BÖHLER NiCrMo 2,5-IG

Solid Wire, low-alloyed, high strength

Classifications

EN ISO 16834-A -	AWS A5.28 / SFA-5.28
G 69 6 M21 Mn3Ni2,5CrMo	ER110S-G
G 62 4 C1 Mn3Ni2,5CrMo	

Characteristics and typical fields of application

GMAW low-alloyed solid wire electrode for joining of quenched and tempered and thermomechanically rolled fine-grained structural steel with yield strength up to 690 MPa. Due to the higher Ni-content, outstanding tough weld metal at low temperatures when deposited with mixed gas M21 is achieved.
Good resistance to cold cracking, stable arc with low spatter formation also when welding out of position (i.e. welding of pipe knots of crane towers). For use in crane and vehicle constructions. Meets stringent requirement on low-temperature toughness down to -60ºC using Ar / (5-25%) CO_2 shielding gas. e.g in marine engineering for the manufacture of LPG tankers and offshore constructions.

Base materials

Quenched and tempered fine-grained steel with high requirements for low-temperature toughness
S620Q, S620QL, S690Q, S690QL, S620QL1-S690QL1, S650MC, S700MC
alform plate 620 M, 700 M, aldur 620 Q, 620 QL, 620 QL1, aldur 700 Q, 700 QL, 700 QL1
ASTM A 514 Gr. F, H, Q ; A 709 Gr. 100 Type B, E, F, H, Q ; A 709 Gr. HPS 100W

Typical analysis

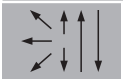
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.08	0.6	1.4	0.3	2.5	0.4

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength $R_{p0.2}$	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J		
	MPa	MPa	%	20°C	-40°C	-60°C
u1	810 (≥ 700)	910 (≥ 790)	(≥ 18)	120 (≥ 100)	75 (≥ 55)	(≥ 47)
u2	(≥ 690)	(≥ 770)	(≥ 17)	(≥ 70)	70 (≥ 47)	-

u1 untreated, as welded – shielding gas Ar + 15 – 25% CO_2
u2 untreated, as welded – shielding gas CO_2

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	M20 M21 C1

Dimension mm
1.0
1.2

Preheating and interpass temperature as required by the base metal.

Approvals

DB (42.132.73), ABS, BV, DNV, LR (suppl. list), CE