THQ-50C (ER70S-6)

CARBON STEEL MIG WELDING WIRE

AWS A5.18 ER70S-6
ISO 14341-A-G42 3C1 Z3Si1
GB/T 8110 G49A3UC1S6

APPLICATION

Welding 490 MPa class carbon and low-alloy steel structures.

CHARACTERISTICS

THQ-50C is a solid gas-shielded welding wire for C1 or M21 shielding gas. It offers low susceptibility to weld metal porosity and good all-position welding performance.

PRECAUTIONS

Remove rust, oil, moisture, and other contaminants from the workpiece before welding. Welding heat input directly affects weld mechanical properties. Select heat input according to the structural criticality. For more critical structures, keep heat input as low as practicable. The listed welding parameters are reference values. Establish a welding procedure suitable for the actual production conditions.

WELDING POSITIONS



MECHANICAL PROPERTIES

Items	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)	Impact energy at -30 °C (J)
Requirements	500-640	≥420	≥20	≥47
Typical results	560	450	26	108

Test shielding gas: CO_2

WIRE CHEMICAL COMPOSITION (%)

Items	C	Mn	Si	S	P	Ni	Cr	Mo	V
Requirements	0.06-0.15	1.40-1.85	0.80-1.15	≤0.025	≤0.025	≤0.15	≤0.15	≤0.15	≤0.03
Typical results	0.08	1.50	0.89	0.012	0.013	0.03	0.02	0.002	0.003
Items	**Cu**								
Requirements	≤0.50								
Typical results	0.11								

TYPICAL OPERATING PROCEDURES

DCEP

Diameter (mm)	0.8	1.0	1.2	1.6
Current (A)	50-180	70-230	80-350	120-500

X-ray radiographic inspection: Level II

CERTIFICATION

ABS 3YSAH10 · BV SA3YMHH · CCS 3YSM · DNV III YMS(H10) · LR 3YSH15 · NK KSW53G(C)H10 · KR 3YSG(C)H10 · CWB B-G49A3CG6 · RS 3Y40SM / 3YSM · CE (CPD) G42 3 C1 Z3Si1

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