diamondspark Ni1 RC-SR

Flux cored wire, seamless, high strength, rutile type

Classifications

EN ISO 17632-A	EN ISO 17632-B	AWS A5.29 / SFA-5.29
T 50 6 1Ni P M21 1 H5	T 55 6 T1-1M21AP-N2-H5	E81T1-Ni1M-JH4

Characteristics and typical fields of application

Seamless rutile, Nickel alloyed, flux cored wire for single- or multilayer welding of carbon, carbon manganese steels and high strength steels with Ar-CO2 shielding gas. Main features: excellent impact values at very low temperature (-60ºC) in as welded conditions and after post weld heat treatments, excellent weldability in all positions, very low spatter losses make it especially suitable for more special applications. CTOD tested at -10ºC (14ºF)

Base materials

S355JR, S355J0, S355J2, S450J0, S355N-S460N, S355NL-S460NL, S355M-S460M, S355ML- S460ML, S460Q, S500Q, S460QL, S500QL, S460QL1, S500QL1, P355GH, P355NH, P420NH, P460NH, P355N-P460N, P355NH-P460NH, P355NL1-P460NL1, P355NL2-P460NL2, L245NB- L415NB, L245MB-L485MB, L360QB-L485QB, aldur 500Q, aldur 500QL, aldur 500QL1
ASTM A 350 Gr. LF2; A 516 Gr. 65, 70; A 572 Gr. 42, 50, 60, 65; A 573 Gr. 70; A 588 Gr. B, C, K; A 633 Gr. A, C, D, E; A 662 Gr. B, C; A 678 Gr. B; A 707 Gr. L2, L3; A 841 Gr. A, B, C; API 5 L X42, X52, X60, X65, X70, X52Q, X60Q, X65Q, X70Q

Typical analysis

wt.-%	Gas	C	Si	Mn	Ni
	M21	0.07	0.45	1.3	0.85

Mechanical properties of all-weld metal - typical values (min. values)

Condition	Yield strength R_e	Tensile strength R_m	Elongation A (L_0=5d_0)	Impact energy ISO-V KV J	
	MPa	MPa	%	-40°C	-60°C
u	520 (≥ 500)	600 (560–690)	25 (≥ 20)	120	100 (≥ 47)
s	500 (≥ 470)	580 (550–680)	29 (≥ 20)	120	90 (≥ 47)
s1	490 (≥470)	570 (550-680)	30 (≥20)	110	60 (≥47)

u - untreated, as welded – shielding gas M21
s - stress relieved 620°C / 2h – shielding gas M21
s1 - stress relieved 620°C / 6h – shielding gas M21

Operating data

	Polarity	DC+	Dimension mm
	Shielding gas (EN ISO 14175)	M21	1.2
			1.6

Welding with standard GMAW-facilities possible

Approvals

TÜV (19046), ABS, DNV, LR, CE