

Classifications

EN ISO 636-A	AWS A5.28 / SFA-5.28
W 46 8 2Ni2	ER80S-Ni2

Characteristics and typical fields of application

TIG rod for unalloyed and Ni-alloyed fine grained construction steels. Tough, crack resistant weld deposit. Low temperature toughness down to -80°C. For thin sheets and root pass welding.

Base materials

Cryogenic constructional steels and Ni-steels, cryogenic steels for ship building

10Ni14, 12Ni14, 13MnNi6-3, 15NiMn6, S275N-S460N, S275NL-S460NL, S275M-S460M, S275ML-S460ML, P275NL1-P460NL1, P275NL2-P460NL2

ASTM A 203 Gr. D, E; A 333 Gr. 3; A334 Gr. 3; A 350 Gr. LF1, LF2, LF3; A 420 Gr. WPL3, WPL6; A 516 Gr. 60, 65; AA 529 Gr. 50; A 572 Gr. 42, 65; A 633 Gr. A, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 738 Gr. A; A 841 A, B, C

Typical analysis


	C	Si	Mn	Ni
wt.-%	0.08	0.6	1.0	2.4

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	%	-60°C	-80°C
u	510 (≥ 460)	600 (550 - 740)	26 (≥ 20)	80 (≥ 55)	(≥ 47)

u untreated, as welded – shielding gas I1

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1	2.0 × 1000
	Rod marking	+ W 2Ni2 / ER80S-Ni 2	2.4 × 1000
			3.0 × 1000

Preheating, interpass temperature and post weld heat treatment as required by the base metal.

Approvals

TÜV (01081), DNV, BV, Equinor, NAKS, CE