

SW-182

FLUX CORED ARC WELDING CONSUMABLES
FOR WELDING OF NICKEL-CHROMIUM ALLOYS
AND DISSIMILAR METAL WELDING

2021.02

HYUNDAI WELDING CO., LTD.



❖ **Specification**

AWS A5.34

ENiCrFe3T1-1/4

❖ **Applications**

Cladding of reactor vessels , Welding of 3~7%Nickel steel for LNG Tanks
Dissimilar metal welding(9Cr-1Mo-V-Nb, stainless steel)
Welding of high molybdenum austenitic stainless steels
in scrubber fabrication

❖ **Characteristics
on Usage**

Good Tensile strength in high temperature
Good impact value at cryogenic temperature

❖ **Note on Usage**

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

❖ **Packing**

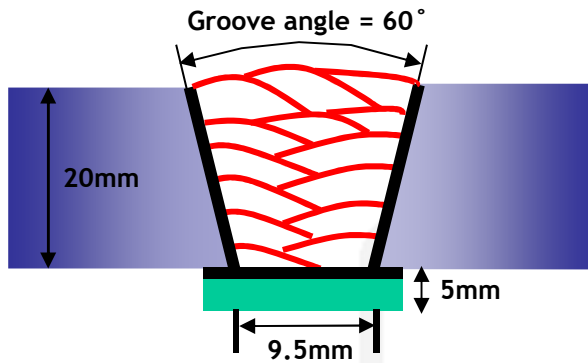
Dia.	1.2mm(0.045in)	
Spool(Kg)	12.5kg (28lbs)	15kg (33lbs)



Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Rules



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm
Shielding Gas	: 100% CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 200 / 31
Stick-Out(mm)	: 20
Pre-Heat(°C)	: R.T .
Polarity	: DC(+)
Inter-passs temp.	≤150°C

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
	TS(MPa/lbs/in ²)	El.(%)	-196°C (-320°F)
SW-182	611	44	105
AWS A5.34 ENiCrFe3TX-X	≥ 560	≥ 25	Not Specified

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

Consumables	C	Si	Mn	P	S	Ni	Cr	Nb	Ti	Fe
SW-182	0.05	0.3	6.7	0.001	0.010	64.78	16.5	1.96	0.2	8.9
AWS A5.34 ENiCrFe3TX-X	≤0.1	≤1.0	5.0~ 9.5	≤0.03	≤0.015	≥59.0	13.0~ 17.0	1.0~ 2.5	≤1.0	≤10.0

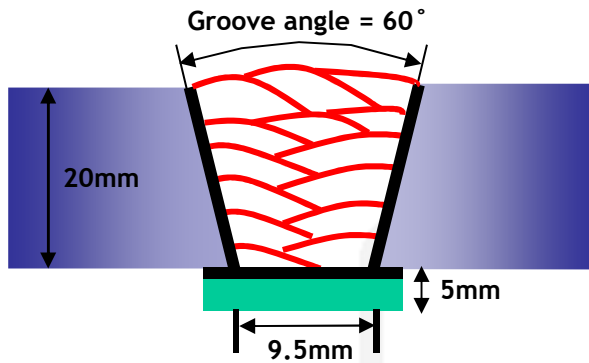
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Mechanical Properties & Chemical Composition of All Weld Metal

❖ Welding Conditions

Method by AWS Rules



[Joint Preparation & Layer Details]

Diameter(mm)	: 1.2mm
Shielding Gas	: Ar+20% CO ₂
Flow Rate(ℓ /min.)	: 20~22
Amp./ Volt.	: 200 / 29
Stick-Out(mm)	: 20
Pre-Heat(°C)	: R.T .
Polarity	: DC(+)
Inter-pass temp.	≤150°C

❖ Mechanical Properties of the All weld metal

Consumables	Tensile Test Results		CVN Impact Value (Joules)
	TS(MPa/lbs/in ²)	El.(%)	-196°C (-320°F)
SW-182	640	37	100
AWS A5.34 ENiCrFe3TX-X	≥ 560	≥ 25	Not Specified

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

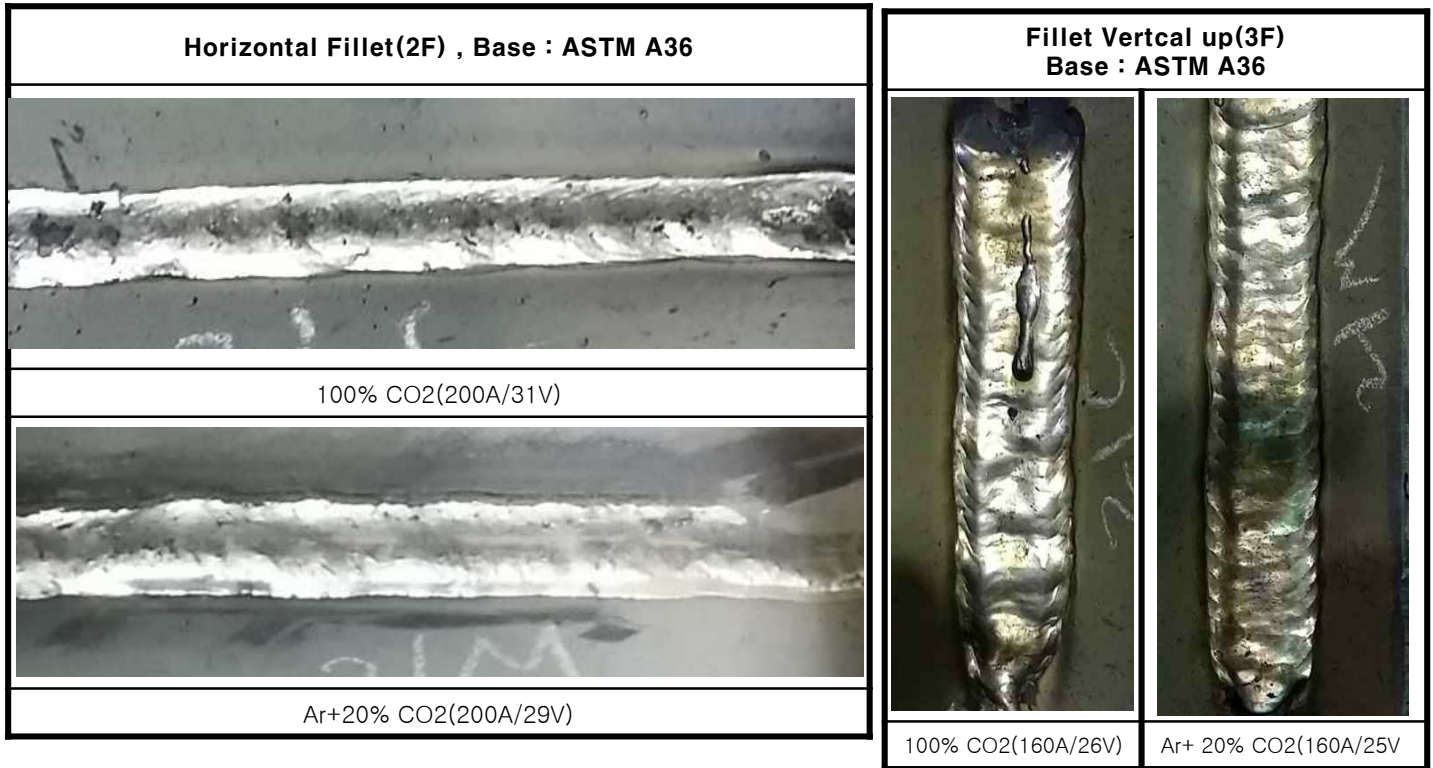
Consumables	C	Si	Mn	P	S	Ni	Cr	Nb	Ti	Fe
SW-182	0.05	0.3	6.3	0.001	0.010	66.22	16.2	1.9	0.2	8.6
AWS A5.34 ENiCrFe3TX-X	≤0.1	≤1.0	5.0~9.5	≤0.03	≤0.015	≥59.0	13.0~17.0	1.0~2.5	≤1.0	≤10.0

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Mechanical Properties & Chemical Composition of All Weld Metal

❖ Bead Appearance



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