

For high tensile strength steel

COVERED ARC WELDING ELECTRODES

Type of covering	Brand name	Size (mm)	Equivalent specification	Welding position	Type of current	Typical chemical composition of all-weld-metal (%)						Typical mechanical properties of all-weld-metal				Application	Approvals
						C	Si	Mn	Cr	Ni	Mo	Y, P N _{min} ² [kgf/cm ²]	T.S N _{min} ² [kgf/cm ²]	EL (%)	LV J [kgf·m]		
Iron powder, titania type	K-7014	2.6-6.0	AWS E7014 JIS D4324	F, V, OH, H	AC/DC(±)	0.08	0.35	0.60	—	—	—	470 [48]	550 [56]	30	80 [8] (-29℃)	Welding of ship structures, bridges, sheet metal and structural steel for buildings.	ABS, KR, LR, NK, CWB
	K-7024	3.2-6.0	AWS E7024 JIS D4324	F, H-Fil	AC/DC(±)	0.09	0.35	0.78	—	—	—	480 [49]	570 [58]	28	70 [7] (0℃)	Flat and horizontal fillet welding of ship structures, bridges and general structural steels.	ABS, BV, DNV, GL, KR, LR, NK, CWB, JS
Low hydrogen type	KK-50LF	2.6-6.0	AWS E7016 JIS D5016	F, V, OH, H	AC/DC(+)	0.06	0.57	1.02	—	—	—	480 [49]	560 [57]	32	140 [14] (-29℃)	Welding of 480N/m ² class high strength steel of ships, buildings and pressure vessels.	ABS, BV, DNV, GL, KR, LR, NK, JS, KS
	KK-50B	2.6-6.0	AWS E7016-G JIS D5016	F, V, OH, H	AC/DC(+)	0.07	0.78	1.05	—	—	0.15	530 [54]	630 [64]	30	90 [9] (-29℃)	Welding of steel which is subjected to elevated temperature such as those found in the high pressure pipe and boiler industries.	
	KK-55	2.6-6.0	AWS E8016-G JIS D5316	F, V, OH, H	AC/DC(+)	0.08	0.50	1.20	—	—	—	540 [55]	600 [61]	28	130 [13] (-29℃)	Welding of 540N/m ² class high strength steel of ships, bridges and buildings.	
	KK-60	2.6-6.0	AWS E9016-G JIS D5616	F, V, OH, H	AC/DC(+)	0.07	0.58	1.04	—	0.64	0.26	550 [56]	650 [66]	29	140 [14] (-29℃)	Welding of 590N/m ² class high strength steel of pressure vessels, bridges, penstocks, vehicles and machinery.	
	KK-70	2.6-6.0	AWS E10016-G JIS D7016	F, V, OH, H	AC/DC(+)	0.08	0.37	1.05	—	1.87	0.40	640 [65]	730 [74]	26	120 [12] (-29℃)	Welding of 690N/m ² class high strength steel of pressure vessels, bridges and penstocks.	
	KK-80	2.6-6.0	AWS E11016-G JIS D8016	F, V, OH, H	AC/DC(+)	0.07	0.60	1.10	0.15	1.84	0.43	730 [74]	830 [85]	22	120 [12] (-29℃)	Welding of 790N/m ² class high strength steel of pressure vessels, bridges and penstocks.	
Low hydrogen, iron powder type	K-7018	2.6-6.0	AWS E7018 JIS D5016	F, V, OH, H	AC/DC(+)	0.07	0.57	0.97	—	—	—	480 [49]	570 [58]	30	90 [9] (-29℃)	Welding of 480N/m ² class high strength steel of ships, buildings and pressure vessels.	ABS, BV, DNV, GL, KR, LR, NK, CWB, JS, KS
	K-7028LF	4.5-6.4	AWS E7028 JIS D5026	F, H-Fil	AC/DC(+)	0.07	0.52	0.98	—	—	—	470 [48]	550 [56]	31	130 [13] (-18℃)	High deposition efficiency welding of flat and horizontal fillets, as well as deep groove joint in 480N/m ² high strength steel.	ABS, BV, DNV, GL, KR, LR, NK, CWB, JS
	K-8018	2.6-6.0	AWS E8018-G JIS D5316	F, V, OH, H	AC/DC(+)	0.06	0.54	1.08	—	0.31	0.20	490 [50]	590 [60]	28	150 [15] (-29℃)	Welding of 540N/m ² class high strength steel of ships, bridges, storage tanks and buildings.	ABS, JS
	K-9018M	2.6-6.0	AWS E9018-M JIS D5616	F, V, OH, H	AC/DC(+)	0.07	0.51	1.10	0.10	1.58	0.20	570 [58]	670 [68]	30	90 [9] (-51℃)	Welding of low alloy high strength steel having tensile properties of about 590N/m ² .	
	K-10018M	2.6-6.0	AWS E10018-M JIS D7016	F, V, OH, H	AC/DC(+)	0.07	0.46	1.35	0.14	1.63	0.28	640 [65]	750 [77]	29	70 [7] (-51℃)	Welding of low alloy high strength steel having tensile properties of about 690N/m ² .	
	K-11018M	2.6-6.0	AWS E11018-M JIS D8016	F, V, OH, H	AC/DC(+)	0.08	0.41	1.49	0.32	1.86	0.32	720 [73]	820 [84]	23	60 [6] (-51℃)	Welding of low alloy high strength steel having tensile properties of about 790N/m ² such as HY 80 etc.	
	K-12018M	2.6-6.0	AWS E12018-M	F, V, OH, H	AC/DC(+)	0.08	0.30	1.46	0.98	1.86	0.41	810 [83]	950 [97]	20	50 [5] (-51℃)	Welding of low alloy high strength steel having tensile properties of about 890N/m ² .	