

SW-625

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

2021.02

HYUNDAI WELDING CO., LTD.



❖ 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

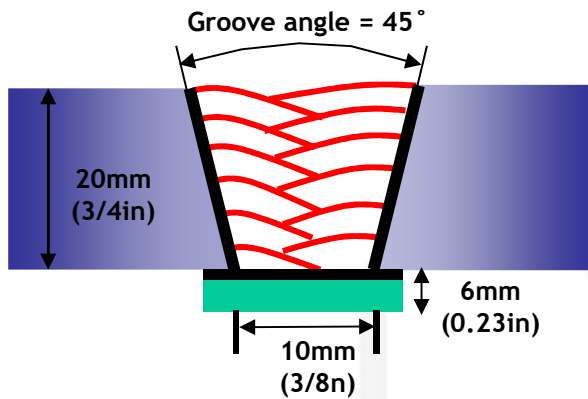
Diameter	1.2mm (0.045in)			
	Spool *including ball pac	5kg (11lbs)	12.5kg (28lbs)	15kg (33lbs)



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% CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 210/29
Stick-Out(mm)	: 20(3/4 in)
Pre-Heat(°C)	: R.T. °C(°F)
Interpass Temp.(°C)	: ≤150°C(302°F)
Polarity	: DC(+)

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
	TS(Mpa/ksi)	EL(%)	
SW-625	759(110)	40.0	-196°C (-320°F) 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

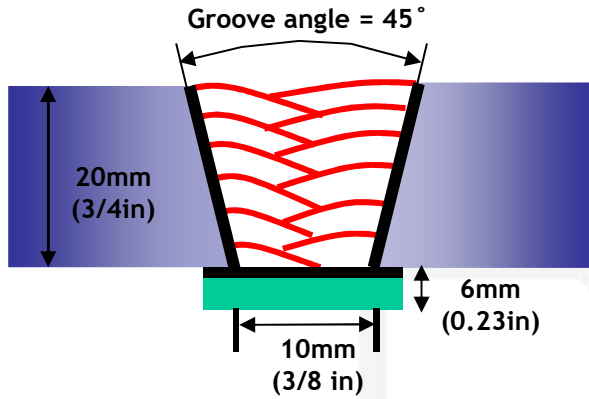
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Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Spec.



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm(0.045in)
Shielding Gas	: Ar + 20% CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 210/29
Stick-Out(mm)	: 20(3/4 in)
Pre-Heat(°C)	: R.T. °C(°F)
Interpass Temp.(°C)	: ≤150°C(302°F)
Polarity	: DC(+)

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
	TS(Mpa/ksi)	EL(%)	-196°C (-320°F)
SW-625	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%)

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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)**

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