HYUNDAI WELDING

Rev. 07

SW-625

FLUX CORED ARC WELDING CONSUMABLES
FOR WELDING OF NICKEL-CHROMIUM-MOLYBDENUM ALLOYS

2021.02

HYUNDAI WELDING CO., LTD.

SW-625

❖ Specification

AWS A5.34	ENiCrMo3T1-1/-4
JIS Z3335	TNI6625-FB1
EN ISO 12153	T Ni 6625 P M21/C1 2

❖ Applications

Joining nickel-chromium-molybdenum alloys
Cladding steel with nickel- chromium-molybdenum weld metal
LNG storage tank manufacture, desulfurization, heat exchanger

❖ Characteristics on Usage

Excellent corrosion resistance of crevice and pitting, SCC
Good Tensile strength in high temperature
Good impact value at cryogenic temperature

❖ Note on Usage

Use 100% Co2, Ar+20~25%CO2 gas

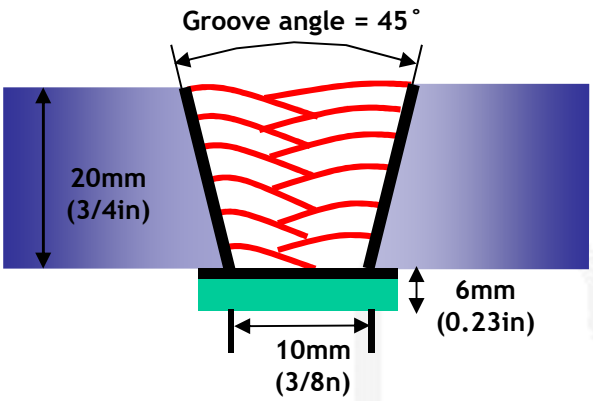
❖Packing

Diameter	1.2mm (0.045in)			
Spool *including ball pac	5kg (11lbs)	12.5kg (28lbs)	15kg (33lbs)	20kg (44lbs)

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter(mm)	:	1.2mm(0.045 in)
Shielding Gas	:	100% CO2
Flow Rate(ℓ /min.)	:	20~22
Amp./ Volt.	:	210/29
Stick-Out(mm)	:	20(3/4 in)
Pre-Heat(℃)	:	R.T . ℃(°F)
Interpass Temp.(℃)	:	≤150℃(302°F)
Polarity	:	DC(+)

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
SW-625	TS(Mpa/ksi)	EL(%)	-196℃ (-320°F)
	759(110)	40.0	75(55.3)
AWS A5.34 ENiCrMo3TX-X	≥690	≥25	-
EN ISO 12153 T Ni 6625 P M 2	≥690	≥22	-

❖ Chemical Analysis of the All weld metal(wt%)

Consumables	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	Nb	Fe
SW-625	0.024	0.42	0.34	0.004	0.002	64.9	20.9	8.9	0.23	3.53	0.37
AWS A5.34 ENiCrMo3TX-X	≤0.1	≤0.5	≤0.5	≤0.02	≤0.015	≥58.0	20.0 ~23.0	8.0 ~10.0	≤0.4	3.15 ~4.15	≤5.0
EN ISO 12153 T Ni 6625 P M 2	≤0.1	≤0.5	≤0.5	≤0.02	≤0.015	≥58.0	20.0 ~23.0	8.0 ~10.0	≤0.4	3.15 ~4.15	≤5.0

Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

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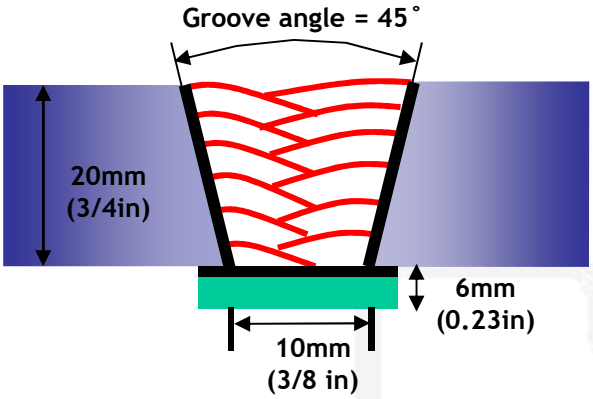

[Joint Preparation & Layer Details]

Diameter(mm)	:	1.2mm(0.045in)
Shielding Gas	:	Ar + 20% CO2
Flow Rate(ℓ /min.)	:	20~22
Amp./ Volt.	:	210/29
Stick-Out(mm)	:	20(3/4 in)
Pre-Heat(℃)	:	R.T . ℃(°F)
Interpass Temp.(℃)	:	≤150℃(302°F)
Polarity	:	DC(+)

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
SW-625	TS(Mpa/ksi)	EL(%)	-196℃ (-320°F)
	760(110)	40.0	80(59.0)
AWS A5.34 ENiCrMo3TX-X	≥690	≥25	-
EN ISO 12153 T Ni 6625 P M 2	≥690	≥22	-

❖ Chemical Analysis of the All weld metal(wt%)

Consumables	C	Si	Mn	P	S	Ni	Cr	Mo	Ti	Nb	Fe
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Recommended welding parameter range & Bead Appearance

❖ Proper Current Range

Consumable	Shielding Gas	Welding Position	Wire Dia.
			1.2mm (0.045 in)
SW-625	100%CO_2 or Ar-20~25%CO_2	F	160~220Amp
		HF	160~220Amp
		V-Up & OH	140~180Amp

Bead appearance
(1G,200A/29V)

Pipe welding(3G)
(170A/27V)

Pipe welding(4G)
(170A/27V)

Bead appearance
(3G,170A/26V)