

**Table QW/QB-422**  
**Ferrous and Nonferrous P-Numbers**  
**Grouping of Base Metals for Qualification (Cont'd)**

Spec. No.	Designation, Type, or Grade	UNS No.	Minimum Specified Tensile, ksi (MPa)	Welding		Brazing			Nominal Composition	Typical Product Form
				P-No.	Group No.	P-No.	AWS	ISO 15608		
							B2.2 BM	Group		
Ferrous (Cont'd)										
A/SA-178	A	K01200	47 (325)	1	1	101	100	1.1	C	E.R.W. tube
A/SA-178	D	K02709	70 (485)	1	2	101	100	11.1	C-Mn-Si	E.R.W. tube
A/SA-178	C	K03503	60 (415)	1	1	101	100	11.1	C	E.R.W. tube
A/SA-179	...	K01200	47 (325)	1	1	101	100	1.1	C	Smls. tube
A/SA-181	Cl. 60	K03502	60 (415)	1	1	101	100	11.1	C-Si	Pipe flange & fittings
A/SA-181	Cl. 70	K03502	70 (485)	1	2	101	100	11.1	C-Si	Pipe flange & fittings
A/SA-182	F12, Cl. 1	K11562	60 (415)	4	1	102	110	5.1	1Cr-0.5Mo	Forgings
A/SA-182	F12, Cl. 2	K11564	70 (485)	4	1	102	110	5.1	1Cr-0.5Mo	Forgings
A/SA-182	F11, Cl. 2	K11572	70 (485)	4	1	102	110	5.1	1.25Cr-0.5Mo-Si	Forgings
A/SA-182	F11, Cl. 3	K11572	75 (515)	4	1	102	110	5.1	1.25Cr-0.5Mo-Si	Forgings
A/SA-182	F11, Cl. 1	K11597	60 (415)	4	1	102	110	5.1	1.25Cr-0.5Mo-Si	Forgings
A/SA-182	F2	K12122	70 (485)	3	2	101	100	4.2	0.5Cr-0.5Mo	Forgings
A/SA-182	F1	K12822	70 (485)	3	2	101	100	1.1	C-0.5Mo	Forgings
A/SA-182	F22, Cl. 1	K21590	60 (415)	5A	1	102	110	5.2	2.25Cr-1Mo	Forgings
A/SA-182	F22, Cl. 3	K21590	75 (515)	5A	1	102	110	5.2	2.25Cr-1Mo	Forgings
A/SA-182	FR	K22035	63 (435)	9A	1	101	100	9.1	2Ni-1Cu	Forgings
A/SA-182	F3VCb	K31390	85 (585)	5C	1	102	110	6.2	3Cr-1Mo-0.25V-Cb-Ca	Forgings
A/SA-182	F21	K31545	75 (515)	5A	1	102	110	5.2	3Cr-1Mo	Forgings
A/SA-182	F3V	K31830	85 (585)	5C	1	102	120	6.2	3Cr-1Mo-V-Ti-B	Forgings
A/SA-182	F22V	K31835	85 (585)	5C	1	102	110	6.2	2.25Cr-1Mo-V	Forgings
A/SA-182	F5	K41545	70 (485)	5B	1	102	110	5.3	5Cr-0.5Mo	Forgings
A/SA-182	F5a	K42544	90 (620)	5B	1	102	110	5.3	5Cr-0.5Mo	Forgings
A/SA-182	F91	K90901	90 (620)	15E	1	102	110	6.4	9Cr-1Mo-V	Forgings
A/SA-182	F9	K90941	85 (585)	5B	1	102	110	5.4	9Cr-1Mo	Forgings
A/SA-182	F92	K92460	90 (620)	15E	1	102	110	6.4	9Cr-2W	Forgings
A/SA-182	...	N08367	95 (655)	45	...	111	420	8.2	46Fe-24Ni-21Cr-6Mo-N	Forgings
A/SA-182	F904L	N08904	71 (490)	45	...	111	150 420	8.2	44Fe-25Ni-21Cr-Mo	Forgings
A/SA-182	FXM-19	S20910	100 (690)	8	3	102	130	8.3	22Cr-13Ni-5Mn	Forgings
A/SA-182	FXM-11	S21904	90 (620)	8	3	102	130	8.3	21Cr-6Ni-9Mn	Forgings
A/SA-182	F304	S30400	70 (485)	8	1	102	130	8.1	18Cr-8Ni	Forgings > 5 in. (127 mm)
A/SA-182	F304	S30400	75 (515)	8	1	102	130	8.1	18Cr-8Ni	Forgings
A/SA-182	F304L	S30403	65 (450)	8	1	102	130	8.1	18Cr-8Ni	Forgings > 5 in. (127 mm)
A/SA-182	F304L	S30403	70 (485)	8	1	102	130	8.1	18Cr-8Ni	Forgings
A/SA-182	F304H	S30409	70 (485)	8	1	102	130	8.1	18Cr-8Ni	Forgings > 5 in. (127 mm)

**Table QW/QB-422**  
**Ferrous and Nonferrous P-Numbers**  
**Grouping of Base Metals for Qualification (Cont'd)**

Spec. No.	Designation, Type, or Grade	UNS No.	Minimum Specified Tensile, ksi (MPa)	Welding		Brazing			Nominal Composition	Typical Product Form
				P-No.	Group No.	P-No.	AWS	ISO 15608		
							B2.2 BM	Group		
Ferrous (Cont'd)										
A/SA-182	F10	S33100	80 (550)	8	2	102	130	8.1	20Ni-8Cr	Forgings
A/SA-182	F49	S34565	115 (795)	8	4	102	130	8.3	24Cr-17Ni-6Mn-4.5Mo-N	Forgings
A/SA-182	F347	S34700	70 (485)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings > 5 in. (127 mm)
A/SA-182	F347	S34700	75 (515)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings
A/SA-182	F347H	S34709	70 (485)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings > 5 in. (127 mm)
A/SA-182	F347H	S34709	75 (515)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings
A/SA-182	F348	S34800	70 (485)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings > 5 in. (127 mm)
A/SA-182	F348	S34800	75 (515)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings
A/SA-182	F348H	S34809	70 (485)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings > 5 in. (127 mm)
A/SA-182	F348H	S34809	75 (515)	8	1	102	130	8.1	18Cr-10Ni-Cb	Forgings
A/SA-182	F54	S39274	116 (800)	10H	1	102	145	10.2	25Cr-7Ni-3Mo-2W-Cu-N	Forgings
A/SA-182	F6a, Cl. 1	S41000	70 (485)	6	1	102	420	7.2	13Cr	Forgings
A/SA-182	F6a, Cl. 2	S41000	85 (585)	6	3	102	150	7.2	13Cr	Forgings
A/SA-182	F6a, Cl. 3	S41000	110 (760)	6	3	102	150	7.2	13Cr	Forgings
A/SA-182	F6a, Cl. 4	S41000	130 (895)	6	3	102	150	7.2	13Cr	Forgings
A/SA-182	F6b	S41026	110 (760)	6	3	102	150	7.2	13Cr-0.5Mo	Forgings
A/SA-182	F6NM	S41500	115 (795)	6	4	102	150	7.2	13Cr-4.5Ni-Mo	Forgings
A/SA-182	F429	S42900	60 (415)	6	2	102	150	7.2	15Cr	Forgings
A/SA-182	F429	S42900	60 (415)	7	2	102	150	7.1	17Cr	Forgings

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				P-No.	Group No.	P-No.	AWS	ISO 15608		
							B2.2 BM	Group		
Ferrous (Cont'd)										
A/SA-1011	HSLAS 60 CL 1	---	75 (515)	1	2	101	120	1.3	C	Sheet & strip
A/SA-1011	HSLAS 60 CL 2	---	70 (485)	1	2	101	120	1.3	C	Sheet & strip
A/SA-1011	SS 33	---	52 (360)	1	1	101	100	1.1	C	Sheet & strip
A/SA-1011	SS 36 1	---	53 (365)	1	1	101	100	1.1	C	Sheet & strip
A/SA-1011	SS 36 2	---	58 (400)	1	1	101	100	1.1	C	Sheet & strip
A/SA-1011	SS 40	---	55 (380)	1	1	101	100	1.2	C	Sheet & strip
A/SA-1011	SS 45	---	60 (415)	1	1	101	120	1.2	C	Sheet & strip
A/SA-1011	SS 50	---	65 (450)	1	1	101	100	1.2	C	Sheet & strip
A/SA-1011	SS 55	---	70 (485)	1	2	101	100	1.3	C	Sheet & strip
A/SA-1011	SS 60	---	75 (515)	1	2	101	100	1.3	C	Sheet & strip
A/SA-1017	92	K92460	90 (620)	15E	1	102	110	6.4	9Cr-2W	Plate
A1066	50	---	65 (450)	3	1	101	100	1.2	Mn-Ni-Cr-Mo	Plate
A1066	60	---	75 (515)	3	2	101	100	2.1	Mn-Ni-Cr-Mo	Plate
A1066	65	---	80 (550)	3	3	101	100	2.1	Mn-Ni-Cr-Mo	Plate
A1066	70	---	85 (585)	3	3	101	100	2.2	Mn-Ni-Cr-Mo	Plate
A1066	80	---	90 (620)	3	3	101	100	2.2	Mn-Ni-Cr-Mo	Plate
A1091	C91	J84090	85 (585)	15E	1	102	110	6.4	9Cr-1Mo-V	Castings

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ASME B/P/C IX-2019

**FOR INFORMATION ONLY:** The row in red above existed in 2017 Edition. Record 16-2870 incorrectly added this row again as a duplicate. The duplicate was correctly deleted by 18-1823 as a revision to 16-2870 prior to publication of 2019 Edition. There was no voted action to delete the original row entry.

ASME BPVC.IX-2019

P-No.	Grp. No.	Spec. No.	Type, Grade, or UNS No.	P-No.	Grp. No.	Spec. No.	Type, Grade, or UNS No.
Steel and Steel Alloys (Cont'd)				Steel and Steel Alloys (Cont'd)			
1	1	A575	M1015	1	1	A694	F42
1	1	A575	M1017	1	1	A694	F46
1	1	A575	M1020	1	1	A694	F48
1	1	A575	M1023	1	1	A694	F50
1	1	A575	M1025	1	1	A694	F52
1	1	A576	G10080	1	1	A/SA-696	B
1	1	A576	G10100	1	1	A707	L1, Cl. 1
1	1	A576	G10120	1	1	A707	L1, Cl. 2
1	1	A576	G10150	1	1	A707	L2, Cl. 1
1	1	A576	G10160	1	1	A707	L2, Cl. 2
1	1	A576	G10170	1	1	A707	L3, Cl. 1
1	1	A576	G10180	1	1	A707	L3, Cl. 2
1	1	A576	G10190	1	1	A/SA-727	—
1	1	A576	G10200	1	1	A/SA-765	I
1	1	A576	G10210	1	1	A/SA-836	—
1	1	A576	G10220	1	1	A860	WPHY 42
1	1	A576	G10230	1	1	A860	WPHY 46
1	1	A576	G10250	1	1	A860	WPHY 52
1	1	A/SA-587	—	1	1	A992	—
1	1	A/SA-618	III	1	1	A/SA-1008	CS A
1	1	A633	A	1	1	A/SA-1008	CS B
1	1	A633	C	1	1	A/SA-1008	DS B
1	1	A633	D	1	1	A/SA-1011	CS B
1	1	A/SA-656	3, 50	1	1	A/SA-1011	DS B
1	1	A/SA-656	7, 50	1	1	A/SA-1011	HSIAS 45 Cl. 1
1	1	A/SA-660	WCA	1	1	A/SA-1011	HSIAS 45 Cl. 2
1	1	A/SA-662	A	1	1	A/SA-1011	HSIAS 50 Cl. 1
1	1	A/SA-662	B	1	1	A/SA-1011	HSIAS 50 Cl. 2
1	1	A/SA-663	—	1	1	A/SA-1011	HSIAS 55 Cl. 2
1	1	A/SA-668	Cl. B	1	1	A/SA-1011	SS 33
1	1	A/SA-668	Cl. C	1	1	A/SA-1011	SS 36 2
1	1	A/SA-671	CA55	1	1	A/SA-1011	SS 40
1	1	A/SA-671	CB60	1	1	A/SA-1011	SS 45
1	1	A/SA-671	CB65	1	1	A/SA-1011	SS 50
1	1	A/SA-671	CC60	1	1	A/SA-1011	A (all grades)
				1	1	API 5L	



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