

AWS A5.28: E110C-K4 H4

EN ISO 18276-A: T 69 6 Mn2NiCrMo M M21 1 H5

WELDING POSITIONS:



FEATURES	BENEFITS	APPLICATIONS
<ul style="list-style-type: none"> Extremely low diffusible hydrogen weld deposit Good reignition characteristics Ideal for use of short arc and spray arc Excellent gap bridging for root welding High deposition rate and efficiencies Virtually no slag coverage Smooth arc characteristic 	<ul style="list-style-type: none"> BWB-WIWEB Approval Minimized risk of hydrogen-induced cracking No re-drying Suitable for robot applications Reduces clean-up time, improves productivity Root welding without any backing Automatic root welding possible 	<ul style="list-style-type: none"> Automatic and mechanized welding Steel structures Offshore structures Pipelines Non-alloy and fine grain steels Vessels General fabrication Heavy equipment Single and multi-pass welding

WIRE TYPE	Gas shielded metal-cored wire
SHIELDING GAS	75-85% Argon (Ar) / Balance Carbon Dioxid (CO ₂); Gas Flow 12-18 l/min (25-38 cfm)
TYPE OF CURRENT	Direct Current Electrode Positive (DCEP)
STANDARD DIAMETERS	Ø 1.2 mm (0.045")
TYPICAL DIFFUSIBLE HYDROGEN*	< 3.0 ml / 100 g; Guaranteed for the total processing time < 4.0 ml / 100 g maximum (AWS Spec)
RE-DRYING	Not required due to seamless wire design.
STORAGE	The same conditions as for solid wire. Product should be stored in a dry, enclosed environment, in its original undamaged packaging

*Measurement technique is the carrier gas method according to AWS and ISO

MATERIALS TO BE WELDED*

Material	Rel ≤ 690 MPa	Material
Unalloyed structural steels	Rel ≤ 690 MPa	S620 - S690, A 106, A 600
Boiler steels	Rel ≤ 690 MPa	P620GH - P620GH up to A517; A 537; A625
Pipe steels	Rel ≤ 690 MPa	P620 - P690
Fine grain structural steels	Rel ≤ 690 MPa	S620 - S 620QLI up to A 625
Steels to API-standard	Rel ≤ 690 MPa	X70 - X100 / HY100

*) The specified base materials are not complete and should only be seen as examples. The selection of the appropriate combination of steel and welding consumable should follow the specific mechanical strength and toughness requirements.

ALL WELD METAL CHEMISTRY (%) (typical values for mixed gas 82% Ar / 18% CO₂)

Element	Typical value (%)	Element	Typical value (%)
Carbon (C)	0.05	Nickel (Ni)	2.2
Manganese (Mn)	1.6	Molybdenum (Mo)	0.5
Silicon (Si)	0.4	Chromium (Cr)	0.5
Sulphur (S)	0.015		
Phosphorus (P)	0.015		

ALL WELD METAL MECHANICAL PROPERTIES (for mixed gas 82% Ar / 18% CO₂)

Mechanical tests	Typical values MPa (ksi)	ISO Specification MPa (ksi)
Tensile Strength Rm	820 (119) (with due regard of the 8/5 time)	770 - 940 (112 - 136)
Yield strength Rp0.2	750 (109) (with due regard of the 8/5 time)	> 690 (100)
Expansion A5	20%	17%

CHARPY V-NOTCH IMPACT VALUES (for mixed gas 82% Ar / 18% CO₂)

Mechanical Tests	Typical values [J] (ft.lbf)	ISO Specification [J] (ft.lbf)
-40 °C	120 (89)	> 69 (51)
-60 °C	90 (66)	> 69 (51)

APPROVALS: TÜV, BV, LR, ABS, DNV-GL, BWB-WIWEB

Please contact the manufacturer to learn the present scope of approvals

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