

Innershield® NR®-203Ni1

Self-shielded cored wire

Classification

AWS A5.29-98 : E71T8-Ni1

General description

Self shielded: easiest equipment arrangement

All position welding

Easy to weld in vertical up position

All passes

Good impact and CTOD toughness

Welding positions



ISO/ASME PA/1G PB/2F PC/2G PF/3G up PG/3G down PE/4G PF/5G up PG/5G down

Current type

DC -

Approvals

ABS	BV	DB	DNV	FORCE	GL	LR	RINA	TÜV
3SA,3YSA	SA3YMHH	+	IIYMSH10	+	3YSH10	3S,3YSH15	3S,3YS	+

Chemical composition (w%), typical, all weld metal

C	Mn	Si	P	S	Ni	Cr	Al
0.08	1.1	0.27	0.008	0.003	0.9	0.04	0.85

Mechanical properties, all weld metal

	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation %	Impact ISO-V(J) -29°C
Required:	AWS A5.29-98	min. 400	480-620	20	27
Typical values	AW	465	540	26	115

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)	
		2.0	2.4
Coils 14C	6.35	X	
Coils 50C	22.68	X	X

Innershield® NR®-203Ni1: rev. EN 15

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Suggestions for use

For mild and higher strength steel, not exceeding the yield strength range of the electrode weld deposit
General plate fabrication, including bridge construction, hull plate and stiffener welding on ships and barges, off shore

For semi- and full automatic welding

Materials to be welded

Steel	Code	Type
General structural steel	EN 10025	S185, S235, S275, S355
Ship plates	ASTM A131	Grade A, B, D, AH32 to DH36
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360
	API 5LX	X42, X46, X52
	EN 10216-1/	P235T1, P235T2, P275T1
	EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	EN 10113-2	S275, S355
	EN 10113-3	S275, S355

Calculation data at normal setting

Diameter (mm)	Electrical Stick-out (mm)	Wire feed speed		Current (approx. A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg Weldmetal
		inch/min	cm/min				
2.0	19	50	125	145	16	1.10	1.30
		90	230	235	20	1.95	1.30
		140	355	310	23	3.15	1.30
2.4	19	50	125	215	18	1.60	1.20
		95	240	315	21	3.25	1.20
		130	330	385	24	4.30	1.20

Welding parameters, optimum fill passes

Diameter (mm)	Wire feed speed/ Current/ Voltage	Welding position						
		PA/1G	PB/2F	PC/2G	PF/3G up	PF/5G up	PG/3G down PG/5G down	PE/4G
2.0	(cm/min.)	280	330	230	200	200	200	180
	(A)	255	300	235	215	215	215	195
	(V)	21	22	20	19	19	18	19
2.4	(cm/min.)	280	280	215	180			
	(A)	345	345	290	250			
	(V)	22	22	19.5	19			