Pipeshield X 80

Solid wire, mild steel

Classifications

EN ISO 14341-A	AWS A5.28 / SFA-5.28
G 50 6 M21 3Ni1	ER80S-Ni5
G 46 4 C1 3Ni1	ER80S-Ni5

Characteristics and typical fields of application

Pipeshield X series of solid wires for GMAW are specifically designed for fully automatic circumferential all position pipe welding. Pipeshield X combines the benefits of engineered wire surfaces and thoroughly controlled chemical compositions leading to good impact values even at low temperatures. Consistent wire geometry supports wire feeding and stable arc performance. The 1%Ni-alloyed Pipeshield X 80 covers pipe steel grades up to API X80 offering good impact toughness at low temperatures down to -60 ºC (-76 ºF) and CTOD values at -10 ºC (14 ºF). Root pass capability up to X100.
This product can be used in sour gas applications. (HIC tested acc. to NACE TM-0284).

Base materials

API5L: X42, X52, X56, X60, X65, X70, X80
EN 10208-2: L290MB – L555MB; L290NB – L415NB
and similar steel grades

Typical analysis

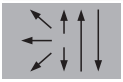
	C	Si	Mn	Ni	Ti	S	P
wt.-%	0.065	0.69	1.55	0.9	+	≤ 0.015	≤ 0.020

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	%	-40 °C J	-60 °C J
u1	500 (≥ 485)	590 (≥ 570)	28 (≥ 25)	60 (≥ 47)	-
u2	520 (≥ 500)	630 (≥ 600)	26 (≥ 24)	125 (≥ 80)	100 (≥ 60)
u3	590	670	24.4	-	-
u4	-	608	-	170	90
s	480 (≥ 440)	585 (≥ 520)	26 (≥ 24)	130 (≥ 80)	120 (≥ 60)

u1 untreated, as welded – shielding gas 100% CO_2
u2 untreated, as welded – shielding gas Ar + 15 – 25% CO_2
u3 untreated, as welded – shielding gas M21, field result, round tensile specimen, longitudinal
u4 untreated, as welded – shielding gas M21, field result, round tensile specimen, transverse
s heat treated, 610 ± 10°C/ 8h – shielding gas Ar + 15 – 25% CO_2

Operating data



Polarity	DC+
Shielding gas (EN ISO 14175)	C1 M2

Dimension mm
0.9
1.0
1.02
1.2

Approvals

TÜV (19757), ABS, DNV, CE