Union X 70

Solid Wire, low-alloyed, high strength

Classifications

EN ISO 16834-A -	AWS A5.28 / SFA-5.28
G 69 5 M Mn3Ni1CrMo	ER110S-G

Characteristics and typical fields of application

GMAW wire for the welding of high-strength, heat treated, fine-grained constructional steels with a minimum yield strength of 690 MPa. Due to the precise addition of micro-alloying elements X 70-IG wire features excellent ductility and crack resistance in spite of its high strength. Good cryogenic impact energy down to -50ºC.

Base materials

High-strength fine-grained steels S620Q, S620QL, S690Q, S690QL, N-A-XTRA M 700, alform® plate 620 M, alform® 700 M, alform® plate 700 M, aldur 620 Q, 620 QL, aldur 700 Q, 700 QL ASTM A 514 Gr. F, H, Q; A 709 Gr. 100 Type E, F, H, Q ; A 709 Gr. HPS 100W

Typical analysis

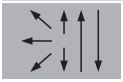
	C	Si	Mn	Cr	Ni	Mo	V
wt.-%	0.1	0.6	1.6	0.25	1.3	0.25	0.1

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	800 (≥690)	900 (770 – 940)	19 (≥17)	190	≥47

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

Operating data



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

Dimension mm
1.0
1.2

Preheating and interpass temperature as required by the base metal.

Approvals

TÜV (19833), DB (42.132.92), DNV, CE