

## GMAW Wires for Heat Resistant Steel

# KMS-505

### Classification

AWS	A5.28	ER80S-B8
JIS	Z3317	G55A-9C1M
EN	3580-A	E CrMo9 B
GB	T 8110	ER55-G

Shielding Gas Ar+1~2%O<sub>2</sub>

### Applications and Features

- (1) It is suitable for welding Cr-Mo steel.
- (2) Weld metal contains 9%Cr-1%Mo.
- (3) It is ideal for welding heat resistant steel of high temperature/pressure equipment, such as ASTM A219-T9 and A385-P9.

### Welding Instruction

- (1) Clean up the contaminations on the steel before welding.
- (2) It provides high hardenability with air cooling. Preheat and PWHT are required.
- (3) Preheat and interpass temperature are: 177~232°C, PWHT: 840~870°C.
- (4) Please refer to Appendix A.

### Typical Chemical Composition of Weld Metal (wt %)

C	Si	Mn	P	S	Cr	Mo
0.080	0.40	0.50	0.012	0.009	9.00	1.02

### Typical Mechanical Properties of Weld Metal (PWHT:850°Cx2Hr)

Tensile Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Yield Strength N/mm <sup>2</sup> (kgf/mm <sup>2</sup> )	Elongation %	Charpy V-Notch	
			°C	J (kgf -m)
640(65.3)	490(50.0)	24	0	—
			-20	—

### Size and Suggested Operating Range (DC+)

Parameters	Diameter (mm)				
	1.0	1.2	1.4	1.6	
Short-Circuit Transfer	A	80~160	100~210	—	—
	V	16~22	17~22	—	—
Spray Transfer	A	180~280	200~300	210~320	220~330
	V	24~30	24~30	24~32	24~32