The Engineering Society For Advancing Mobility Land Sea Air and Space®
INTERNATIONAL
400 Commonwealth Drive, Warrendale, PA 15096-0001

SURFACE VEHICLE INFORMATION REPORT

SAE J1249

REV. JUN2000

Issued 1983-06
Revised 2000-06

Superseding J1249 JUN95

Former SAE Standard and Former SAE Ex-Steels

1. ***Scope—***This SAE Information Report provides a list of those SAE steels which, because of decreased usage, have been deleted from the standard SAE Handbook listings. Included are alloy steels from SAE J778 deleted since 1936, carbon steels from SAE J118 deleted since 1952, and all EX steels deleted from SAE J1081. Information concerning SAE steels prior to these dates may be obtained from the SAE office on request. With the issuance of this report, SAE J778, Formerly Standard SAE Alloy Steels, and SAE J118, Formerly Standard SAE Carbon Steels, will be retired since they are now combined in SAE J1249. In the future, new assignments to SAE J1081, Chemical Compositions of SAE Experimental Steels, will be given "PS" (Potential Standard) numbers rather than "EX" numbers.

The steels listed in Tables 1 and 2 are no longer considered as standard steels. Producers should be contacted concerning availability. Steel grades can be reinstated based on usage according to the critieria indicated in SAE J403 and J404.

The last column lists the date a steel was last listed as standard in the SAE Handbook. Where applicable, the corresponding AISI and UNS numbers are given.

2. ***References***

2.1 **Applicable Publications—**The following publications form a part of this specification to the extent specified herein. Unless otherwise indicated, the latest issue of SAE publications shall apply.

2.1.1 SAE PUBLICATIONS—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

SAE J1081—Potential Standard Steels
SAE J118 Cancelled—Formerly Standard SAE Carbon Steels
SAE J778 Cancelled—Formerly Standard SAE Alloy Steels

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TABLE 1—FORMER STANDARD SAE STEELS

SAE No.	UNS No.	C	Mn	P, Max[1]	S, Max[1]	Si	Cr	Ni	Mo	V, Min	AISI No.	Date
1009	—	0.15 max	0.60 max	0.040	0.050	—	—	—	—	—	1009	1965
1011	G10110	0.09–0.14	0.60–0.90	0.040	0.050	—	—	—	—	—	1011	1993
1019[2]	G10190	0.15–0.20	0.70–1.00	0.040	0.050	—	—	—	—	—		
1033	—	0.30–0.36	0.70–1.00	0.040	0.050	—	—	—	—	—	1033	1965
1034	—	0.32–0.38	0.50–0.80	0.040	0.050	—	—	—	—	—	C1034	1968
1037[2]	G10370	0.32–0.38	0.70–1.00	0.040	0.050	—	—	—	—	—		
1059[2]	—	0.55–0.65	0.50–0.80	0.040	0.050	—	—	—	—	—		1968
1059	G10590	0.55–0.65	0.50–0.80	0.040	0.050	—	—	—	—	—	1059	1993
1062	—	0.54–0.65	0.85–1.15	0.040	0.050	—	—	—	—	—	C1062	1953
1064[2]	G10640	0.60–0.70	0.50–0.80	0.040	0.050	—	—	—	—	—		
1069[2]	G10690	0.65–0.75	0.40–0.70	0.040	0.050	—	—	—	—	—		
1074	G10740	0.70–0.80	0.50–0.80	0.040	0.050	—	—	—	—	—	1074	1993
1075[2]	G10750	0.70–0.80	0.40–0.70	0.040	0.050	—	—	—	—	—		
1084[2]	G10840	0.80–0.93	0.60–0.90	0.040	0.050	—	—	—	—	—		
1085	G10850	0.80–0.93	0.70–1.00	0.040	0.050	—	—	—	—	—		
1086[2]	G10860	0.80–0.94	0.30–0.50	0.040	0.050	—	—	—	—	—		1977
1108[2]	G11080	0.08–0.13	0.50–0.80	0.040	0.08–0.13	—	—	—	—	—		
1109	G11090	0.08–0.13	0.60–0.90	0.040	0.08–0.13	—	—	—	—	—	1109	1977
1110	G11100	0.08–0.13	0.30–0.60	0.040	0.08–0.13	—	—	—	—	—	1110	1993
1111	—	0.13 max	0.60–0.90	0.07–0.12	0.10–0.15	—	—	—	—	—	B1111	1969
1112	—	0.13 max	0.70–1.00	0.07–0.12	0.16–0.23	—	—	—	—	—	B1112	1969
1113	—	0.13 max	0.70–1.00	0.07–0.12	0.24–0.33	—	—	—	—	—	B1113	1969
1114	—	0.10–0.16	1.00–1.30	0.040	0.08–0.13	—	—	—	—	—	C1114	1952
1115	—	0.13–0.18	0.60–0.90	0.040	0.08–0.13	—	—	—	—	—	1115	1965
1116	—	0.14–0.20	1.10–1.40	0.040	0.16–0.23	—	—	—	—	—	C1116	1952
1119	G11190	0.14–0.20	1.00–1.30	0.040	0.24–0.33	—	—	—	—	—	1119	1977
1120	—	0.18–0.23	0.70–1.00	0.040	0.08–0.13	—	—	—	—	—	1120	1965
1123	G11230	0.20–0.27	1.20–1.50	0.040	0.06–0.09	—	—	—	—	—	1123	1993
1139[2]	G11390	0.35–0.43	1.35–1.65	0.040	0.13–0.20	—	—	—	—	—		
1145	G11450	0.42–0.49	0.70–1.00	0.040	0.04–0.07	—	—	—	—	—	1145	1977
1152	G11520	0.48–0.55	0.70–1.00	0.040	0.06–0.09	—	—	—	—	—	1152	1993
1211[2]	G12110	0.13 max	0.60–0.90	0.07–0.12	0.10–0.15	—	—	—	—	—		
1320	—	0.18–0.23	1.60–1.90	0.040	0.040	0.20–0.35	—	—	—	—	A1320	1956
1330	G13300	0.28–0.33	1.60–1.90	0.035	0.040	0.15–0.35	—	—	—	—	1330	1993
1345	G13450	0.43–0.48	1.60–1.90	0.035	0.040	0.15–0.35	—	—	—	—		
1513	G15130	0.10–0.16	1.10–1.40	0.040	0.050	—	—	—	—	—	1513	1993
1518	G15180	0.15–0.21	1.10–1.40	0.040	0.050	—	—	—	—	—	—	1977
1525	G15250	0.23–0.29	0.80–1.10	0.040	0.050	—	—	—	—	—	—	1977
1533	G15330	0.30–0.37	1.10–1.40	0.040	0.050	—	—	—	—	—	1533	1993
1534	G15340	0.30–0.37	1.20–1.50	0.040	0.050	—	—	—	—	—	1534	1993
1536	G15360	0.30–0.37	1.20–1.50	0.040	0.050	—	—	—	—	—		
1544	G15440	0.40–0.47	0.80–1.10	0.040	0.050	—	—	—	—	—	1544	1993
1545	G15450	0.43–0.50	0.80–1.10	0.040	0.050	—	—	—	—	—	1545	1993
1546	G15460	0.44–0.52	1.00–1.30	0.040	0.050	—	—	—	—	—	1546	1993

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TABLE 1—FORMER STANDARD SAE STEELS (CONTINUED)

SAE No.	UNS No.	C	Mn	P, Max[1]	S, Max[1]	Si	Cr	Ni	Mo	V, Min	AISI No.	Date
1551	G15510	0.45–0.56	0.85–1.15	0.040	0.050	—	—	—	—	—		
1553	G15530	0.48–0.55	0.80–1.10	0.040	0.050	—	—	—	—	—	1553	1993
1561	G15610	0.55–0.65	0.75–1.05	0.040	0.050	—	—	—	—	—		
1570	G15700	0.65–0.75	0.80–1.10	0.040	0.050	—	—	—	—	—	1570	1993
1572	G15720	0.65–0.76	1.00–1.30	0.040	0.050	—	—	—	—	—	—	1977
1580	G15800	0.75–0.88	0.80–1.10	0.040	0.050	—	—	—	—	—	1580	1993
1590	G15900	0.85–0.98	0.80–1.10	0.040	0.050	—	—	—	—	—	1590	1993
2317	—	0.15–0.20	0.40–0.60	0.040	0.040	0.20–0.35	—	3.25–3.75	—	—	A2317	1956
2330	—	0.28–0.33	0.60–0.80	0.040	0.040	0.20–0.35	—	3.25–3.75	—	—	A2330	1953
2340	—	0.38–0.43	0.70–0.90	0.040	0.040	0.20–0.35	—	3.25–3.75	—	—	A2340	1953
2345	—	0.43–0.48	0.70–0.90	0.040	0.040	0.20–0.35	—	3.25–3.75	—	—	A2345	1952
2512	—	0.09–0.14	0.45–0.60	0.025	0.025	0.20–0.35	—	4.75–5.25	—	—	E2512	1953
2515	—	0.12–0.17	0.40–0.60	0.040	0.040	0.20–0.35	—	4.75–5.25	—	—	A2515	1956
2517	—	0.15–0.20	0.45–0.60	0.025	0.025	0.20–0.35	—	4.75–5.25	—	—	E2517	1959
3115	—	0.13–0.18	0.40–0.60	0.040	0.040	0.20–0.35	0.55–0.75	1.10–1.40	—	—	A3115	1953
3120	—	0.17–0.22	0.60–0.80	0.040	0.040	0.20–0.35	0.55–0.75	1.10–1.40	—	—	A3120	1956
3130	—	0.28–0.33	0.60–0.80	0.040	0.040	0.20–0.35	0.55–0.75	1.10–1.40	—	—	A3130	1956
3135	—	0.33–0.38	0.60–0.80	0.040	0.040	0.20–0.35	0.55–0.75	1.10–1.40	—	—	3135	1960
X3140	—	0.38–0.43	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	1.10–1.40	—	—	A3141	1947
3140	—	0.38–0.43	0.70–0.90	0.040	0.040	0.20–0.35	0.55–0.75	1.10–1.40	—	—	3140	1964
3145	—	0.43–0.48	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	1.10–1.40	—	—	A3145	1952
3150	—	0.48–0.53	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	1.10–1.40	—	—	A3150	1952
3215	—	0.10–0.20	0.30–0.60	0.040	0.050	0.15–0.30	0.90–1.25	1.50–2.00	—	—	—	1941
3220	—	0.15–0.25	0.30–0.60	0.040	0.050	0.15–0.30	0.90–1.25	1.50–2.00	—	—	—	1941
3230	—	0.25–0.35	0.30–0.60	0.040	0.050	0.15–0.30	0.90–1.25	1.50–2.00	—	—	—	1941
3240	—	0.35–0.45	0.30–0.60	0.040	0.040	0.15–0.30	0.90–1.25	1.50–2.00	—	—	A3240	1941
3245	—	0.40–0.50	0.30–0.60	0.040	0.040	0.15–0.30	0.90–1.25	1.50–2.00	—	—	—	1941
3250	—	0.45–0.55	0.30–0.60	0.040	0.040	0.15–0.30	0.90–1.25	1.50–2.00	—	—	—	1941
3310	—	0.08–0.13	0.45–0.60	0.025	0.025	0.20–0.35	1.40–1.75	3.25–3.75	—	—	E3310	1964
3312	—	0.08–0.13	0.45–0.60	0.025	0.025	0.20–0.35	1.40–1.75	3.25–3.75	—	—	—	1948
3316	—	0.14–0.19	0.45–0.60	0.025	0.025	0.20–0.35	1.40–1.75	3.25–3.75	—	—	E3316	1956
3325	—	0.20–0.30	0.30–0.60	0.040	0.050	0.15–0.30	1.25–1.75	3.25–3.75	—	—	—	1936
3335	—	0.30–0.40	0.30–0.60	0.040	0.050	0.15–0.30	1.25–1.75	3.25–3.75	—	—	—	1936
3340	—	0.35–0.45	0.30–0.60	0.040	0.050	0.15–0.30	1.25–1.75	3.25–3.75	—	—	—	1936
3415	—	0.10–0.20	0.30–0.60	0.040	0.050	0.15–0.30	0.60–0.95	2.75–3.25	—	—	—	1941
3435	—	0.30–0.40	0.30–0.60	0.040	0.050	0.15–0.30	0.60–0.95	2.75–3.25	—	—	—	1936
3450	—	0.45–0.55	0.30–0.60	0.040	0.050	0.15–0.30	0.60–0.95	2.75–3.25	—	—	—	1936
4012	G40120	0.09–0.14	0.75–1.00	0.035	0.040	0.15–0.30	—	—	0.15–0.25	—	4012	1977
4024	G40240	0.20–0.25	0.70–0.90	0.035	0.035–0.050	0.15–0.35	—	—	0.20–0.30	—		
4028	G40280	0.25–0.30	0.70–0.90	0.035	0.035–0.050	0.15–0.35	—	—	—	—	4028	1993
4032	G40320	0.30–0.35	0.70–0.90	0.035	0.040	0.15–0.35	—	—	0.20–0.30	—		
4042	G40420	0.40–0.45	0.70–0.90	0.035	0.040	0.15–0.35	—	—	0.20–0.30	—		
4053	—	0.50–0.56	0.75–1.00	0.040	0.040	0.20–0.35	—	—	0.20–0.30	—	4053	1956
4063	G40630	0.60–0.67	0.75–1.00	0.040	0.040	0.20–0.35	—	—	0.20–0.30	—	4063	1964
4068	—	0.63–0.70	0.75–1.00	0.040	0.040	0.20–0.35	—	—	0.20–0.30	—	A4068	1957
4119	—	0.17–0.22	0.70–0.90	0.040	0.040	0.20–0.35	0.40–0.60	—	0.20–0.30	—	A4119	1956

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TABLE 1—FORMER STANDARD SAE STEELS (CONTINUED)

SAE No.	UNS No.	C	Mn	P, Max[1]	S, Max[1]	Si	Cr	Ni	Mo	V, Min	AISI No.	Date
4121	G41210	0.18–0.23	0.75–1.00	0.035	0.040	0.15–0.35	0.45–0.65	—	0.20–0.30	—	4121	1993
4125	—	0.23–0.28	0.70–0.90	0.040	0.040	0.20–0.35	0.40–0.60	—	0.20–0.30	—	A4125	1950
4131	G41310	0.28–0.33	0.50–0.70	0.035	0.040	0.15–0.35	0.90–1.20	—	0.15–0.25	—	4131	1993
4135	G41350	0.33–0.38	0.70–0.90	0.035	0.040	0.15–0.35	0.80–1.10	—	0.15–0.25	—		
4147	G41470	0.45–0.50	0.75–1.00	0.035	0.040	0.15–0.35	0.80–1.10	—	0.15–0.25	—	4147	1993
4161	G41610	0.56–0.64	0.75–1.00	0.035	0.040	0.15–0.35	0.70–0.90	—	0.25–0.35	—		
4317	—	0.15–0.20	0.45–0.65	0.040	0.040	0.20–0.35	0.40–0.60	1.65–2.00	0.20–0.30	—	4317	1953
4337	G43370	0.35–0.40	0.60–0.80	0.040	0.040	0.20–0.35	0.70–0.90	1.65–2.00	0.20–0.30	—	4337	1964
4419	—	0.18–0.23	0.45–0.65	0.035	0.040	0.15–0.30	—	—	0.45–0.60	—	4520	1977
4419H	—	0.17–0.23	0.35–0.75	0.035	0.040	0.15–0.30	—	—	0.45–0.60	—	4419H	1977
4422	G44220	0.20–0.25	0.70–0.90	0.035	0.040	0.15–0.35	—	—	0.35–0.45	—		
4427	G44270	0.24–0.29	0.70–0.90	0.035	0.040	0.15–0.35	—	—	0.35–0.45	—		
4608	—	0.06–0.11	0.25–0.45	0.040	0.040	0.25 max	—	1.40–1.75	0.15–0.25	—	4608	1956
46B12[3]	—	0.10–0.15	0.45–0.65	0.040	0.040	0.20–0.35	—	1.65–2.00	0.20–0.30	—	46B12	1957
4615	G46150	0.13–0.18	0.45–0.65	0.035	0.040	0.15–0.35	—	1.65–2.00	0.20–0.30	—		
4617	G46170	0.15–0.20	0.45–0.65	0.035	0.040	0.15–0.35	—	1.65–2.00	0.20–0.30	—		
X4620	—	0.18–0.23	0.50–0.70	0.040	0.040	0.20–0.35	—	1.65–2.00	0.20–0.30	—	X4620	1956
4621	G46210	0.18–0.23	0.70–0.90	0.035	0.040	0.15–0.30	—	1.65–2.00	0.20–0.30	—	4621	1977
4621H	—	0.17–0.23	0.60–1.00	0.035	0.040	0.15–0.30	—	1.55–2.00	0.20–0.30	—	4621H	1977
4626	G46260	0.24–0.29	0.45–0.65	0.035	0.040	0.15–0.35	—	0.70–1.00	0.15–0.25	—		
4640	—	0.38–0.43	0.60–0.80	0.040	0.040	0.20–0.35	—	1.65–2.00	0.20–0.30	—	A4640	1952
4715	G47150	0.13–0.18	0.70–0.90	0.035	0.040	0.15–0.35	0.45–0.65	0.70–1.00	0.45–0.60	—	4715	1993
4718	G47180	0.16–0.21	0.70–0.90	—	—	—	0.35–0.55	0.90–1.20	0.30–0.40	—		
4720	G4720	0.17–0.22	0.50–0.70	0.035	0.040	0.15–0.35	0.35–0.55	0.90–1.20	0.15–0.25	—	4720	1993
4812	—	0.10–0.15	0.40–0.60	0.040	0.040	0.20–0.35	—	3.25–3.75	0.20–0.30	—	4817	1956
4815	G48150	0.13–0.18	0.40–0.60	0.035	0.040	0.15–0.35	—	3.25–3.75	0.20–0.30	—	4815	1993
4817	G48170	0.15–0.20	0.40–0.60	0.035	0.040	0.15–0.35	—	3.25–3.75	0.20–0.30	—		
5015	G50150	0.12–0.17	0.30–0.50	0.035	0.040	0.15–0.30	0.30–0.50	—	—	—	5015	1977
50B40[3]	B50401	0.38–0.43	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	—	—	—		
50B44[3]	G50441	0.43–0.48	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	—	—	—		
5045	—	0.43–0.48	0.70–0.90	0.040	0.040	0.20–0.35	0.55–0.75	—	—	—	5045	1953
5046	G50460	0.43–0.48	0.75–1.00	0.035	0.040	0.15–0.35	0.20–0.35	—	—	—		
50B50[3]	G50501	0.48–0.53	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	—	—	—		
5060	G50600	0.56–0.64	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	—	—	—		
50B60[3]	G50601	0.56–0.64	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	—	—	—		
5115	G51150	0.13–0.18	0.70–0.90	0.035	0.040	0.15–0.35	0.70–0.90	—	—	—		
5117	G51170	0.15–0.20	0.70–0.90	0.040	0.040	0.15–0.35	0.70–0.90	—	—	—		
5135	G51350	0.33–0.38	0.60–0.80	0.035	0.040	0.15–0.35	0.80–1.05	—	—	—		
5145	G51450	0.43–0.48	0.70–0.90	0.035	0.040	0.15–0.30	0.70–0.90	—	—	—	5145	1977
5145H	H51450	0.42–0.49	0.60–1.00	0.035	0.040	0.15–0.30	0.60–1.00	—	—	—	5145H	1977
5147	G51470	0.46–0.51	0.70–0.95	0.035	0.040	0.15–0.35	0.85–1.15	—	—	—		
5152	—	0.48–0.55	0.70–0.90	0.040	0.040	0.20–0.35	0.90–1.20	—	—	—	5152	1956
5155	G51550	0.51–0.59	0.70–0.90	0.035	0.040	0.15–0.35	0.70–0.90	—	—	—		
50100	G50986	0.98–1.10	0.25–0.45	0.025	0.025	0.15–0.35	0.40–0.60	—	—	—		
E51100	G51986	0.98–1.10	0.25–0.45	0.025	0.025	0.15–0.35	0.90–1.15	—	—	—	E51100	1993
6115	—	0.10–0.20	0.30–0.60	0.040	0.050	0.15–0.30	0.80–1.10	—	—	0.15	—	1936

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TABLE 1—FORMER STANDARD SAE STEELS (CONTINUED)

SAE No.	UNS No.	C	Mn	P, Max[1]	S, Max[1]	Si	Cr	Ni	Mo	V, Min	AISI No.	Date
6117	—	0.15–0.20	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	—	—	0.10	6117	1956
6118	G61180	0.16–0.21	0.50–0.70	0.035	0.040	0.15–0.35	0.50–0.70	—	V–0.10–0.15	—		
6120	—	0.17–0.22	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	—	—	0.10	6120	1961
6125	—	0.20–0.30	0.60–0.90	0.040	0.050	0.15–0.30	0.80–1.10	—	—	0.15	—	1936
6130	—	0.25–0.35	0.60–0.90	0.040	0.050	0.15–0.30	0.80–1.10	—	—	0.15	—	1936
6135	—	0.30–0.40	0.60–0.90	0.040	0.050	0.15–0.30	0.80–1.10	—	—	0.15	—	1941
6140	—	0.35–0.45	0.60–0.90	0.040	0.050	0.15–0.30	0.80–1.10	—	—	0.15	—	1936
6145	—	0.43–0.48	0.70–0.90	0.040	0.050	0.20–0.35	0.80–1.10	—	—	0.15	6145	1956
6195	—	0.90–1.05	0.20–0.45	0.030	0.035	0.15–0.30	0.80–1.10	—	—	0.15	—	1936
71360	—	0.50–0.70	0.30 max	0.035	0.040	0.15–0.30	3.00–4.00	12.00–15.00W	—	—	—	1936
71660	—	0.50–0.70	0.30 max	0.035	0.040	0.15–0.30	3.00–4.00	15.00–18.00W	—	—	—	1936
7260	—	0.50–0.70	0.30 max	0.035	0.040	0.15–0.30	0.50–1.00	1.50–2.00W	—	—	—	1936
8115	G81150	0.13–0.18	0.70–0.90	0.035	0.040	0.15–0.35	0.30–0.50	0.20–0.40	0.08–0.15	—		
81B45[3]	G81451	0.43–0.48	0.75–1.00	0.035	0.040	0.15–0.35	0.35–0.55	0.20–0.40	0.08–0.15	—		
8627	G86270	0.25–0.30	0.70–0.90	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
8632	—	0.30–0.35	0.70–0.90	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—	8632	1951
8635	—	0.33–0.38	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—	8635	1956
8637	G86370	0.35–0.40	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—	8637	1993
8641	—	0.38–0.43	0.75–1.00	0.040	0.040-0.060	0.20–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—	8641	1956
8642	G86420	0.40–0.45	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
86B45[3]	G86451	0.43–0.48	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
8650	G86500	0.48–0.53	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
8653	—	0.50–0.56	0.75–1.00	0.040	0.040	0.20–0.35	0.50–0.80	0.40–0.70	0.15–0.25	—	8653	1956
8647	—	0.45–0.50	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—	8647	1948
8655	G86550	0.51–0.59	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
8660	G86600	0.56–0.64	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.15–0.25	—		
8715	—	0.13–0.18	0.70–0.90	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8715	1956
8717	—	0.15–0.20	0.70–0.90	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8717	1956
8719	—	0.18–0.23	0.60–0.80	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8719	1952
8735	G87350	0.33–0.38	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8735	1952
8740	G87400	0.38–0.43	0.75–1.00	0.035	0.040	0.15–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—		
8742	G87420	0.40–0.45	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8742	1964
8745	—	0.43–0.48	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8745	1953
8750	—	0.48–0.53	0.75–1.00	0.040	0.040	0.20–0.35	0.40–0.60	0.40–0.70	0.20–0.30	—	8750	1956
9250	—	0.45–0.55	0.60–0.90	0.040	0.040	1.80–2.20	—	—	—	—	9250	1941
9255	G92550	0.51–0.59	0.70–0.95	0.035	0.040	1.80–2.20	—	—	—	—	9255	1977
9261	—	0.55–0.65	0.75–1.00	0.040	0.040	1.80–2.20	0.10–0.25	—	—	—	9261	1956
9262	G92620	0.55–0.65	0.75–1.00	0.040	0.040	1.80–2.20	0.25–0.40	—	—	—	9262	1961
9310	G93106	0.08–0.13	0.45–0.65	0.025	0.025	0.15–0.35	1.00–1.40	3.00–3.50	0.08–0.15	—		
9315	—	0.13–0.18	0.45–0.65	0.025	0.025	0.20–0.35	1.00–1.40	3.00–3.50	0.08–0.15	—	E9315	1959
9317	—	0.15–0.20	0.45–0.65	0.025	0.025	0.20–0.35	1.00–1.40	3.00–3.50	0.08–0.15	—	E9317	1959
94B15[3]	G94151	0.13–0.18	0.75–1.00	0.035	0.040	0.15–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—		
94B17[3]	G94171	0.15–0.20	0.75–1.00	0.035	0.040	0.15–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—		
94B30[3]	G94301	0.28–0.33	0.75–1.00	0.035	0.040	0.15–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—		
9437	—	0.35–0.40	0.90–1.20	0.040	0.040	0.20–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—	9437	1950
9440	—	0.38–0.43	0.90–1.20	0.040	0.040	0.20–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—	9440	1950

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TABLE 1—FORMER STANDARD SAE STEELS (CONTINUED)

SAE No.	UNS No.	C	Mn	P, Max[1]	S, Max[1]	Si	Cr	Ni	Mo	V, Min	AISI No.	Date
94B40[3]	G94401	0.38–0.43	0.75–1.00	0.040	0.040	0.20–0.35	0.30–0.60	0.30–0.60	0.08–0.15	—	94B40	1964
9442	—	0.40–0.45	0.90–1.20	0.040	0.040	0.20–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—	9442	1950
9445	—	0.43–0.48	0.90–1.20	0.040	0.040	0.20–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—	9445	1950
9447	—	0.45–0.50	0.90–1.20	0.040	0.040	0.20–0.35	0.30–0.50	0.30–0.60	0.08–0.15	—	9447	1950
9747	—	0.45–0.50	0.50–0.80	0.040	0.040	0.20–0.35	0.10–0.25	0.40–0.70	0.15–0.25	—	9747	1950
9763	—	0.60–0.67	0.50–0.80	0.040	0.040	0.20–0.35	0.10–0.25	0.40–0.70	0.15–0.25	—	9763	1950
9840	G98400	0.38–0.43	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	0.85–1.15	0.20–0.30	—	9840	1964
9845	—	0.43–0.48	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	0.85–1.15	0.20–0.30	—	9845	1950
9850	G98500	0.48–0.53	0.70–0.90	0.040	0.040	0.20–0.35	0.70–0.90	0.85–1.15	0.20–0.30	—	9850	1961
43BV12[3]	—	0.08–0.13	0.75–1.00	—	—	0.20–0.35	0.40–0.60	1.65–2.00	0.20–0.30	0.03	—	—
43BV14[3]	—	0.10–0.15	0.45–0.65	—	—	0.20–0.35	0.40–0.60	1.65–2.00	0.08–0.15	0.03	—	—

1. Limits apply to semi-finished products for forgings, bars, wire rods, and seamless tubing.
2. These grades remain standard for wire rods.
3. Boron content 0.0005 to 0.003%.

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TABLE 2—FORMER EX/PS STEELS

EX/PS No.	Composition, % C	Composition, % Mn	Composition, % Cr	Composition, % Mo	Composition, % Other	Approximate SAE Grade	Deletion Date
EX No.							
1(1)	0.15–0.21	0.35–0.60	—	0.20–0.30	4.80–5.30 Ni	9310	1976
2(1)	0.64–0.75	0.25–0.45	0.15–0.30	0.08–0.15	0.70–1.00 Ni	—	1971
3	0.56–0.64	0.75–1.00	0.40–0.60	—	—	5060	Made standard
4	0.18–0.23	0.75–1.00	0.45–0.65	0.05–0.10	—	4118	1973
5	0.18–0.23	0.75–1.00	0.45–0.65	0.08–0.15	0.40–0.70 Ni	8620	1971
6	0.20–0.25	0.75–1.00	0.45–0.65	0.08–0.15	0.40–0.70 Ni	8622	1971
7	0.23–0.28	0.75–1.00	0.45–0.65	0.08–0.15	0.40–0.70 Ni	8625	1971
8	0.25–0.30	0.75–1.00	0.45–0.65	0.08–0.15	0.40–0.70 Ni	8627	1971
9(1)	0.19–0.24	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8620	1976
11(1)	0.38–0.43	0.75–1.00	0.25–0.40	0.05–0.10	0.20–0.40 Ni, 0.0005 B min	8640	1976
12	0.38–0.43	0.75–1.00	0.25–0.40	0.05–0.10	0.20–0.40 Ni, 0.0005 B min	8640	1976
13(1)	0.66–0.75	0.80–1.05	0.25–0.40	0.05–0.10	0.20–0.40 Ni	—	1976
14(1)	0.66–0.75	0.80–1.05	0.25–0.40	0.05–0.10	0.20–0.40 Ni	—	1976
15	0.18–0.23	0.90–1.20	0.40–0.60	0.13–0.20	—	—	
22	0.13–0.18	0.75–1.00	0.45–0.65	0.20–0.30	—	8615	1973
23	0.15–0.20	0.75–1.00	0.45–0.65	0.20–0.30	—	8617	1973
24	0.18–0.23	0.75–1.00	0.45–0.65	0.20–0.30	—	—	
25	0.20–0.25	0.75–1.00	0.45–0.65	0.20–0.30	—	8622	1973
26	0.23–0.28	0.75–1.00	0.45–0.65	0.20–0.30	—	8625	1973
27	0.25–0.30	0.75–1.00	0.45–0.65	0.20–0.30	—	8627	1976
28	0.16–0.21	0.75–1.00	0.45–0.65	0.30–0.40	0.40–0.70 Ni	4718	1973
29	0.18–0.23	0.75–1.00	0.45–0.65	0.30–0.40	0.40–0.70 Ni	4320	1976
30	0.13–0.18	0.70–0.90	0.45–0.65	0.45–0.60	0.70–1.00 Ni	—	
35	0.35–0.40	0.90–1.20	0.45–0.65	0.13–0.20	—	8637	1976
37	0.40–0.45	0.90–1.20	0.45–0.65	0.13–0.20	—	8642	1976
41	0.56–0.64	0.90–1.20	0.45–0.65	0.13–0.20	—	8660	1976
42	0.13–0.18	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8615	1976
43	0.13–0.18	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni, 0.0005 B min	—	1976
44	0.15–0.20	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8617	1976
45	0.15–0.20	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni, 0.0005 B min	—	1976
46	0.20–0.25	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8622	1976
47	0.23–0.28	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8625	1976
48	0.25–0.30	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8627	1976
49	0.28–0.33	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8630	1976
50	0.33–0.38	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8635	1976
51	0.35–0.40	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8637	1976
52	0.38–0.43	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8640	1976
53	0.40–0.45	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	8642	1976
60	0.20–0.25	1.00–1.30	0.70–0.90	—	—	—	1983
62	0.25–0.30	1.00–1.30	0.70–0.90	—	—	—	1983
PS No.							
10	0.19–0.24	0.95–1.25	0.25–0.40	0.05–0.10	0.20–0.40 Ni	—	1993
19	0.18–0.23	0.90–1.20	0.40–0.60	0.08–0.15	0.0005–0.003 B	—	1993
21	0.15–0.20	0.90–1.20	0.40–0.60	0.13–0.20	—	—	1993
31	0.15–0.20	0.70–0.90	0.45–0.65	0.45–0.60	0.70–1.00 Ni	—	1993
32	0.18–0.23	0.70–0.90	0.45–0.65	0.45–0.60	0.70–1.00 Ni	—	1993
34	0.28–0.33	0.90–1.20	0.40–0.60	0.13–0.20	—	—	1993
36	0.38–0.43	0.90–1.20	0.45–0.65	0.13–0.20	—	—	1993
38	0.43–0.48	0.90–1.20	0.45–0.65	0.13–0.20	—	—	1993
39	0.48–0.53	0.90–1.20	0.45–0.65	0.13–0.20	—	—	1993
40	0.51–0.59	0.90–1.20	0.45–0.60	0.13–0.20	—	—	1993
56	0.08–0.13	0.70–1.00	0.45–0.65	0.65–0.80	1.65–2.00 Ni	—	1993
57	0.08 Max	1.25 Max	17.00–19.00	1.75–2.25	0.15–0.35 S, 1.00 Max Si	—	1993
58	0.16–0.21	1.00–1.30	0.45–0.65	—	—	—	1993
59	0.18–0.23	1.00–1.30	0.70–0.90	—	—	—	1993
61	0.23–0.28	1.00–1.30	0.70–0.90	—	—	—	1993
63	0.31–0.38	0.75–1.10	0.70–0.90	—	0.0005–0.003 B	—	1993
64	0.16–0.21	1.00–1.30	0.70–0.90	—	—	—	1993
65	0.21–0.26	1.00–1.30	0.70–0.90	—	—	—	1993
66	0.16–0.21	0.40–0.70	0.45–0.75	0.08–0.15	1.65–2.00 Ni	—	1993
67	0.42–0.49	0.80–1.20	0.85–1.20	0.25–0.35	—	—	1993

1. All steels contain (1) 0.035 P max except EX 1 (0.040 P max), and EX 2, EX 13, and EX 14 (0.025 P max); (2) all contain 0.040 S max except EX 2, EX 13, and EX 14 (0.025 S max); and (3) all contain 0.15–0.35 Si except EX 9, EX 11, and EX 13 (0.050 Si max).

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