



FLUX CORE WIRES FOR LOW TEMPERATURE SERVICE STEEL

Brand Name	Size (mm)	Equivalent Specification	Welding Position	Shielding Gas	Type of Current	Typical Chemical Composition of All-Weld Metal (%)								Typical Mechanical Properties of All-Weld Metal				Characteristics and Applications	Approvals	
						C	Si	Mn	P	S	Cr	Mo	Ni	Y.S (MPa)	TS (MPa)	E. (%)	I.V (J)			
K-71UT	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E71T-C/-9CJ H4 YFL-C504R T49 4 T1-1CA-U H5 T46 4 P C 1 H5 T49 4 T1-1CA-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.04	0.30	1.35	0.014	0.010	-	0.39	-	540	600	27	76 (-30°C) 55 (-40°C)	All position gas shielded 0.4%Ni alloyed Flux cored arc welding. Typical applications are railcar, automotive, heavy equipment and general structural steel fabrications.	ABS, BV, DNV, GL, KR, NK, LR, RS, JIS, KS, CE
K-71TSR	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E71T-12CJ H4 YFL-C504R T49 4 T1-1CAP-N1-U H5 T46 4 P C 1 H5 T49 4 T12-1CAP-N1-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.02	0.45	1.41	0.010	0.009	-	-	0.41	578	612	25	138 (-30°C) 119 (-40°C) (620°Cx2hr)	All position gas shielded 0.4%Ni alloyed Flux cored arc welding. Typical applications are railcar, automotive, heavy equipment and general structural steel fabrications. (NACE, API steel)	ABS, BV, DNV, GL, KR, NK, LR, JIS, KS, CE
K-71TSRM	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E71T-12MJ H4 YFL-A504R T49 4 T1-1 MAP-N1-U H5 T46 4 P M 1 H5 T49 4 T12-1 MAP-N1-U H5	F,V,OH, H,VD	Ar+20%CO ₂	DC(+)	0.03	0.50	1.50	0.008	0.010	-	-	0.42	580	610	27	74 (-30°C) 55 (-40°C) (620°Cx2hr)	Typical applications are railcar, automotive, heavy equipment and general structural steel fabrications. (NACE, API steel) Good impact value at low temperature down to -40°C in the PWHT conditions.	-
K-71TP	1.2~1.6	AWS A5.20 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E71T-1C/1M -12C/12M H4 T49 3 T1-1C/MA H10 T46 3 P C 1 H5 / M 1 H10 T49 3 T12-1CA H5 / 1MA H10	F,V,OH, H,VD	CO ₂	DC(+)	0.03	0.60	1.00	0.013	0.011	-	-	-	580	610	27	130 (-20°C) 100 (-30°C)	Welding of 490MPa tensile strength steel and titania type of flux cored wire for all-position. Typical applications are shipbuilding, pressure vessel, bridges, construction industries etc.	CE
K-80TK2	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E80T1-K2C H4 YFL-C506M T 55 6 T1-0 CA-N3-U T 50 6 1.5Ni M C 4 H5 T 55 6 T1-0CA-N3-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.03	0.45	1.50	0.014	0.010	-	-	1.50	550	640	25	100 (-30°C) 50 (-60°C)	Butt and fillet welding of 1.5% Ni steel and Al-killed steel for low temperature serviced steel at down to -60°C for offshore structure of LPG carriers.	ABS, BV, DNV, GL, KR, NK, LR
K-81TK2	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E81T1-K2C H4 YFL-C506R T55 6 T1-1CA-N3-U H5 T50 6 1.5Ni P C 1 H5 T55 6 T1-1CA-N3-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.03	0.45	1.50	0.012	0.009	-	-	1.50	550	640	25	120 (-30°C) 55 (-60°C)	MAG welding of Al-killed steel which are used for low temperature serviced steel at down to -60°C for offshore structure of LPG carriers.	ABS, BV, DNV, GL, KR, NK, LR, RS, JIS, KS, CE
K-81TSR	1.2~1.6	AWS A5.20 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E81T1-K2C H4 YFL-C506R T55 6 T1-1CAP-N3-U H5 T50 6 1.5Ni P C 1 H5 T55 6 T1-1CAP-N3-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.02	0.31	1.21	0.011	0.010	-	-	1.47	570	640	25	85 (-30°C) 65 (-60°C) (620°Cx2hr)	For gas shielded metal arc welding of 600MPa high tensile steel for low temperature service. LNG and LPG carriers and storage tank etc. (Acceptable for CTOD characteristics)	ABS, BV, DNV, GL, KR, NK, LR, RS, JIS, KS, CE
K-81TK2 Plus	1.2~1.6	AWS A5.29 KS D 7104 JIS Z 3313 EN ISO 17632-A EN ISO 17632-B	E81T1-K2C YFL-C506R T55 6 T1-1CA-N3-U H5 T50 6 1.5Ni P C 1 H5 T55 6 T1-1CA-N3-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.03	0.48	1.52	0.012	0.010	-	-	1.50	582	650	27	102 (-40°C) 57 (-60°C)	For gas shielded metal arc welding of 600MPa high tensile steel for low temperature service. LNG and LPG carriers and storage tank etc. (YP 460 class steels with min. yield strength for 460MPa)	-
K-91TK2	1.2~1.6	AWS A5.29 KS D 7104 JIS Z 3313 EN ISO 18276-A EN ISO 18276-B	E91T1-K2C H4 YFL-C604R T62 4 T1-1CA-N3M1-U H5 T55 4 Mn1.5Ni P C 1 H5 T 62 4 T1-1CA-N3M1-U H5	F,V,OH, H,VD	CO ₂	DC(+)	0.03	0.45	1.27	0.012	0.009	-	-	1.45	550	640	25	135 (-20°C) 90 (-40°C)	Welding of 620MPa high tensile steel for low temperature service. LNG and LPG carriers and storage tank etc.	ABS, JIS, CE