BÖHLER NiCu 1-IG

Solid Wire, low-alloyed, high strength

Classifications

EN ISO 14341-A	AWS A5.28 / SFA-5.28
G 42 4 M21 Z3Ni1Cu	ER80S-G

Characteristics and typical fields of application

GMAW Ni-Cu-alloyed solid wire for weatherproof structural steels. The weld metal has the same corrosion properties as matching weatherproof structural steels. For use with CO_2 and gas mixture. Outstanding toughnesss of the weld metal at low temperatures. For use in steel framed structures, in bridge building and rail vehicle manufacture.

Base materials

Weather-resistant constructional steels, special grade constructional steels
S235JRG2Cu, S235J2G4Cu, S235J0Cu, S235JRW, S355J0Cu, S355J2G3Cu, S355J0W, 235J2W-S355J2W, S355K2W
ASTM A 588 Gr. A, B, C, K; A 618 Gr. II; 709 Gr. C

Typical analysis

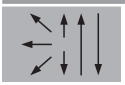
	C	Si	Mn	Ni	Cu
wt.-%	0.1	0.5	1.1	0.9	0.4

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
u	470 (≥ 420)	580 (≥ 500 – 670)	26 (≥ 20)	130	≥ 47
s	460	540	20	130	

u untreated, as welded – shielding gas Ar + 15 – 25 % CO_2 or 100 % CO_2
s stress relieved, 600 °C/2h – shielding gas Ar + 15 – 25 % CO_2 or 100 % CO_2

Operating data



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

Dimension mm
0.8
1.0
1.2
1.6

Approvals

DB (42.132.69), CE