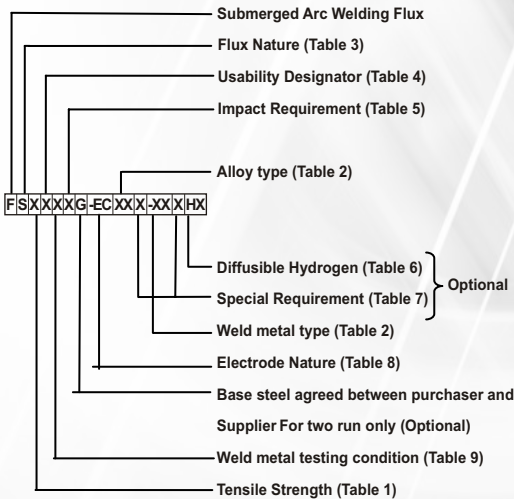


# LOW ALLOY STEEL CONSUMABLES AND FLUXES CLASSIFICATION FOR SAW (AWS A/SFA 5.23)



**Table 1: Tensile Strength of undiluted weld metal**

Code Digit	Tensile Strength, psi (MPa)	
	Two-run	Multiple pass
6	60,000(430)	Not Specified
7	70,000(490)	70,000-95, 000(490-660)
8	80,000(550)	80,000-100, 000(550-700)
9	90,000(620)	90,000-110,000(620-760)
10	100,000(690)	100,000-120,000(690-830)
11	110,000(760)	110,000-130,000(760-900)
12	1200,000(830)	120,000-140,000(830-970)
13	130,000(900)	130,000-150,000(900-1040)

**Table 2: Alloy/ Weld Metal Type**

Code Digit *	Alloy Type
A1,A2,A3,A4	C-Mo Steel
B1,B2,B2H,B3,B4,B5,B6,B6H,B8,B9	C-Cr-Mo Steel
Ni1,Ni2,Ni3	C-Ni Steel
Ni4,Ni5,F1,F2,F3	C-Ni-Mo Steel
F4,F5,F6	C-Cr-Ni-Mo Steel
M1,M2,M3,M4,M5,M6	High-Strength Low Alloy
W	Weathering Steel

'H' indicates High Carbon Version  
\*If prefixed with "E" indicates composition of solid electrode

**Table 3: Flux Nature**

Code Digit	Flux Nature
S	Crushed slag or blend of crushed slag with unused flux
Without 'S'	Virgin flux

**Table 4: Usability Designator**

Code Digit	Usability Designator
T	Two Run
No Code	Multiple pass

**Table 5: Impact Requirement for weld metal**

Code Digit	Max Test Temperature		Avg Value (J), min
	°F	°C	
0	0	0	27
2	-20	-20	
3	Not Specified	-30	
4	-40	-40	
5	-50	-50	
6	-60	-60	
7	Not Specified	-70	
8	-80	Not Specified	
10	-100	-100	
15	-150	Not Specified	
Z	No Impact Requirement		

**Table 6: Diffusible Hydrogen**

Code Digit	Diffusible Hydrogen Content, average (ml/100g Deposited Metal) max
H2	2
H4	4
H8	8
H16	16

**Table 8: Electrode Nature**

Code Digit	Electrode Nature
E	Electrode/ Solid electrode
EC	Composite electrode

**Table 7: Special Requirement**

Code Digit	Elements (maximum, %)	Application
N	P=0.012, V=0.05, Cu=0.08	Nuclear Application
R	P&S=0.01, Cu=0.15, As=Sn=Sb=0.005	Step cooling Application

**Table 9: Weld metal testing condition**

Code Digit	Testing Condition
A	As-Welded
P	Post Weld Heat treated



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