BÖHLER NiMo 1-IG

Solid Wire, low-alloyed, high strength

Classifications

EN ISO 16834-A	AWS A5.28 / SFA-5.28
G 55 6 M21 Mn3Ni1Mo	ER90S-G
G 55 4 C1 Mn3Ni1Mo	

Characteristics and typical fields of application

GMAW low-alloyed solid wire for joining of quenched and tempered and thermomechanically rolled fine-grained structural steels. The wire is suited for boiler, pressure vessel, pipeline, and crane construction as well as structural steel engineering. Due to the precise addition of micro alloying the weld metal features excellent ductility and crack resistance. Good impact energy down to -60ºC. The chemical composition of the wire meets the NORSOK- Standard for "water injection systems".

Base materials

Fine-grained steels and quenched and tempered fine-grained steels
S460N, S460M, S460NL, S460ML, S460Q-S555Q, S460QL-S550QL, S460QL1-S550QL1, 460N,P460NH, P460NL1, P460NL2, L415NB, L415MB-L555MB, L415QB-L555QB, alform 500 M, 550 M, aldur 500 Q, 500 QL, 500 QL1, aldur 550 Q, 550 QL, 550 QL1, 20MnMoNi4-5, 15NiCuMoNb5-6-4
ASTM A 572 Gr. 65; A 633 Gr. E; A 738 Gr. A; A 852; API 5 L X60, X65, X70, X80, X60Q, X65Q, X70Q, X80Q

Typical analysis

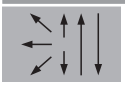
	C	Si	Mn	Ni	Mo
wt.-%	0.08	0.6	1.8	0.9	0.3

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	620 (≥550)	700 (640 – 820)	23 (≥18)	140 (≥ 47)	110 (≥ 47)	(≥ 47)
u2	590 (≥550)	680 (640 – 820)	22 (≥18)	120 (≥ 47)	(≥ 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)	C1 M21

Dimension mm
0.9
1.0
1.2

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (11763), DB (42.132.76), DNV, CE