

S-900SP × M-12K[A-2]

TYPE : Active

AWS A5.17/ASME SFA5.17 F7A4(P2)-EM12K
 JIS Z3183 S502-H
 AWS A5.23/ASME SFA5.23 F9A2-EA2-G
 JIS Z3183 S582-H
 EN ISO 14174 S A CS 1 / EN ISO 14171 S2Si[S2Mo]

Applications

Butt and flat fillet welding of buildings, bridges and API Line-pipe (Longitudinal)

Characteristics on Usage

It provides good bead appearance, better slag removal and high impact value of the weld metal. It is relatively insensitive to rust and dirt on a base metal, and makes better resistance to pockmark and pit.

High impact values in both multi-run and two-run technique.

As the consumption of flux is low, it is very economical.

Notes on Usage

- ① Dry the flux at 300~350°C(572~662° F) for 60 minutes before use.
- ② When the flux height is excessive, poor bead appearance may occur.
- ③ Use welding current and speed as low as possible at the first layer of groove to avoid cracking.

Approval	I Current	I Basicity Index
NAKS(S-900SP×A-2)	AC, DC +	1.5

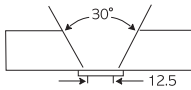
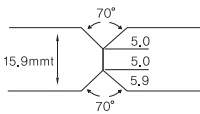
Typical Chemical Composition of All-Weld Metal (%)

Wire	C	Si	Mn	P	S	Mo	BM	Th.(mm)
M-12K	0.09	0.35	1.55	0.024	0.004	-	SS400	25
A-2	0.11	0.26	1.51	0.019	0.006	0.39	SM570	25
A-2	0.08	0.23	1.54	0.013	0.004	0.15	API 5L X70	15.9

Typical Mechanical Properties of All-Weld Metal

Wire	YS	TS	EL	Position of fracture	CVN-Impact Value J (ft · lbs)			BM	Th. (mm)
	MPa(lbs/in ²)	MPa(lbs/in ²)	(%)		-20°C(-4° F)	-30°C(-22° F)	-40°C(-40° F)		
M-12K	525 (76,100)	575 (83,400)	28	-	-	-	90 (66)	SS400	25
A-2	650 (94,300)	710 (103,000)	24	-	-	100 (73)	-	SM570	25
A-2	-	620 (89,900)	-	BM	110 (81)	-	-	API 5L X70	15.9

Typical Welding Conditions

Wire	Dia. (mm)	Th. (mm)	Groove Design (mm)	Pass	Amp. (A)	Volt. (V)	Speed (cm/min)	Remarks
M-12K (A-2)	4.0	25		1~13	570	30	40	AWS A5.17/ A5.23
A-2	L(DC+):4.0 T(AC) :4.0	15.9		In side 1st	(L)980 (T)800	34 38	100	Both Side Single-pass (tandem)
				Out side 2nd	(L)1000 (T)780	39 40	110	