TOKO®
1978

GUIDE TO AWS ELECTRODE CLASSIFICATION(AWS AS.12 AS.5)

MILD STEEL (COVERED)
ELECTRODE CLASSIFICATION AWS A5.1-91
SMAW(MMA) PROCESS

E 60 1 0

ELECTRODE
STRENGTH KSI

POSITION
1. Flat, Horizontal,Vertical & Overhead
2. Flat & Horizontal only
3. Flat, Horizontal, Vertical-down & Overhead

Types of Coating & Current

Digit	Type of Coating	Welding Current
0	Cellulose Solution	DCEP
1	cellulose potassium	AC or DCEP/N
2	titania sodium	AC or DCEN
3	titania potassium	AC or DCEP/N
4	Iron powder titania	AC or DCEP/N
5	low hydrogen sodium	DCEP
6	low hydrogen potassium	AC or DCEP
7	iron powder iron oxide	AC or DCEP/N
8	iron pdr low hydrogen	AC or DCEP
E 6020	iron oxide sodium	AC or DCEP

AC - alternating current
DCEP - Direct Current Electrode Positive
DCEN - Direct Current Electrode Negative

LOW ALLOY(COVERED)
ELECTRODE CLASSIFICATION AWS A5.5-96

E 80 1 8 - B1

ELECTRODE
80,000psi min.
tensile strength required(stress relieved)

POSITION

AC or DCEP

Chemical Composition

suffix	C	Mn	Si	Ni	Cr	Mo	V
AI	0.12	0.6-1.0*	0.40-0.80*	-	-	0.4-0.65	-
B1	0.12	0.9	0.60-0.80*	-	0.40-0.65	0.4-0.65	-
B2L	0.05	0.9	0.6-1.0*	-	1.0-1.5	0.4-0.85	-
B2	0.12	0.9	0.60-0.80*	-	1.0-1.5	0.4-0.65	-
B3L	0.05	0.9	0.8-1.0*	-	20-2.5	0.9-1.2	-
B3	0.12	0.9	0.60-0.80*	-	2.0-2.5	0.9-1.2	-
B4L	0.05	0.9	1.00	-	1.75-2.25	0.4-0.65	
B5	0.07-0.15	0.40-0.70	0.30-0.60	-	0.40-0.60	1.0-1.25	0.05
B6	0.05-0.10	1.0	0.90	0.40	4.0-6.0	0.45-0.65	-
B6L	0.05	1.0	0.90	0.40	4.0-6.0	0.45-0.65	-
B7	0.05-0.10	1.0	0.90	0.40	6.0-8.0	0.45-0.65	-
B7L	0.05	1.0	0.90	0.40	6.0-8.0	0.45-0.65	-
B8	0.05-0.10	1.0	0.90	0.40	8.0-10.5	0.85-1.20	-
B8L	0.05	1.0	0.90	0.40	8.0-10.5	0.85-1.20	-
B9* **	0.08-0.13	1.25	0.30	0.40	8.0-10.5	0.85-1.20	0.15-0.30
C	0.12	1.25	0.60	2.00-2.75	-	-	-
C1L	0.05	1.25	0.50	2.00-2.75	-	-	-
C2	0.12	1.25	0.60	3.00-3.75	-	-	-
C2L	0.05	1.25	0.50	3.00-3.75	-	-	-
C3	0.12	0.40-1.25	0.80	0.80-1.10	0.15	0.35	0.05
C3L	0.08	0.40-1.40	0.50	0.80-1.10	0.15	0.35	0.05
C4	0.1	1.25	0.60	1.10-2.00	-	-	-
C5L	0.05	0.40-1.00	0.50	6.00-7.25	-	-	-
NM1	0.1	0.80-1.25	0.60	0.80-1.10	0.1	0.40-0.65	0.02
D1	0.12	1.25-1.75	0.80	-	-	0.25-0.45	-
D2	0.15	1.65-2.00	0.60	-	-	0.25-0.45	-
D3	0.12	1.00-1.80	0.60	0.9	-	0.40-0.65	-
G	-	1.0min	0.80min	0.50min	0.30min	0.20min	0.1min
P1	0.2	0.40-0.70	0.40-0.70	1	0.3	0.5	0.1
W1	0.12	0.40-0.70	0.40-0.70	0.20-0.40	0.15-0.30	-	0.08
W2	0.12	0.50-1.30	0.35-0.80	0.40-0.60	0.45-0.70	-	-
M&M1**	0.1	0.6-2.25*	0.6-0.8*	1.4-2.5*	0.15-1.5*	0.25-0.55*	0.05

SINGLE VALUES DENOTE MAXIMUM, REFER TO STD FOR FULL ANALYSIS

Note * AMOUNT DEPENDS ON ELECTRODE CLASSIFICATION SINGLE VALUE INDICATE MAXIMUM, CHECK A5.5 FOR DIFFERENT CLASSES

Note ** THERE ARE SEVERAL DIFFERENT "M" & "M1" CLASSES, "M" & "M1" CLASSIFICATIONS ARE INTENDED TO CONFORM TO MILITART SPECIFICATIONS. SEE SPECIFICATION

Note*** Cu-0.25,Al-0.04,Nb-0.02-0.10,N-0.02-0.07