BÖHLER alform® 700-IG

Solid wire, low-alloyed, high strength

Classifications

EN ISO 16834-A	AWS A5.28 / SFA-5.28
G 79 5 M21 Mn4Ni1,5CrMo	ER110S-G

Characteristics and typical fields of application

High-strength, medium solid wire electrode for shielded arc welding of quenched and tempered fine grained structural steel alform® 700 M. Outstanding tough weld metal at low temperature when deposited with gas mixture. Good deformability; outstanding mechanical properties even at higher electric heat input per unit length of weld. Good resistance to cold cracking due to high purity of the wire surface. For use in crane and vehicle manufacturing.

Base materials

High strength steels like S690Q, S690QL, aldur 700Q, 700QL, alform® 700 M (wire is especially balanced for this plate steel)
ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type E, F, H, Q; A 709 Gr. HPS 100W

Typical analysis

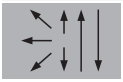
	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.09	0.7	1.70	0.30	1.85	0.60

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	-50°C
u	≥ 790	≥ 880 - 1080	≥ 16	≥ 90	≥ 47

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

Operating data



Polarity	DC+	Dimension mm
Shielding gas (EN ISO 14175)	M21	1.0
		1.2

Preheating and interpass temperature as required by the base metal.

Approvals

DB (42.132.60), NAKS, CE