

# ST-80CM

Heat resistance – low alloy steel

## Conformances

AWS A5.28 / ASME SFA5.28 ER80S-G  
 JIS Z3317 YG1CM-A / JIS Z3316 YGT1CM  
 EN ISO 14341-B S2M3

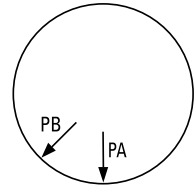
## Applications

- Pressure vessels
- Offshore
- Machinery
- Chemical industry

## Features

- MIG welding for boiler steam pipe of steam power generation and 1.0~1.25%Cr-0.5%Mo heat resisting steel using for refining oil & chemical industrial machine tool.
- Excellent TS and impact value in a high temperature after heat treatment.

## Welding Position



## Current

DC -

## Shielding Gas

100% Ar  
 Ar + 2% O<sub>2</sub>

## Diameter / Packaging

Diameter mm (in)	Spool			Ball Pac		
	5kg (11lbs)	15kg (33lbs)	20kg (44lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
0.8 (0.033)	✓	✓	✓	✓	✓	✓
0.9 (0.035)	✓	✓	✓	✓	✓	✓
1.0 (0.040)	✓	✓	✓	✓	✓	✓
1.2 (0.045)	✓	✓	✓	✓	✓	✓
1.4 (0.052)	✓	✓	✓	✓	✓	✓
1.6 (1/16)	✓	✓	✓	✓	✓	✓

SMW

SAW

GMW

GTAW

FCAW

Non-FERROUS

APPENDIX

Typical Chemical Composition of the Wire(%)

C	Si	Mn	Cr	Mo
0.09	0.67	1.02	1.19	0.45

Typical Mechanical Properties of All-Weld Metal

	YS MPa(lbs/in <sup>2</sup> )	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft.lbs)	PWHT
As welded with 100% Ar	630 (91,500)	28	0 (32) -20 (-4)	290 (215) 280 (207)	690°C × 1Hr

Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm(in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)
<b>0.9mm (0.035in), DC +</b>					
100% CO <sub>2</sub> Gas	12 (1/2)	2.5 (100)	80	18	0.7 (1.6)
		3.8 (150)	120	19	1.1 (2.4)
		6.4 (250)	175	21	1.8 (4.0)
Mixed Gas (Ar+CO <sub>2</sub> )	19 (3/4)	8.9 (350)	195	23	2.7 (6.0)
		12.7 (500)	230	29	3.6 (8.0)
		15.2 (600)	275	30	4.4 (9.6)
<b>1.0mm (0.040in), DC +</b>					
100% CO <sub>2</sub> Gas	12 (1/2)	2.5 (100)	80	18	0.7 (1.6)
		3.8 (150)	120	19	1.1 (2.4)
		6.4 (250)	175	21	1.8 (4.0)
Mixed Gas (Ar+CO <sub>2</sub> )	19 (3/4)	8.9 (350)	195	23	2.7 (6.0)
		12.7 (500)	230	29	3.6 (8.0)
		15.2 (600)	275	30	4.4 (9.6)
<b>1.2mm (0.045in), DC +</b>					
100% CO <sub>2</sub> Gas	12 (1/2)	2.5 (100)	80	18	0.7 (1.6)
		3.8 (150)	120	19	1.1 (2.4)
		6.4 (250)	175	21	1.8 (4.0)
Mixed Gas (Ar+CO <sub>2</sub> )	19 (3/4)	8.9 (350)	195	23	2.7 (6.0)
		12.7 (500)	230	29	3.6 (8.0)
		15.2 (600)	275	30	4.4 (9.6)