

SC-414S

MARTENSITIC STS TYPE SUBMERGED ARC WIRE

HYUNDAI WELDING CO., LTD.



❖ Specification

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❖ Description & Applications

SC-414S is specifically designed for weld overlay on continuous caster rolls and provides the greatest resistance to thermal fatigue cracking and corrosion.

(Steel Mill Rolls, Casting Rolls, etc.)

❖ Welding Process

SAW (with S-717 flux or S-400HF)

❖ Current Type

DC+

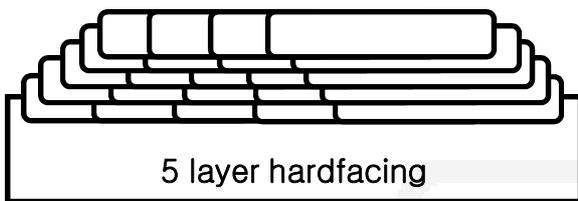
❖ Packing

SC-414S	Dia.	2.4mm(3/32in) 3.2mm(1/8in)
	Coil	25kg(55lbs)
	Pailpack	150kg(330lbs), 250kg(551lbs)



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



Diameter	: 2.4mm(3/32in)
Welding Type	: SAW(S-717)
Amp./ Volt.	: 380 / 28
Stick-Out	: 25~30mm(0.98~1.18in)
Pre-Heat	: 150~250℃ (302~482°F)
Interpass Temp.	: 200~300℃ (392~572°F)
Total layers	: ≥4 layer

❖ Chemical Analysis of All weld metal(wt%)

Consumable	C	Si	Mn	Cr	Ni	Mo	Nb	V
SC-414S	0.13	0.65	1.19	14.03	2.87	1.06	0.21	0.31

❖ Hardness test of All weld metal(HRc)

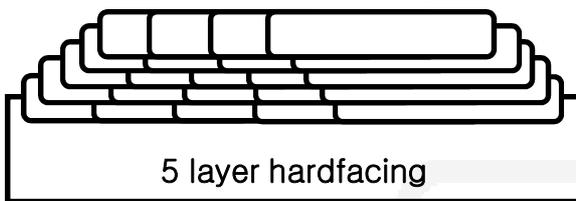
Consumable	Hardness(HRc)					Avg.
SC-414S	41	43	43	44	45	43

This information is provided solely for the purpose of confirming product conformance with applicable standards. The serviceability of a product or structure utilizing this type of information is and must be the sole responsibility of the builder/user. Many variables beyond the control of HYUNDAI WELDING CO., LTD. affect the results obtained in applying this type of information. These variables include, but are not limited to, welding procedure, shielding gas, plate chemistry and temperature, weldment design, fabrication methods and service requirements.



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions



Diameter	: 3.2mm(1/8in)
Welding Type	: SAW(S-717)
Amp./ Volt.	: 400 / 30
Stick-Out	: 25~30mm(0.98~1.18in)
Pre-Heat	: 150~250℃(302~482°F)
Interpass Temp.	: 200~300℃(392~572°F)
Total layers	: ≥4 layer

❖ Chemical Analysis of All weld metal(wt%)

Consumable	C	Si	Mn	Cr	Ni	Mo	Nb	V
SC-414S	0.12	0.54	1.43	14.01	2.86	1.08	0.21	0.40

❖ Hardness test of All weld metal(HRc)

Consumable	Hardness(HRc)					Avg.
SC-414S	42	42	43	43	45	43

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Test Results

❖ BEAD APPEARANCE

Consumable	SC-414S (2.4mm, 3/32in)
Amp.(A)	360~380
Volt.(V)	27~28
Carrige Speed	40~60cm/min(15.7~23.6in/min)
Welding Position	Flat(1G)



Consumable	SC-414S (3.2mm, 1/8in)
Amp.(A)	380~400
Volt.(V)	28~30
Carrige Speed	40~60cm/min(15.7~23.6in/min)
Welding Position	Flat(1G)



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