

YM-55AZ

☆AWS A5.18 ER70S-G

For X42 to X70 pipeline and root welding

APPLICATIONS

Welding of X42 to X70 with Ar+CO₂
Welding of root pass

CHARACTERISTICS

YM-55AZ that is used with Ar+CO₂ shielding gas is a solid wire for gas metal arc welding. Arc is stable, spatters are few and weldability is excellent even in high welding current range. High efficiency is obtained in automatic and semi-automatic welding due to high deposition rate and deep penetration. It is also applicable Pulse welding process with Ar+CO₂, automatic and robot welding process.

WELDING POSITION



■ TYPICAL CHEMICAL COMPOSITION OF WELD METAL (%)

C	Si	Mn	P	S
0.09	0.65	1.35	0.015	0.010

■ TYPICAL MECHANICAL PROPERTIES OF WELD METAL

Shielding gas	Yield Point, MPa	Tensile Strength, MPa	Elongation, %	Charpy 2V-notch at -20°C, J
Ar-20%CO ₂	572	612	30	155

■ TYPICAL WELD JOINT TEST

Base metal	Tensile test		Charpy 2V-notch	
Plate Thickness	Tensile Strength, MPa	Fracture position	-40°C	-20°C
X70 equivalent 22	625	Base metal	86	121

■ TYPICAL WELDING CONDITIONS

Pass	Welding consumables (wire dia.mm)	Welding method	Wire feedspeed m/min	Welding current A	Arc voltage V	Travel speed cm/min	Heat input kJ/cm
Root pass (inner side)	YM-55AZ ER70S-G (0.9 or 1.0)	Short circuit arc welding (DC+)	7.3	170	21	70	3.1
Hot pass	YM-55AZ ER70S-G (1.0)	Pulse welding (DC+)	12.5	220	24	70	4.5
Filler layers			10.5	180	23	45	5.6
Cover pass			6.6	125	22	45	3.8