

S-9018.B3R

TYPE : Basic

AWS A5.5 / ASME SFA5.5 E9018-B3
JIS Z3223 E6218-2C1M
EN 1599 ECrMo2 B 3 2 H5

SWAW

Applications

S-9018.B3R can be used for Welding of 2.25%Cr-1%Mo heat resistant steel. Used for steam pipes of boilers for power plant and marine use, equipment for oil refining industries, and high temperature synthetic chemical industries.

Characteristics on Usage

S-9018.B3R is an iron powder low hydrogen type electrode. Its coating contains much iron powder, which increases working efficiency. Relevant trace element P, Sn, As and Sb are controlled to ensure low X-Factor. (X-Factor ≤ 15ppm) Its usability is good with direct current applications and very low-hydrogen electrode. (HDM ≤ 5ml/100g) Good toughness against the impact value at low temperature.

Notes on Usage

- ① Dry the electrodes at 350~400°C(662~752°F) for 60 minutes before use.
- ② Preheat at 200~350°C(392~662°F) and postheat at 670~730°C(1256~1346°F).
- ③ Keep the arc as short as possible.

Welding Position



1G (PA) 2F (PB) 3G (PF) 4G (PE)

Current

AC or DC +

Typical Chemical Composition of All-Weld Metal (%)

C	Si	Mn	P	S	Cr	Mo	Sn	As	Sb	X-factor(ppm)
0.072	0.62	0.79	0.009	0.010	2.22	0.97	0.0060	0.0020	0.0070	13.1

X-factor = (10P + 5Sb + 4Sn + As)/100 ≤ 15 (ppm)

Typical Mechanical Properties of All-Weld Metal

YS MPa(lbs/in ²)	TS MPa(lbs/in ²)	EL (%)	CVN-Impact Value J (ft · lbs)		Heat Treatment
			0°C(32°F)	-20°C(-4°F)	
632 (91,700)	721 (104,600)	23.8	121 (89)	81 (60)	690°C(1274°F) X 1hr. S.R
606 (87,900)	703 (102,000)	25.2	132 (97)	105 (77)	690°C(1274°F) X 2hr. S.R

Approval

I Packing

Packet	5kg (11 lbs)
Carton	5kg (11 lbs) × 4 : 20kg(44 lbs)
Vacuum Pack	5kg (11 lbs)
Carton	5kg (11 lbs) × 4 : 20kg (44 lbs)

Sizes Available and Recommended Currents (Amp.)

Size mm (in)	2.6 (3/32)	3.2 (1/8)	4.0 (5/32)	5.0 (3/16)
Length mm(in)	350 (14)	350 (14)	400 (16)	400 (16)
F	60~90	90~130	130~190	190~240
V-up, OH	50~80	80~120	120~180	-