

Classifications

EN ISO 636-A -	AWS A5.28 / SFA-5.28
W 46 6 3Ni1	ER80S-G

Characteristics and typical fields of application

Ni-alloyed welding rod / wire type 3 Ni 1 with good flow characteristics in out of position welding. Very good impact toughness of weld metal at low temperatures. Tested according to KTA 1408.

Base materials

Low temperature fine grained structural steels up to S460 MPa (67 ksi);
S275N-S460N, S275NL-S460NL, S275M-S460M, S275ML-S460ML, P355N, P460N, P275NL1-P460NL1, P275NL2-P460NL2, L245NB-L450NB, L245MB-L450MB, GE200-GE240,

Nuclear reactor construction steel: 15MnNi6-3

ASTM A 203 Gr. D, E; A 350 Gr. LF1, LF2, LF3; A 420 Gr. WPL3, WPL6; A 516 Gr. 60, 65, 70; A 572 Gr. 42, 50, 55, 60, 65; A 633 Gr. C, D, E; A 662 Gr. A, B, C; A 707 Gr. L1, L2, L3; A 841 Gr. A, B, C; API 5 L Gr. B, X52, X56, X60, X65

Typical analysis

	C	Si	Mn	Ni
wt.-%	0.1	0.7	1.4	1.3

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	-60°C
u	470 (≥460)	600 (530 - 680)	25 (≥ 20)	150 (≥47)	47 (≥ 32)

u untreated, as welded - shielding gas I1

Operating data

	Polarity	DC-	Dimension mm
	Shielding gas (EN ISO 14175)	I1 - I3	2.0 × 1000
	Rod marking	+ 3 Ni 1	2.4 × 1000
			2.5 × 1000
			3.0 × 1000
			3.2 × 1000

Approvals

TÜV (00513), DB (42.132.49), DNV, KTA 1408.1 (08012), CE