Union X 90

Solid Wire, low-alloyed, high strength

Classifications

EN ISO 16834-A	AWS A5.28 / SFA-5.28
G 89 6 M21 Mn4Ni2CrMo	ER120S-G

Characteristics and typical fields of application

GMAW low-alloyed solid wire electrode for joining of quenched and tempered and thermomechanically rolled fine-grained structural steels with yield strength of 890 MPa.
Due to the micro-alloying concept, the weld metal is outstandingly tough with high-strength and good resistance to cold cracking at low temperatures when deposited with gas mixture. Used in crane and vehicle constructions.

Base materials

S890Q, S890QL, S890QL1;
S890MC;
USS-T1;
ASTM A 709 Gr. 100 Type B, E, F, H, Q, HPS 100W

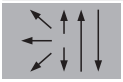
Typical analysis

	C	Si	Mn	Cr	Ni	Mo
wt.-%	0.10	0.80	1.80	0.35	2.25	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		Shielding gas
	MPa	MPa	%	20°C	-60°C	
u	915 (≥ 890)	960 (≥ 940 - 1180)	20 (≥ 15)	130	≥ 47	M21
u untreated, as welded						

Operating data



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

Dimension mm
0.8
1.0
1.2

Approvals

TÜV (07675), DB (42.132.12), DNV, CE