

MC-50

For mild steel and 50kgf/mm² class high tensile strength steel

AWS A5.18 ER70S-G
KS D 7025 YGW11
JIS Z3312 YGW11

Application

Butt and fillet MAG welding of structures such as vehicles, buildings, ships, machinery and bridges.

Characteristics

- (1) As a solid wire, deposition rate is high and the penetration is quite deep. So, high efficiency welding can be performed.
- (2) The deposition efficiency is high because of no slag formation, the welding time can be reduced.
- (3) The arc stability is good and spatter loss is low. So, welding job is easy.

Typical chemical composition of weld metal (%)

(Shield Gas : 100%CO₂)



C	Mn	Si	P	S
0.09	1.09	0.46	0.013	0.012

Typical mechanical properties of weld metal

(Shield Gas : 100%CO₂)

YP N/mm ² (kgf/mm ²)	TS N/mm ² (kgf/mm ²)	EL %	IV J (kgf-m)	PWHT
			0°C	
470(48)	560(57)	30	120(12.2)	As welded
420(43)	520(53)	34	140(14.3)	620°C×1hr SR

An example of joint weld test (Shield gas: 100%CO₂)

Position	Steel	Dia. (mm)	Depositing sequence	Welding condition				Joint tensile test		IV J (kgf-m)
				Pass	Amp.	Volt.	Speed (cm/min)	TS N/mm ² (kgf/mm ²)	Fractured position	
F	SM 50A	1.2 1.6		1 (1.2MM)	260	29	30	560(57)	Base metal	81(8.3)
				2-7 (1.6MM)	350	32	30-40			
H	SM 50A	1.2 1.6		1 (1.2MM)	260	29	40	560(57)	Base metal	98(10)
				2-8 (1.6MM)	350	32	30-55			

Size & recommended current range (DC +)

Dia. (mm)	1.0	1.2	1.4	1.6	2.0
	Amp.	F 50-220	100-350	150-450	200-550
	H 50-200	100-300	150-350	200-400	-

• Approval : ABS, BV, DNV, GL, KR, LR, NK