

Electrode: Low Temperature Steel

WE-8018C1



Welding Position

Classification	AWS A5.5M E5518-C1
	EN E 46 6 2Ni B 32



Application and Properties:

WE-8018C1 is an iron powder and low hydrogen type stick electrode for all-position welding that the weld metal chemical composition is 2.5%Ni. It can obtain good notch toughness with impact requirement down to -60°C. It is suitable for the welding of low temperature facilities.

Notes on Usage:

1. Dry the stick electrode at 350 – 400°C for one hour before welding.
2. Be sure to remove moisture, oil, and rust on the base metal.
3. Preheating treatment before welding at 90 – 110°C and try to keep low hydrogen situation during whole welding process.
4. Keep short arc length when welding. To avoid blowholes when striking the arc, please use backstep method welding technique during welding process.
5. To relieve stress, PWHT at 605 – 635°C.
6. Current Type: DC or AC.
7. Because of excessive heat input, the impact value tends to be lower. Therefore, choose proper heat input is very important.

Chemical Composition of Deposited Metal:

Element wt%	C	Mn	Si	Cr	Ni	Mo	P	S
AWS	0.12	1.25	0.8	-	2.00-2.75	-	0.035	0.035
Type Value	0.08	0.98	0.59	0.08	2.38	0.015	0.015	0.008

Mechanical Properties of Deposited Metal:

	Yield Stress MPa	Tensile Strength MPa	Elongation %	Charpy V-notch J/°C	PWHT
AWS	460	550	19	27/-60	620°C±15°C/1hr
Type Value	510	580	28	80/-60	620°C±15°C/1hr

Size Available and Recommended Parameter:

Diameter and Size/mm		2.6×350	3.2×350	4.0×400	5.0×450
Current/Amp	F	70-100	100-140	140-180	180-230
	V, OH	60-90	90-130	120-160	-

Electrode: Low Temperature Steel

WE-8018C2



Welding Position

Classification	AWS A5.5M E5518-C2
	EN E 46 6 2Ni B 12



Application and Properties:

WE-8018C2 is an iron powder and low hydrogen type stick electrode for all-position welding that the weld metal chemical composition is 3.5%Ni. It can obtain good notch toughness with impact requirement down to -70°C. It is suitable for the welding of low temperature facilities.

Notes on Usage:

1. Dry the stick electrode at 350 – 400°C for one hour before welding.
2. Be sure to remove moisture, oil, and rust on the base metal.
3. Preheating treatment before welding at 90 – 110°C and try to keep low hydrogen situation during whole welding process.
4. Keep short arc length when welding. To avoid blowholes when striking the arc, please use backstep method welding technique during welding process.
5. To relieve stress, PWHT at 605 – 635°C.
6. Current Type: DC or AC.
7. Because of excessive heat input, the impact value tends to be lower. Therefore, choose proper heat input is very important.

Chemical Composition of Deposited Metal:

Element wt%	C	Mn	Si	Cr	Ni	Mo	P	S
AWS	0.12	1.25	0.8	-	3.00-3.75	-	0.03	0.03
Type Value	0.075	0.90	0.51	0.08	3.32	0.03	0.015	0.011

Mechanical Properties of Deposited Metal:

	Yield Stress MPa	Tensile Strength MPa	Elongation %	Charpy V-notch J/°C	PWHT
AWS	460	550	19	27/-70	620°C±15°C/1hr
Type Value	520	600	29	80/-70	620°C±15°C/1hr

Size Available and Recommended Parameter:

Diameter and Size/mm		2.6×350	3.2×350	4.0×400	5.0×450
Current/Amp	F	70-100	100-140	140-180	180-230
	V, OH	60-90	90-130	120-160	-

Electrode: Low Temperature Steel

WE-8018C3



Welding Position

Classification	AWS A5.5M E5518-C3
	EN E 46 6 1Ni B 12



Application and Properties:

WE-8018C2 is an iron powder and low hydrogen type stick electrode for all-position welding that the weld metal chemical composition is 1%Ni. It can obtain good notch toughness with impact requirement down to -40°C. It is suitable for the welding of low temperature facilities and LPG storage tanks.

Notes on Usage:

1. Dry the stick electrode at 350 – 400°C for one hour before welding.
2. Be sure to remove moisture, oil, and rust on the base metal.
3. Preheating treatment before welding at 90 – 110°C and try to keep low hydrogen situation during whole welding process.
4. Keep short arc length when welding. To avoid blowholes when striking the arc, please use backstep method welding technique during welding process.
5. To relieve stress, PWHT at 605 – 635°C.
6. Current Type: DC or AC.
7. Because of excessive heat input, the impact value tends to be lower. Therefore, choose proper heat input is very important.

Chemical Composition of Deposited Metal:

Element wt%	C	Mn	Si	Cr	Ni	Mo	P	S
AWS	0.12	0.40-1.25	0.80	0.15	0.80-1.10	0.35	0.03	0.03
Type Value	0.072	0.92	0.39	0.07	1.08	0.05	0.015	0.011

Mechanical Properties of Deposited Metal:

	Yield Stress MPa	Tensile Strength MPa	Elongation %	Charpy V-notch J/°C
AWS	460	550	19	27/-40
Type Value	520	600	29	110/-40

Size Available and Recommended Parameter:

Diameter and Size/mm		2.6×350	3.2×350	4.0×400	5.0×450
Current/Amp	F	70-100	100-140	140-180	180-230
	V, OH	60-90	90-130	120-160	-