KC-80SNi1

(Low Temp. Service Steel 1% Ni Solid Wire)

KISWEL

Rev.0

KC-80SNi1

KISWEL

■ Description & Application

- **It is designed for welding of 550MPa high tensile steel for low temperature service above -45℃.**
- **Suited for welding 1% Ni steel and other low temperature for low temperature pressure vessel, tank and pipe.**
- **Solid wire for welding of low temperature equipment and structure.**

■ Classification

- **AWS A5.18-2005 : ER80S-Ni1**
- **EN ISO 14341-A : G 46 6 M G3Ni1**

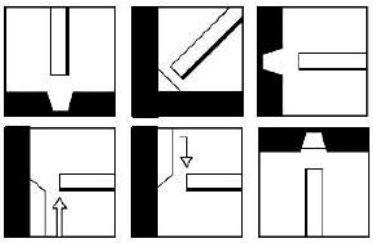
■ Typical Chemical Composition of Wire (%)

	C	Si	Mn	P	S	Ni
AWS ER80S-Ni1	≤0.12	0.40-0.80	≤1.25	≤0.025	≤0.025	0.80-1.10
EN ISO G3Ni1	0.06-0.14	0.50-0.90	1.00-1.60	≤0.020	≤0.020	0.80-1.50
KC-80SNi1	**0.09**	**0.63**	**1.11**	**0.009**	**0.008**	**0.83**

■ Shielding Gas

- **98% Ar + 2% O_2 (15~25ℓ/min)**

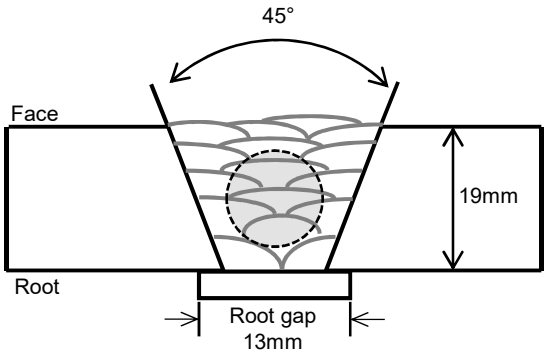
■ Welding Position



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All Weld Metal Test Specimen



Base metal	A515 Gr.70
Diameter	1.2mm
Current / Voltage	280A / 30V
Stick out	20mm
Travel Speed	30 CPM
Welding Position	PA / 1G

Typical Mechanical Properties of Weld Metal

	Shielding Gas	PWHT	Y.S (MPa)	T.S (MPa)	El. (%)	IV (J) (Joule @ Temp)
AWS ER80S-Ni1	-	AW	≥ 470	≥ 550	≥ 24	≥ 27 @ -45℃
EN ISO 3Si1	-	AW	≥ 420	500~640	≥ 20	≥ 47 @ -30℃
KC-80SNi1	**Ar + 2%O_2**	**AW**	**576**	**675**	**25**	**124 @ -45℃ 92 @ -60℃**
KC-80SNi1	**Ar + 2%O_2**	**620℃ 1Hrs**	**537**	**597**	**25**	**127 @ -45℃ 120 @ -60℃**
KC-80SNi1	**Ar + 2%O_2**	**620℃ 20Hrs**	**510**	**604**	**27**	**138 @ -45℃ 100 @ -60℃**

Typical Operating Procedures

Dia (mm)	Shielding Gas	Current (amps)	Voltage (volts)	Feed speed (m/min)	Melt-off Rate (Kg/Hr)
0.9	Ar + 2% O_2	190-280	24-30	9.5-15.5	2.4-4.2
1.2	Ar + 2% O_2	280-340	27-30	8.5-12.5	4.2-6.2
1.4	Ar + 2% O_2	300-440	30-34	7.5-12.5	5.1-8.5
1.6	Ar + 2% O_2	320-440	28-32	5.5-7.5	4.9-6.7

* Polarity : DCEP (DC+)

■ Packaging





■ Size and Weight

Dia. (mm)	0.6, 0.8, 0.9, 1.0, 1.14, 1.2, 1.32, 1.4, 1.6			
Weight (kg)	2	5	12.5, 15, 20	100~450
Packaging	Plastic Spool			Pail-pack / DPP
	-		Wire Basket	

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The Management System of KISWEL LTD, 704, Gongdan-ro, Seongsan-gu, Changwon-si, Gyeongnam 51544, Republic of Korea, 70, Saebyeok-ro 63beon-gil, Sasang-gu, Busan 47018, Republic of Korea has been approved by Lloyd's Register Quality Assurance to : IATF 16949:2016, ISO 14001:2015, applicable to : Manufacture of solid welding wires & rods, flux cored wires, submerged arc welding wires & fluxes, stainless steel welding wires & rods and covered electrodes.
More information : www.kiswel.com

