356	15E	1	6.4	12A	J84090	Castings
ASTM/ASME	A/SA-358	8	3	8.3	XM-19	S20910	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	3	8.3	XM-29	S24000	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304	S30400	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304L	S30403	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304H	S30409	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304N	S30451	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	304LN	S30453	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	S30815	S30815	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309	S30900	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309S	S30908	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	309Cb	S30940	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310	S31000	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310S	S31008	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	2	8.2	310Cb	S31040	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.2	S31254	S31254	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316	S31600	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316L	S31603	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316H	S31609	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316N	S31651	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	316LN	S31653	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.1	S31725	S31725	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.1	S31726	S31726	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	4	8.2	—	S32053	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	321	S32100	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	347	S34700	Fusion Welded Pipe
ASTM/ASME	A/SA-358	8	1	8.1	348	S34800	Fusion Welded Pipe
ASTM	A366	1	1	1.1	CS	—	Sheet
ASTM/ASME	A/SA-369	1	1	1.1	FPA	K02501	Forged Pipe
ASTM/ASME	A/SA-369	1	1	1.1	FPB	K03006	Forged Pipe
ASTM/ASME	A/SA-369	3	1	1.1	FP1	K11522	Forged Pipe
ASTM/ASME	A/SA-369	3	1	4.2	FP2	K11547	Forged Pipe
ASTM/ASME	A/SA-369	4	1	5.1	FP12	K11562	Forged Pipe
ASTM/ASME	A/SA-369	4	1	5.1	FP11	K11597	Forged Pipe
ASTM/ASME	A/SA-369	5A	1	5.2	FP22	K21590	Forged Pipe
ASTM/ASME	A/SA-369	5A	1	5.2	FP21	K31545	Forged Pipe
ASTM/ASME	A/SA-369	5B	1	5.3	FP5	K41545	Forged Pipe
ASTM/ASME	A/SA-369	15E	1	6.4	FP91	K90901	Forged Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-369	5B	1	5.4	FP9	K90941	Forged Pipe
ASTM/ASME	A/SA-369	15E	1	6.4	FP92	K92460	Forged Pipe
ASTM/ASME	A/SA-372	1	1	11.1	A	K03002	Forgings
ASTM/ASME	A/SA-372	1	2	11.1	B	K04001	Forgings
ASTM/ASME	A/SA-376	8	1	8.1	16-8-2H	S16800	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304	S30400	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304H	S30409	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304N	S30451	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP304LN	S30453	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316	S31600	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316H	S31609	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316N	S31651	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP316LN	S31653	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.1	S31725	S31725	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.1	S31726	S31726	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP321	S32100	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP321H	S32109	Seamless Pipe
ASTM/ASME	A/SA-376	8	4	8.3	S34565	S34565	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP347	S34700	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP347H	S34709	Seamless Pipe
ASTM/ASME	A/SA-376	8	1	8.1	TP348	S34800	Seamless Pipe
ASTM	A381	1	1	11.1	Y35	—	Welded Pipe
ASTM	A381	1	1	11.1	Y42	—	Welded Pipe
ASTM	A381	1	1	11.1	Y46	—	Welded Pipe
ASTM	A381	1	1	11.1	Y48	—	Welded Pipe
ASTM	A381	1	1	11.1	Y50	—	Welded Pipe
ASTM	A381	1	2	11.1	Y52	—	Welded Pipe
ASTM	A381	1	2	11.1	Y56	—	Welded Pipe
ASTM	A381	1	2	11.1	Y60	—	Welded Pipe
ASTM	A381	1	3	11.1	Y65	—	Welded Pipe
ASTM/ASME	A/SA-387	4	1	5.1	12, Cl. 1	K11757	Plate
ASTM/ASME	A/SA-387	4	1	5.1	12, Cl. 2	K11757	Plate
ASTM/ASME	A/SA-387	4	1	5.1	11, Cl. 1	K11789	Plate
ASTM/ASME	A/SA-387	4	1	5.1	11, Cl. 2	K11789	Plate
ASTM/ASME	A/SA-387	3	1	4.2	2, Cl. 1	K12143	Plate
ASTM/ASME	A/SA-387	3	2	4.2	2, Cl. 2	K12143	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	22, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	22, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	21, Cl. 1	K31545	Plate
ASTM/ASME	A/SA-387	5A	1	5.2	21, Cl. 2	K31545	Plate
ASTM/ASME	A/SA-387	5B	1	5.3	5, Cl. 1	K41545	Plate
ASTM/ASME	A/SA-387	5B	1	5.3	5, Cl. 2	K41545	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-387	15E	1	6.4	91, Cl.2	K90901	Plate
ASTM/ASME	A/SA-387	5B	1	5.4	9, Cl. 1	K90941	Plate
ASTM/ASME	A/SA-387	5B	1	5.4	9, Cl. 2	K90941	Plate
ASTM	A389	4	1	6.2	C23	J12080	Castings
ASTM	A389	4	1	6.2	C24	J12092	Castings
ASTM/ASME	A/SA-403	8	3	8.3	WPXM-19	S20910	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304	S30400	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304L	S30403	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304H	S30409	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304N	S30451	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP304LN	S30453	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP309	S30900	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP310	S31000	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	2	8.2	WP310S	S31008	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.2	—	S31254	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316	S31600	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316L	S31603	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316H	S31609	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316N	S31651	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP316LN	S31653	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP317	S31700	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP317L	S31703	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.1	WP S31726	S31726	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.2	—	S32053	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP321	S32100	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP321H	S32109	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	4	8.3	S34565	S34565	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP347	S34700	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP347H	S34709	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP348	S34800	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP348H	S34809	Wrought Piping Fittings
ASTM/ASME	A/SA-403	8	1	8.1	WP S38815	S38815	Wrought Piping Fittings
ASTM	A405	4	1	6.2	P24	K11591	Seamless Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP304	S30400	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP304L	S30403	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	S30815	S30815	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP309S	S30908	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP309Cb	S30940	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP310S	S31008	Welded Pipe
ASTM/ASME	A/SA-409	8	2	8.2	TP310Cb	S31040	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.2	S31254	S31254	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP316	S31600	Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-409	8	1	8.1	TP316L	S31603	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP317	S31700	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.1	S31725	S31725	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.1	S31726	S31726	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.2	—	S32053	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP321	S32100	Welded Pipe
ASTM/ASME	A/SA-409	8	4	8.3	S34565	S34565	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP347	S34700	Welded Pipe
ASTM/ASME	A/SA-409	8	1	8.1	TP348	S34800	Welded Pipe
ASTM/ASME	A/SA-414	1	1	1.1	A	K01501	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	B	K02201	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	C	K02503	Sheet
ASTM/ASME	A/SA-414	1	1	1.1	D	K02505	Sheet
ASTM/ASME	A/SA-414	1	1	11.1	E	K02704	Sheet
ASTM/ASME	A/SA-414	1	2	11.1	F	K03102	Sheet
ASTM/ASME	A/SA-414	1	2	11.1	G	K03103	Sheet
ASTM/ASME	A/SA-420	1	1	11.1	WPL6	K03006	Piping Fittings
ASTM/ASME	A/SA-420	9A	1	9.1	WPL9	K22035	Piping Fittings
ASTM/ASME	A/SA-420	9B	1	9.2	WPL3	K31918	Piping Fittings
ASTM/ASME	A/SA-420	11A	1	9.3	WPL8	K81340	Piping Fittings
ASTM/ASME	A/SA-423	4	2	5.1	1	K11535	Seamless & Welded Tube
ASTM/ASME	A/SA-423	4	2	5.1	2	K11540	Seamless & Welded Tube
ASTM/ASME	A/SA-426	3	1	1.1	CP15	J11522	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	3	1	4.2	CP2	J11547	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	4	1	5.1	CP12	J11562	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	4	1	5.1	CP11	J12072	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	3	1	1.1	CP1	J12521	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5A	1	5.2	CP22	J21890	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5A	1	5.2	CP21	J31545	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.3	CP5	J42045	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.3	CP5b	J51545	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	5B	1	5.4	CP9	J82090	Centrifugal Cast Pipe
ASTM/ASME	A/SA-426	6	3	7.2	CPCA15	J91150	Centrifugal Cast Pipe
ASTM	A430	8	1	8.1	FP16-8-2H	S16800	Forged Pipe
ASTM	A430	8	1	8.1	FP304	S30400	Forged Pipe
ASTM	A430	8	1	8.1	FP304H	S30409	Forged Pipe
ASTM	A430	8	1	8.1	FP304N	S30451	Forged Pipe
ASTM	A430	8	1	8.1	FP316	S31600	Forged Pipe
ASTM	A430	8	1	8.1	FP316H	S31609	Forged Pipe
ASTM	A430	8	1	8.1	FP316N	S31651	Forged Pipe
ASTM	A430	8	1	8.1	FP321	S32100	Forged Pipe
ASTM	A430	8	1	8.1	FP321H	S32109	Forged Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A430	8	1	8.1	FP347	S34700	Forged Pipe
ASTM	A430	8	1	8.1	FP347H	S34709	Forged Pipe
ASTM	A441	1	2	—	Group 1	—	Shapes
ASTM	A441	1	2	—	Group 2	—	Shapes
ASTM	A441	1	2	—	Group 3	—	Shapes
ASTM	A441	1	2	—	Group 4	—	Shapes
ASTM	A441	1	2	—	Group 5	—	Shapes
ASTM	A441	1	2	—	—	K12211	Plate & Bar
ASTM/ASME	A/SA-451	8	1	8.1	CPF3	J92500	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF3A	J92500	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8	J92600	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8A	J92600	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8C	J92710	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF3M	J92800	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPE20N	J92802	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF8M	J92900	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	1	8.1	CPF10MC	J92971	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH8	J93400	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH10	J93402	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPH20	J93402	Centrifugal Cast Pipe
ASTM/ASME	A/SA-451	8	2	8.2	CPK20	J94202	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP304H	S30409	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP316H	S31609	Centrifugal Cast Pipe
ASTM	A452	8	1	8.1	TP347H	S34709	Centrifugal Cast Pipe
ASTM/ASME	A/SA-455	1	2	11.2	—	K03300	Plate
ASTM	A473	8	3	8.3	201	S20100	Forgings
ASTM	A473	8	3	8.3	202	S20200	Forgings
ASTM	A473	8	3	8.3	XM-10	S21900	Forgings
ASTM	A473	8	3	8.3	XM-11	S21904	Forgings
ASTM	A473	8	1	8.1	302	S30200	Forgings
ASTM	A473	8	1	8.1	302B	S30215	Forgings
ASTM	A473	8	1	8.1	304	S30400	Forgings
ASTM	A473	8	1	8.1	304L	S30403	Forgings
ASTM	A473	8	1	8.1	305	S30500	Forgings
ASTM	A473	8	2	8.2	308	S30800	Forgings
ASTM	A473	8	2	8.2	S30815	S30815	Forgings
ASTM	A473	8	2	8.2	309	S30900	Forgings
ASTM	A473	8	2	8.2	309S	S30908	Forgings
ASTM	A473	8	2	8.2	310	S31000	Forgings
ASTM	A473	8	2	8.2	310S	S31008	Forgings
ASTM	A473	8	2	8.2	314	S31400	Forgings
ASTM	A473	8	1	8.1	316	S31600	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A473	8	1	8.1	316L	S31603	Forgings
ASTM	A473	8	1	8.1	317	S31700	Forgings
ASTM	A473	8	1	8.1	321	S32100	Forgings
ASTM	A473	8	1	8.1	347	S34700	Forgings
ASTM	A473	8	1	8.1	348	S34800	Forgings
ASTM	A473	6	1	7.1	403	S40300	Forgings
ASTM	A473	7	1	7.1	405	S40500	Forgings
ASTM	A473	6	1	7.2	410	S41000	Forgings
ASTM	A473	6	4	7.2	414	S41400	Forgings
ASTM	A473	6	2	7.2	420	S42000	Forgings
ASTM	A473	6	2	7.2	429	S42900	Forgings
ASTM	A473	7	2	7.1	430	S43000	Forgings
ASTM/ASME	A/SA-479	8	3	8.3	XM-19	S20910	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-17	S21600	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-18	S21603	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.1	S21800	S21800	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-11	S21904	Bars & Shapes
ASTM/ASME	A/SA-479	8	3	8.3	XM-29	S24000	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	302	S30200	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304	S30400	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304L	S30403	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304H	S30409	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304N	S30451	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	304LN	S30453	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	S30600	S30600	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	S30815	S30815	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	309S	S30908	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	309Cb	S30940	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	310S	S31008	Bars & Shapes
ASTM/ASME	A/SA-479	8	2	8.2	310Cb	S31040	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.2	S31254	S31254	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316	S31600	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316L	S31603	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316H	S31609	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316Ti	S31635	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316Cb	S31640	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316N	S31651	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	316LN	S31653	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.1	S31725	S31725	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.1	S31726	S31726	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S31803	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.2	—	S32053	Bars & Shapes

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-479	8	1	8.1	321	S32100	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32101	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	321H	S32109	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32202	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S32205	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32550	S32550	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	S32615	S32615	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32750	S32750	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.2	S32906	S32906	Bars & Shapes
ASTM/ASME	A/SA-479	8	4	8.3	—	S34565	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	347	S34700	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	347H	S34709	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	348	S34800	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	348H	S34809	Bars & Shapes
ASTM/ASME	A/SA-479	8	1	8.1	—	S38815	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.1	403	S40300	Bars & Shapes
ASTM/ASME	A/SA-479	7	1	7.1	405	S40500	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.2	410	S41000	Bars & Shapes
ASTM/ASME	A/SA-479	6	1	7.2	XM-30	S41040	Bars & Shapes
ASTM/ASME	A/SA-479	6	4	7.2	414	S41400	Bars & Shapes
ASTM/ASME	A/SA-479	6	4	7.2	S41500	S41500	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	430	S43000	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	439	S43035	Bars & Shapes
ASTM/ASME	A/SA-479	7	2	7.1	S44400	S44400	Bars & Shapes
ASTM/ASME	A/SA-479	10I	1	7.1	XM-27	S44627	Bars & Shapes
ASTM/ASME	A/SA-479	10J	1	7.1	S44700	S44700	Bars & Shapes
ASTM/ASME	A/SA-479	10K	1	7.1	S44800	S44800	Bars & Shapes
ASTM/ASME	A/SA-479	10H	1	10.1	—	S82441	Bars
ASTM/ASME	A/SA-487	10A	1	2.1	1, Cl. A	J13002	Castings
ASTM/ASME	A/SA-487	10A	1	2.1	1, Cl. B	J13002	Castings
ASTM/ASME	A/SA-487	3	3	2.1	2, Cl. A	J13005	Castings
ASTM/ASME	A/SA-487	3	3	2.1	2, Cl. B	J13005	Castings
ASTM/ASME	A/SA-487	3	3	3.1	4, Cl. A	J13047	Castings
ASTM/ASME	A/SA-487	11A	3	3.1	4, Cl. B	J13047	Castings
ASTM/ASME	A/SA-487	3	3	3.1	4, Cl. C	J13047	Castings
ASTM/ASME	A/SA-487	11A	3	3.1	4, Cl. E	J13047	Castings
ASTM/ASME	A/SA-487	5C	1	5.2	8, Cl. A	J22091	Castings
ASTM/ASME	A/SA-487	5C	4	5.2	8, Cl. B	J22091	Castings
ASTM/ASME	A/SA-487	5C	4	5.2	8, Cl. C	J22091	Castings
ASTM/ASME	A/SA-487	1	2	1.1	16, Cl. A	J31200	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. C	J91150	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15M Cl. A	J91151	Castings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. B	J91171	Castings
ASTM/ASME	A/SA-487	6	3	7.2	CA15 Cl. D	J91171	Castings
ASTM/ASME	A/SA-487	6	4	7.2	CA6NM Cl. A	J91540	Castings
ASTM/ASME	A/SA-487	6	4	7.2	CA6NM Cl. B	J91540	Castings
ASTM	A500	1	1	1.2	C	K02705	Seamless & Welded Tube
ASTM	A500	1	1	11.1	A	K03000	Seamless & Welded Tube
ASTM	A500	1	1	11.1	B	K03000	Seamless & Welded Tube
ASTM	A500	1	1	11.1	D	K03000	Seamless & Welded Tube
ASTM	A501	1	1	11.1	A	K03000	Seamless & Welded Tube
ASTM	A501	1	1	1.2	B	K03000	Seamless & Welded Tube
ASTM/ASME	A/SA-508	3	3	3.1	3, Cl.1	K12042	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	3, Cl.2	K12042	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	2, Cl.1	K12766	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	2, Cl.2	K12766	Forgings
ASTM/ASME	A/SA-508	1	2	11.1	1	K13502	Forgings
ASTM/ASME	A/SA-508	1	2	11.1	1A	K13502	Forgings
ASTM/ASME	A/SA-508	5C	1	5.2	22, Cl. 3	K21590	Forgings
ASTM/ASME	A/SA-508	11A	5	3.1	4N, Cl.1	K22375	Forgings
ASTM/ASME	A/SA-508	11B	10	3.1	4N, Cl.2	K22375	Forgings
ASTM/ASME	A/SA-508	3	3	3.1	4N, Cl.3	K22375	Forgings
ASTM/ASME	A/SA-508	5C	1	6.2	3VCb	K31390	Forgings
ASTM/ASME	A/SA-508	5C	1	6.2	3V	K31830	Forgings
ASTM/ASME	A/SA-508	11A	5	3.1	5, Cl.1	K42365	Forgings
ASTM/ASME	A/SA-508	11B	10	3.1	5, Cl.2	K42365	Forgings
ASTM	A511	8	1	8.1	MT 302	S30200	Seamless Tube
ASTM	A511	8	1	8.1	MT 304	S30400	Seamless Tube
ASTM	A511	8	1	8.1	MT 304L	S30403	Seamless Tube
ASTM	A511	8	2	8.2	MT 309S	S30908	Seamless Tube
ASTM	A511	8	2	8.2	MT 310S	S31008	Seamless Tube
ASTM	A511	8	1	8.1	MT 316	S31600	Seamless Tube
ASTM	A511	8	1	8.1	MT 316L	S31603	Seamless Tube
ASTM	A511	8	1	8.1	MT 317	S31700	Seamless Tube
ASTM	A511	8	1	8.1	MT 321	S32100	Seamless Tube
ASTM	A511	8	1	8.1	MT 347	S34700	Seamless Tube
ASTM	A512	1	1	1.1	MTX 1015	—	Tube
ASTM	A512	1	1	1.1	MTX 1020	—	Tube
ASTM	A512	1	1	1.1	1008	G10080	Tube
ASTM	A512	1	1	1.1	1010	G10100	Tube
ASTM	A512	1	1	1.1	MT 1010	G10100	Tube
ASTM	A512	1	1	1.1	1012	G10120	Tube
ASTM	A512	1	1	1.1	1015	G10150	Tube
ASTM	A512	1	1	1.1	MT 1015	G10150	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A512	1	1	—	1016	G10160	Tube
ASTM	A512	1	1	1.1	1018	G10180	Tube
ASTM	A512	1	1	—	1019	G10190	Tube
ASTM	A512	1	1	1.1	1020	G10200	Tube
ASTM	A512	1	1	1.1	MT 1020	G10200	Tube
ASTM	A512	1	1	—	1021	G10210	Tube
ASTM	A512	1	2	11.1	1025	G10250	Tube
ASTM	A512	1	1	11.1	1026	G10260	Tube
ASTM	A512	1	2	11.1	1030	G10300	Tube
ASTM/ASME	A/SA-513	1	1	—	MTX 1015	—	Tube
ASTM/ASME	A/SA-513	1	1	—	MTX 1020	—	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1008	G10080	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1010	G10100	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1010	G10100	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1015	G10150	Tube
ASTM	A513	1	1	1.1	1015 CW	G10150	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1015	G10150	Tube
ASTM/ASME	A/SA-513	1	1	—	1017	G10170	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1018	G10180	Tube
ASTM/ASME	A/SA-513	1	1	—	1019	G10190	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1020	G10200	Tube
ASTM	A513	1	2	1.1	1020 CW	G10200	Tube
ASTM/ASME	A/SA-513	1	1	1.1	MT 1020	G10200	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1021	G10210	Tube
ASTM/ASME	A/SA-513	1	1	1.1	1022	G10220	Tube
ASTM/ASME	A/SA-513	1	1	—	1023	G10230	Tube
ASTM/ASME	A/SA-513	1	1	—	1024	G10240	Tube
ASTM/ASME	A/SA-513	1	2	11.1	1025	G10250	Tube
ASTM	A513	1	2	1.2	1025 CW	G10250	Tube
ASTM/ASME	A/SA-513	1	1	11.1	1026	G10260	Tube
ASTM	A513	1	3	11.1	1026 CW	G10260	Tube
ASTM/ASME	A/SA-513	1	2	11.1	1030	G10300	Tube
ASTM	A514	11B	9	3.1	Q	—	Plate
ASTM	A514	11B	12	3.1	R	—	Plate
ASTM	A514	11B	6	3.1	S	—	Plate
ASTM	A514	11B	6	3.1	T	—	Plate
ASTM	A514	11B	6	3.1	C	K11511	Plate
ASTM	A514	11B	6	3.1	K	K11523	Plate
ASTM	A514	11B	3	3.1	F	K11576	Plate
ASTM	A514	11B	6	3.1	J	K11625	Plate
ASTM	A514	11B	4	3.1	B	K11630	Plate
ASTM	A514	11B	3	3.1	H	K11646	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A514	11B	10	3.1	M	K11683	Plate
ASTM	A514	11B	1	3.1	A	K11856	Plate
ASTM	A514	11B	2	3.1	E	K21604	Plate
ASTM	A514	11B	8	3.1	P	K21650	Plate
ASTM/ASME	A/SA-515	1	1	11.1	60	—	Plate
ASTM	A515	1	1	1.1	55	K02001	Plate
ASTM/ASME	A/SA-515	1	1	1.1	60	K02401	Plate
ASTM/ASME	A/SA-515	1	1	11.1	65	K02800	Plate
ASTM/ASME	A/SA-515	1	2	11.1	70	K03101	Plate
ASTM/ASME	A/SA-516	1	1	1.1	55	K01800	Plate
ASTM/ASME	A/SA-516	1	1	1.1	60	K02100	Plate
ASTM/ASME	A/SA-516	1	1	1.1	65	K02403	Plate
ASTM/ASME	A/SA-516	1	2	11.1	70	K02700	Plate
ASTM/ASME	A/SA-517	11B	9	3.1	Q	—	Plate
ASTM/ASME	A/SA-517	11B	6	3.1	S	—	Plate
ASTM	A517	11B	6	3.1	T	—	Plate
ASTM	A517	11B	14	3.1	C	K11511	Plate
ASTM	A517	11B	6	3.1	K	K11523	Plate
ASTM/ASME	A/SA-517	11B	3	3.1	F	K11576	Plate
ASTM	A517	11B	6	3.1	J	K11625	Plate
ASTM/ASME	A/SA-517	11B	4	3.1	B	K11630	Plate
ASTM/ASME	A/SA-517	11B	3	3.1	H	K11646	Plate
ASTM	A517	11B	10	3.1	M	K11683	Plate
ASTM/ASME	A/SA-517	11B	1	3.1	A	K11856	Plate
ASTM/ASME	A/SA-517	11B	2	3.1	E	K21604	Plate
ASTM/ASME	A/SA-517	11B	8	3.1	P	K21650	Plate
ASTM	A519	1	1	—	MTX 1015	—	Tube
ASTM	A519	1	1	—	MTX 1020	—	Tube
ASTM	A519	1	1	1.1	1008	G10080	Tube
ASTM	A519	1	1	1.1	MT 1010	G10100	Tube
ASTM	A519	1	1	1.1	1012	G10120	Tube
ASTM	A519	1	1	1.1	1015	G10150	Tube
ASTM	A519	1	1	1.1	MT 1015	G10150	Tube
ASTM	A519	1	1	—	1016	G10160	Tube
ASTM	A519	1	1	—	1017	G10170	Tube
ASTM	A519	1	1	1.1	1018	G10180	Tube
ASTM	A519	1	2	1.1	1018 CW	G10180	Tube
ASTM	A519	1	1	1.1	1018 HR	G10180	Tube
ASTM	A519	1	1	—	1019	G10190	Tube
ASTM	A519	1	1	1.1	1020	G10200	Tube
ASTM	A519	1	2	1.1	1020 CW	G10200	Tube
ASTM	A519	1	1	1.1	1020 HR	G10200	Tube

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A519	1	1	1.1	MT 1020	G10200	Tube
ASTM	A519	1	1	—	1021	G10210	Tube
ASTM	A519	1	1	1.1	1022	G10220	Tube
ASTM	A519	1	2	1.1	1022 CW	G10220	Tube
ASTM	A519	1	1	1.1	1022 HR	G10220	Tube
ASTM	A519	1	2	11.1	1025	G10250	Tube
ASTM	A519	1	2	1.2	1025 CW	G10250	Tube
ASTM	A519	1	1	1.1	1025 HR	G10250	Tube
ASTM	A519	1	1	—	1026	G10260	Tube
ASTM	A519	1	2	11.1	1026 CW	G10260	Tube
ASTM	A519	1	1	11.1	1026 HR	G10260	Tube
ASTM	A519	1	2	—	1030	G10300	Tube
ASTM	A519	11B	9	—	4130	G41300	Tube
ASTM	A519	11B	9	—	8630	G86300	Tube
ASTM	A521	1	1	—	CC	—	Die Forging
ASTM	A521	1	1	—	CC1	—	Die Forging
ASTM	A521	1	2	—	CE	—	Die Forging
ASTM/ASME	A/SA-522	11A	1	9.3	II	K71340	Forgings
ASTM/ASME	A/SA-522	11A	1	9.3	I	K81340	Forgings
ASTM	A523	1	1	1.1	A	K02504	Pipe
ASTM	A523	1	1	11.1	B	K03005	Pipe
ASTM/ASME	A/SA-524	1	1	1.1	I	K02104	Seamless Pipe
ASTM/ASME	A/SA-524	1	1	1.1	II	K02104	Seamless Pipe
ASTM	A526	1	1	—	II	—	Galvanized Sheet
ASTM	A527	1	1	—	II	—	Galvanized Sheet
ASTM	A529	1	2	11.1	50	—	Plate, Bar & Shapes
ASTM	A529	1	2	11.1	55	—	Plate, Bar & Shapes
ASTM	A529	1	1	11.1	42	K02703	Plate, Bar & Shapes
ASTM/ASME	A/SA-533	3	3	3.1	A, Cl. 1	K12521	Plate
ASTM/ASME	A/SA-533	3	3	3.1	A, Cl. 2	K12521	Plate
ASTM/ASME	A/SA-533	11A	4	3.1	A, Cl. 3	K12521	Plate
ASTM/ASME	A/SA-533	3	3	3.1	D, Cl. 1	K12529	Plate
ASTM/ASME	A/SA-533	3	3	3.1	D, Cl. 2	K12529	Plate
ASTM/ASME	A/SA-533	11A	4	3.1	D, Cl. 3	K12529	Plate
ASTM/ASME	A/SA-533	3	3	3.1	B, Cl. 1	K12539	Plate
ASTM/ASME	A/SA-533	3	3	3.1	B, Cl. 2	K12539	Plate
ASTM/ASME	A/SA-533	11A	4	3.2	B, Cl. 3	K12539	Plate
ASTM/ASME	A/SA-533	3	3	3.1	C, Cl. 1	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	C, Cl. 2	K12554	Plate
ASTM/ASME	A/SA-533	11A	4	3.2	C, Cl. 3	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	E, Cl. 1	K12554	Plate
ASTM/ASME	A/SA-533	3	3	3.1	E, Cl. 2	K12554	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-537	1	2	1.2	Cl. 1	K12437	Plate
ASTM/ASME	A/SA-537	1	3	1.2	Cl. 2	K12437	Plate
ASTM/ASME	A/SA-537	1	3	1.2	Cl. 3	K12437	Plate
ASTM	A539	1	1	—	—	K01506	Coiled Tube
ASTM/ASME	A/SA-541	1	2	11.1	1A	K03020	Forgings
ASTM/ASME	A/SA-541	1	2	11.1	1	K03506	Forgings
ASTM/ASME	A/SA-541	4	1	5.2	11, Cl. 4	K11572	Forgings
ASTM/ASME	A/SA-541	3	3	4.1	3, Cl.1	K12045	Forgings
ASTM/ASME	A/SA-541	3	3	4.1	3, Cl.2	K12045	Forgings
ASTM/ASME	A/SA-541	3	3	4.2	2, Cl.1	K12765	Forgings
ASTM/ASME	A/SA-541	3	3	4.2	2, Cl.2	K12765	Forgings
ASTM/ASME	A/SA-541	5C	1	5.2	22, Cl. 3	K21390	Forgings
ASTM/ASME	A/SA-541	5C	4	5.2	22, Cl. 4	K21390	Forgings
ASTM/ASME	A/SA-541	5C	5	5.2	22, Cl. 5	K21390	Forgings
ASTM/ASME	A/SA-541	5C	1	6.2	3VCb	K31390	Forgings
ASTM/ASME	A/SA-541	5C	1	6.2	3V	K31830	Forgings
ASTM/ASME	A/SA-541	5C	1	5.2	22V	K31835	Forgings
ASTM/ASME	A/SA-542	5C	4	5.2	A, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-542	5C	5	5.2	A, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-542	5C	3	5.2	A, Cl. 3	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	A, Cl. 4	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	A, Cl. 4a	K21590	Plate
ASTM/ASME	A/SA-542	5C	4	5.2	B, Cl. 1	K21590	Plate
ASTM/ASME	A/SA-542	5C	5	5.2	B, Cl. 2	K21590	Plate
ASTM/ASME	A/SA-542	5C	3	5.2	B, Cl. 3	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	B, Cl. 4	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	5.2	B, Cl. 4a	K21590	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	E, Cl. 4a	K31390	Plate
ASTM/ASME	A/SA-542	5C	4	6.2	C, Cl. 1	K31830	Plate
ASTM/ASME	A/SA-542	5C	5	6.2	C, Cl. 2	K31830	Plate
ASTM/ASME	A/SA-542	5C	3	6.2	C, Cl. 3	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	C, Cl. 4	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.2	C, Cl. 4a	K31830	Plate
ASTM/ASME	A/SA-542	5C	1	6.3	D, Cl. 4a	K31835	Plate
ASTM/ASME	A/SA-543	11A	5	3.1	C Cl. 1	—	Plate
ASTM/ASME	A/SA-543	11B	10	3.1	C Cl. 2	—	Plate
ASTM/ASME	A/SA-543	3	3	3.1	C Cl. 3	—	Plate
ASTM/ASME	A/SA-543	11A	5	3.1	B Cl. 1	K42339	Plate
ASTM/ASME	A/SA-543	11B	10	3.1	B Cl. 2	K42339	Plate
ASTM/ASME	A/SA-543	3	3	3.1	B Cl. 3	K42339	Plate
ASTM/ASME	A/SA-553	11A	1	9.2	III	—	Plate
ASTM/ASME	A/SA-553	11A	1	9.3	II	K71340	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-553	11A	1	9.3	I	K81340	Plate
ASTM	A554	8	1	8.1	MT 302	S30200	Welded Tube
ASTM	A554	8	1	8.1	MT 304	S30400	Welded Tube
ASTM	A554	8	1	8.1	MT 304L	S30403	Welded Tube
ASTM	A554	8	2	8.2	MT 309S	S30908	Welded Tube
ASTM	A554	8	2	8.2	MT 309S-Cb	S30940	Welded Tube
ASTM	A554	8	2	8.2	MT 310S	S31008	Welded Tube
ASTM	A554	8	1	8.1	MT 316	S31600	Welded Tube
ASTM	A554	8	1	8.1	MT 316L	S31603	Welded Tube
ASTM	A554	8	1	8.1	MT 317	S31700	Welded Tube
ASTM	A554	8	1	8.1	MT 321	S32100	Welded Tube
ASTM	A554	8	1	8.1	MT 347	S34700	Welded Tube
ASTM/ASME	A/SA-556	1	1	1.1	A2	K01807	Seamless Tube
ASTM/ASME	A/SA-556	1	1	11.1	B2	K02707	Seamless Tube
ASTM/ASME	A/SA-556	1	2	11.1	C2	K03006	Seamless Tube
ASTM/ASME	A/SA-557	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A/SA-557	1	1	11.1	B2	K03007	E.R.W. Tube
ASTM/ASME	A/SA-557	1	2	11.1	C2	K03505	E.R.W. Tube
ASTM/ASME	A/SA-562	1	1	1.1	—	K11224	Plate
ASTM	A569	1	1	1.1	30	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	33	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	36	K02502	Sheet & Strip
ASTM	A569	1	1	1.1	40	K02502	Sheet & Strip
ASTM	A569	1	1	1.2	45	K02502	Sheet & Strip
ASTM	A569	1	1	1.2	50	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	30	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	33	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	36	K02502	Sheet & Strip
ASTM	A570	1	1	1.1	40	K02502	Sheet & Strip
ASTM	A570	1	1	1.2	45	K02502	Sheet & Strip
ASTM	A570	1	1	1.2	50	K02502	Sheet & Strip
ASTM	A570	1	1	1.3	55	K02502	Sheet & Strip
ASTM/ASME	A/SA-572	1	1	1.2	42	—	Plate & Shapes
ASTM/ASME	A/SA-572	1	1	1.2	50	—	Plate & Shapes
ASTM/ASME	A/SA-572	1	2	1.3	55	—	Plate & Shapes
ASTM	A572	1	2	1.3	55	—	Plate, Sheet, Bar & Shapes
ASTM/ASME	A/SA-572	1	2	11.1	60	—	Plate & Shapes
ASTM	A572	1	3	11.1	65	—	Plate, Sheet, Bar & Shapes
ASTM/ASME	A/SA-572	1	3	1.3	65	—	Plate & Shapes
ASTM	A573	1	1	11.1	58	—	Plate
ASTM	A573	1	1	11.1	65	—	Plate
ASTM	A573	1	2	11.1	70	—	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A575	1	1	1.1	M1008	—	Bar
ASTM	A575	1	1	1.1	M1010	—	Bar
ASTM	A575	1	1	1.1	M1012	—	Bar
ASTM	A575	1	1	1.1	M1015	—	Bar
ASTM	A575	1	1	1.1	M1017	—	Bar
ASTM	A575	1	1	11.1	M1020	—	Bar
ASTM	A575	1	1	11.1	M1023	—	Bar
ASTM	A575	1	1	11.1	M1025	—	Bar
ASTM	A576	1	1	1.1	G10080	—	Bar
ASTM	A576	1	1	1.1	G10100	—	Bar
ASTM	A576	1	1	1.1	G10120	—	Bar
ASTM	A576	1	1	1.1	G10150	—	Bar
ASTM	A576	1	1	1.1	G10160	—	Bar
ASTM	A576	1	1	1.1	G10170	—	Bar
ASTM	A576	1	1	1.1	G10180	—	Bar
ASTM	A576	1	1	1.1	G10190	—	Bar
ASTM	A576	1	1	1.1	G10200	—	Bar
ASTM	A576	1	1	11.1	G10210	—	Bar
ASTM	A576	1	1	11.1	G10220	—	Bar
ASTM	A576	1	1	11.1	G10230	—	Bar
ASTM	A576	1	1	11.1	G10250	—	Bar
ASTM/ASME	A/SA-587	1	1	1.1	A2	K01807	E.R.W. Tube
ASTM/ASME	A/SA-587	1	1	—	B2	K03007	E.R.W. Tube
ASTM/ASME	A/SA-587	1	1	1.1	—	K11500	E.R.W. Pipe
ASTM	A588	3	1	1.4	K	—	Plate & Bar
ASTM	A588	3	1	1.4	K	—	Shapes
ASTM	A588	3	1	1.4	A	K11430	Plate & Bar
ASTM	A588	3	1	1.4	A	K11430	Shapes
ASTM	A588	3	1	1.4	C	K11538	Plate & Bar
ASTM	A588	3	1	1.4	C	K11538	Shapes
ASTM	A588	3	1	1.4	B	K12043	Plate & Bar
ASTM	A588	3	1	1.4	B	K12043	Shapes
ASTM/ASME	A/SA-592	11B	3	3.1	F	K11576	Forgings
ASTM/ASME	A/SA-592	11B	2	3.1	E	K11695	Forgings
ASTM/ASME	A/SA-592	11B	1	3.1	A	K11856	Forgings
ASTM	A595	1	2	11.1	A	K02004	Welded Tube
ASTM	A595	1	2	11.1	B	K02005	Welded Tube
ASTM	A595	3	1	11.1	C	K11526	Welded Tube
ASTM	A606	1	2	1.4	2, CR, AR	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, A	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, AR	—	Sheet & Strip
ASTM	A606	1	2	1.4	2, HR, N	—	Sheet & Strip

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A607	1	1	—	45	—	Sheet & Strip
ASTM	A607	1	1	—	50	—	Sheet & Strip
ASTM	A607	1	2	—	55	—	Sheet & Strip
ASTM	A607	1	3	—	60	—	Sheet & Strip
ASTM	A607	1	3	—	65	—	Sheet & Strip
ASTM	A607	1	3	—	70	—	Sheet & Strip
ASTM	A611	1	1	1.1	D	G10120	Sheet & Strip
ASTM	A611	1	1	—	A	G10170	Sheet & Strip
ASTM	A611	1	1	—	B	G10170	Sheet & Strip
ASTM	A611	1	1	—	C	G10170	Sheet & Strip
ASTM	A611	1	3	—	E	G10170	Sheet & Strip
ASTM/ASME	A/SA-612	10C	1	1.3	-	K02900	Plate
ASTM	A615	1A	4	—	40	—	Rebar
ASTM	A615	1A	4	—	60	—	Rebar
ASTM	A618	1	2	1.2	Ia	—	Tube
ASTM	A618	1	2	1.2	Ib	—	Seamless & Welded Tube
ASTM	A618	1	2	1.2	Ib	K02601	Tube
ASTM	A618	1	2	1.2	II	K12609	Tube
ASTM	A618	1	1	1.2	III	K12700	Tube
ASTM	A620	1	1	1.1	A	K00040	Sheet
ASTM	A620	1	1	1.1	B	K00040	Sheet
ASTM	A633	1	1	1.1	A	K01802	Plate
ASTM	A633	1	1	1.1	C	K12000	Plate
ASTM	A633	1	2	1.1	C	K12000	Plate
ASTM	A633	1	1	1.1	D	K12037	Plate
ASTM	A633	1	2	1.1	D	K12037	Plate
ASTM	A633	1	3	4.1	E	K12202	Plate
ASTM/ASME	A/SA-645	11A	2	9.2	A	K41583	Plate
ASTM	A653	1	1	—	33	—	Galvanized Sheet
ASTM	A653	1	1	—	37	—	Galvanized Sheet
ASTM	A653	1	1	—	40	—	Galvanized Sheet
ASTM	A653	1	1	—	80	—	Galvanized Sheet
ASTM/ASME	A/SA-656	1	1	1.2	T3, 50	—	Plate
ASTM/ASME	A/SA-656	1	2	1.3	T3, 60	—	Plate
ASTM/ASME	A/SA-656	1	3	2.2	T3, 70	—	Plate
ASTM/ASME	A/SA-656	1	4	2.2	T3, 80	—	Plate
ASTM/ASME	A/SA-656	1	1	1.2	T7, 50	—	Plate
ASTM/ASME	A/SA-656	1	2	1.3	T7, 60	—	Plate
ASTM/ASME	A/SA-656	1	3	2.2	T7, 70	—	Plate
ASTM/ASME	A/SA-656	1	4	2.2	T7, 80	—	Plate
ASTM/ASME	A/SA-656	1	1	1.2	50	K11804	Plate
ASTM/ASME	A/SA-656	1	1	1.3	60	K11804	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-656	1	2	1.3	70	K11804	Plate
ASTM/ASME	A/SA-656	1	3	1.3	80	K11804	Plate
ASTM	A659	1	1	1.1	1015	G10150	Sheet & Strip
ASTM	A659	1	1	—	1016	G10160	Sheet & Strip
ASTM	A659	1	1	—	1017	G10170	Sheet & Strip
ASTM	A659	1	1	1.1	1018	G10180	Sheet & Strip
ASTM	A659	1	1	1.1	1020	G10200	Sheet & Strip
ASTM	A659	1	1	—	1021	G10210	Sheet & Strip
ASTM	A659	1	1	—	1023	G10230	Sheet & Strip
ASTM/ASME	A/SA-660	1	1	11.1	WCA	J02504	Centrifugal Cast Pipe
ASTM/ASME	A/SA-660	1	2	11.1	WCC	J02505	Centrifugal Cast Pipe
ASTM/ASME	A/SA-660	1	2	1.1	WCB	J03003	Centrifugal Cast Pipe
ASTM/ASME	A/SA-662	1	1	1.1	A	K01701	Plate
ASTM/ASME	A/SA-662	1	2	1.1	C	K02007	Plate
ASTM/ASME	A/SA-662	1	1	1.1	B	K02203	Plate
ASTM	A663	1	1	—	—	—	Bar
ASTM	A663	1	1	—	45	—	Bars & Shapes
ASTM	A663	1	1	—	50	—	Bars & Shapes
ASTM	A663	1	1	—	55	—	Bars & Shapes
ASTM	A663	1	1	—	60	—	Bars & Shapes
ASTM	A663	1	1	—	65	—	Bars & Shapes
ASTM	A663	1	2	—	70	—	Bars & Shapes
ASTM	A663	1	2	—	75	—	Bars & Shapes
ASTM	A663	1	3	—	80	—	Bars & Shapes
ASTM/ASME	A/SA-666	8	3	8.3	201-1	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	3	8.3	201-2	S20100	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	3	8.3	XM-11	S21904	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	302	S30200	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304	S30400	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304L	S30403	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304N	S30451	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	304LN	S30453	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316	S31600	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316L	S31603	Plate, Sheet & Strip
ASTM/ASME	A/SA-666	8	1	8.1	316N	S31651	Plate, Sheet & Strip
ASTM	A668	1	3	11.1	F	—	Forgings
ASTM	A668	1	1	1.1	B	G10200	Forgings
ASTM	A668	1	2	11.1	C	G10250	Forgings
ASTM	A668	1	2	11.1	D	G10300	Forgings
ASTM/ASME	A/SA-671	1	1	1.1	CC60	K02100	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CE55	K02202	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	1.1	CB60	K02401	Fusion Welded Pipe

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM/ASME	A/SA-671	1	1	11.1	CE60	K02402	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	1.1	CC65	K02403	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CC70	K02700	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CB65	K02800	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	1	11.1	CA55	K02801	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CK75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	11.1	CB70	K03101	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	2	1.2	CD70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-671	1	3	1.2	CD80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	3.1	J80	—	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	3.1	J90	—	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	A45	K01700	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C55	K01800	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	B55	K02001	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C60	K02100	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	A50	K02200	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	E55	K02202	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	B60	K02401	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	E60	K02402	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	1.1	C65	K02403	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	C70	K02700	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	B65	K02800	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	1	11.1	A55	K02801	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	N75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	11.1	B70	K03101	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	1	1.1	L65	K11820	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.2	L70	K12020	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.1	H75	K12021	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	3	1.2	H80	K12022	Fusion Welded Pipe
ASTM/ASME	A/SA-672	3	2	1.2	L75	K12320	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	2	1.2	D70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	1	3	1.2	D80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-672	11A	4	3.2	J100	K12521	Fusion Welded Pipe
ASTM/ASME	A/SA-675	1	1	11.1	45	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	50	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	55	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	60	—	Bar
ASTM/ASME	A/SA-675	1	1	11.1	65	—	Bar
ASTM/ASME	A/SA-675	1	2	11.1	70	—	Bar
ASTM/ASME	A/SA-675	1	3	—	80	—	Bar
ASTM/ASME	A/SA-675	1	4	—	90	—	Bar
ASTM	A678	1	2	1.2	A	K01600	Plate

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A678	1	3	1.3	B	K02002	Plate
ASTM	A678	1	3	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	C	K02204	Plate
ASTM	A678	1	4	1.3	D	K12202	Plate
ASTM/ASME	A/SA-680	8	1	—	80	S46953	Seamless & Welded Fitting
ASTM/ASME	A/SA-688	8	3	8.3	XM-29	S24000	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304	S30400	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304L	S30403	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304N	S30451	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP304LN	S30453	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316	S31600	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316L	S31603	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316N	S31651	Welded Tube
ASTM/ASME	A/SA-688	8	1	8.1	TP316LN	S31653	Welded Tube
ASTM	A690	1	2	1.4	—	K12249	Marine Piling-Plate & Bar
ASTM/ASME	A/SA-691	1	2	11.1	CMS-75	K02803	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1CR, Cl. 1	K11757	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1CR, Cl. 2	K11757	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1.25CR, Cl. 1	K11789	Fusion Welded Pipe
ASTM/ASME	A/SA-691	4	1	5.1	1.25CR, Cl. 2	K11789	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	1	1.1	CM-65	K11820	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	1.2	CM-70	K12020	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	1	4.2	0.5Cr, Cl. 1	K12143	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	4.2	0.5Cr, Cl. 2	K12143	Fusion Welded Pipe
ASTM/ASME	A/SA-691	3	2	1.2	CM-75	K12320	Fusion Welded Pipe
ASTM/ASME	A/SA-691	1	2	1.2	CMSH-70	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-691	1	3	1.2	CMSH-80	K12437	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	2.25CR, Cl. 1	K21590	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	2.25CR, Cl. 2	K21590	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	3CR, Cl. 1	K31545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5A	1	5.2	3CR, Cl. 2	K31545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5B	1	5.3	5CR, Cl. 1	K41545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	5B	1	5.3	5CR, Cl. 2	K41545	Fusion Welded Pipe
ASTM/ASME	A/SA-691	15E	1	6.4	91	K91560	Fusion Welded Pipe
ASTM	A694	1	1	11.1	F42	K03014	Forgings
ASTM	A694	1	1	11.1	F46	K03014	Forgings
ASTM	A694	1	1	11.1	F48	K03014	Forgings
ASTM	A694	1	1	11.1	F50	K03014	Forgings
ASTM	A694	1	1	11.1	F52	K03014	Forgings
ASTM	A694	1	2	11.1	F56	K03014	Forgings
ASTM	A694	1	2	11.1	F60	K03014	Forgings
ASTM	A694	1	2	11.1	F65	K03014	Forgings

(Continued)

Table C.1 (Continued)
Listing of Base Metal Specifications—Ferrous Alloys

Standard	Base Metal Specification	Material Number	Group Number	ISO 15608 Group	Type, Grade, or Alloy Designation	UNS Number	Product Form
Steel and Steel Alloys							
ASTM	A694	1	3	11.1	F70	K03014	Forgings
ASTM/ASME	A/SA-695	1	1	11.1	B, 35	K03504	Bar
ASTM/ASME	A/SA-695	1	2	11.1	B, 40	K03504	Bar
ASTM/ASME	A/SA-696	1	1	11.1	B	K03200	Bar
ASTM/ASME	A/SA-696	1	2	11.1	C	K03200	Bar
ASTM	A706	1A	4	1.3	60	—	Rebar
ASTM	A707	1	1	1.2	L1, Cl. 1	K02302	Forgings
ASTM	A707	1	1	1.2	L1, Cl. 2	K02302	Forgings
ASTM	A707	3	1	—	L6, Cl. 1	K02902	Forgings
ASTM	A707	3	1	—	L6, Cl. 2	K02902	Forgings
ASTM	A707	3	2	—	L6, Cl. 3	K02902	Forgings
ASTM	A707	3	4	—	L6, Cl. 4	K02902	Forgings
ASTM	A707	1	1	11.1	L2, Cl. 1	K03301	Forgings
ASTM	A707	1	1	11.1	L2, Cl. 2	K03301	Forgings
ASTM	A707	1	2	11.1	L2, Cl. 3	K03301	Forgings
ASTM	A707	1	1	—	L4, Cl. 1	K12089	Forgings
ASTM	A707	1	1	—	L4, Cl. 2	K12089	Forgings
ASTM	A707	1	2	—	L4, Cl. 3	K12089	Forgings
ASTM	A707	1	1	1.2	L3, Cl. 1	K12510	Forgings
ASTM	A707	1	1	1.2	L3, Cl. 2	K12510	Forgings
ASTM	A707	1	2	1.3	L3, Cl. 3	K12510	Forgings
ASTM	A707	1	1	—	L5, Cl. 1	K20934	Forgings
ASTM	A707	1	1	—	L5, Cl. 2	K20934	Forgings
ASTM	A707	1	2	—	L5, Cl. 3	K20934	Forgings
ASTM	A707	1	4	—	L5, Cl. 4	K20934	Forgings
ASTM	A707	9B	1	—	L7, Cl. 1	K32218	Forgings
ASTM	A707	9B	1	—	L7, Cl. 2	K32218	Forgings
ASTM	A707	9B	1	—	L8, Cl. 1	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 2	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 3	K42247	Forgings
ASTM	A707	9B	1	—	L8, Cl. 4	K42247	Forgings
ASTM	A709	1	1	11.1	36	—	Plate, Bar & Shapes
ASTM	A709	1	1	1.2	50	—	Plate, Bar & Shapes
ASTM	A709	1	1	1.2	50S	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	50W, A	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	50W, B	—	Plate, Bar & Shapes
ASTM	A709	1	2	1.4	HPS 50W	—	Plate, Bar & Shapes
ASTM	A709	11B	11	1.4	HPS 70W	—	Plate, Bar & Shapes
ASTM	A710	12C	1	3.3	A Cl.1	K20747	Plate
ASTM	A710	12A	1	3.3	A Cl.2	K20747	Plate
ASTM	A710	12B	1	3.3	A Cl.3	K20747	Plate
ASTM	A714	9A	1	9.1	V	K22035	Seamless & Welded Pipe

(Continued)