

# **SMT-276**

**AWS A5.14/ ASME SFA5.14 ERNiCrMo-4**

2020.06



## ❖ Specification

AWS A5.14/ ASME SFA 5.14      ERNiCrMo-4

## ❖ Applications

– Pump, valves, pipe works and vessels for use in aggressive environment  
in chemical process plants, also in equipment for flue gas desulphurisation and critical equipment in offshore oil and gas production

## ❖ Characteristics on Usage

– Excellent corrosion resistance in a wide range of aggressive organic and inorganic acid media  
– Preheat is not required, interpass temperature should preferably be kept below 100°C and heat input restricted to 1.5KJ/min.

## ❖ Note on Usage

Use 100%Ar or Ar+30%He

## ❖ Packing

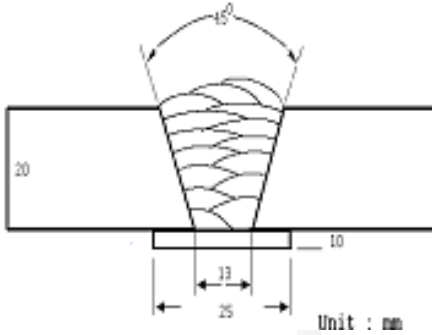
<b>Dia.</b>	1.0mm (0.040in)	1.2mm (0.045in)	1.4mm (0.052in)	1.6mm (1/16in)
<b>MIG</b>	12.5kg (27.6lbs)			

<b>Dia.</b>	2.0mm (5/64in)	2.4mm (3/32in)	3.2mm (1/8in)
<b>TIG</b>	5kg (11lbs)		



## Mechanical Properties & Chemical Composition of All Weld Metal

### ❖ Welding Conditions



[ Joint Preparation & Layer Details ]

<b>Diameter(mm)</b>	: 1.2mm
<b>Shielding Gas</b>	: 100%Ar
<b>Flow Rate(ℓ /min.)</b>	: 20~25
<b>Amp./ Volt.</b>	: 160~240 /
<b>Pre-Heat(℃)</b>	: R.T.
<b>Interpass Temp.(℃)</b>	: 150 ± 15
<b>Polarity</b>	: DC(+)

### ❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)							
	T.S. MPA (ksi)	EL. (%)	-60℃ (-76°F)				-196℃ (-320.8°F)			
SMT-276 (MIG)	743 (108)	49	x1	x2	x3	Avg.	x1	x2	x3	Avg.
			158 (117)	165 (122)	154 (114)	159 (118)	155 (115)	144 (107)	136 (101)	145 (107)

### ❖ Chemical Analysis of the wire(wt%)

Consumable	C	Si	Mn	P	S	Ni	Cr	Mo	Cu
SMT-276	0.011	0.05	0.53	0.009	0.001	58.25	15.92	15.95	0.04
AWS A5.14 ERNiCrMo-4	≤0.02	≤0.08	≤1.0	≤0.04	≤0.03	Rem.	14.5 ~16.5	15.0 ~17.0	≤0.5

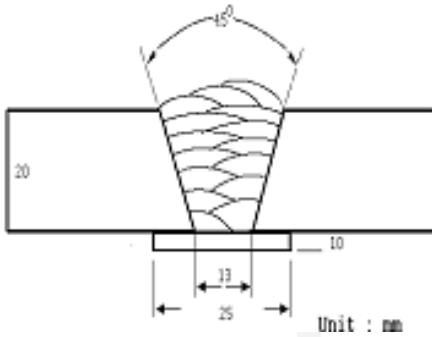
Consumable	V	Fe	W
SMT-276	0.04	5.71	3.39
AWS A5.14 ERNiCrMo-4	≤0.35	4.0 ~7.0	3.0 ~4.5

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



[ Joint Preparation & Layer Details ]

<b>Diameter(mm)</b>	: 2.4mm
<b>Shielding Gas</b>	: 100%Ar
<b>Flow Rate(ℓ /min.)</b>	: 20~25
<b>Amp./ Volt.</b>	: 160~240 /
<b>Pre-Heat(℃)</b>	: R.T.
<b>Interpass Temp.(℃)</b>	: 150 ± 15
<b>Polarity</b>	: DC(-)

### ❖ Mechanical Properties of All weld metal

Consumable	Tensile Test		CVN Impact test Joule (ft·lbs)							
	T.S. MPA (ksi)	EL. (%)	-60℃ (-76°F)				-196℃ (-320.8°F)			
SMT-276 (TIG)	750 (109)	33	x1	x2	x3	Avg.	x1	x2	x3	Avg.
			131 (97)	134 (99)	124 (91)	131 (97)	100 (74)	105 (77)	104 (77)	103 (76)

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