

AWS A5.28: E80C-B2 H4

EN ISO 17634-A: T CrMo1 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 Virtually no slag coverage Smooth arc characteristic 	<ul style="list-style-type: none"> Minimizes risk of hydrogen-induced cracking Suitable for robot applications Automatic root welding possible Root-welding without any backing Improved efficiency Reduced cleaning time Easy handling 	<ul style="list-style-type: none"> Automatic and mechanized welding Steel structures Pipelines Cast steels Steam boilers and turbines (Mo steels up to 550 °C (1022 °F)) Single and multi-pass welding

**WIRE TYPE
SHIELDING GAS**

Gas shielded metal-cored wire
75-85% Argon (Ar) / Balance Carbon Dioxid (CO₂); Gas Flow 12-18 l/min (25-38 cfh)

**TYPE OF CURRENT
STANDARD DIAMETERS
TYPICAL DIFFUSIBLE HYDROGEN***

Direct Current Electrode Positive (DCEP)
Ø 1.0 - 1.2 mm (0.039 - 0.045")
< 3.0 ml / 100 g; Guaranteed for the total processing time < 4.0 ml / 100 g maximum (AWS Spec)

**RE-DRYING
STORAGE**

Not required due to seamless wire design.
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*

Boiler steels	Rel ≤ 460 MPa	13CrMo4-5
Cast steels	Rel ≤ 460 MPa	G17CrMo5-5, G22CrMo5-4
Similar alloyed heat treatable steels and similar alloyed cementation and nitrited steels.		
*) 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)

Carbon (C)	0.06	Nickel (Ni)	-
Manganese (Mn)	0.9	Molybdenum (Mo)	0.5
Silicon (Si)	0.3	Chromium (Cr)	1.2
Sulphur (S)	0.01		
Phosphorus (P)	0.01		

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	600 (87)	550 - 690 (80 - 100)
Yield strength Rp0.2	520 (75)	> 470 (68)
Expansion A5	24%	20%
The specified values apply to the stress-relieved condition (690 °C / 60 min)		

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

Mechanical Tests	Typical values [J] (ft.lbf)	ISO Specification [J] (ft.lbf)
RT	120 (88)	> 47 (35)
-40 °C	52 (38)	
The specified values apply to the stress-relieved condition (690 °C / 60 min)		

APPROVALS: CE, TÜV

Revision: 1/22

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