Innershield® NR®203 Ni1

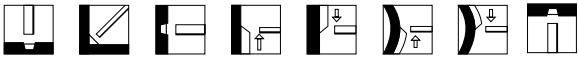
CLASSIFICATION

AWS A5.29	E71T8-Ni1	**A-Nr**	10
AWS A5.36	E71T8-A2-Ni1-H16	**F-Nr**	6
EN ISO 17632-A	T 42 4 1Ni Y N 1 H10	**9606 FM**	1

GENERAL DESCRIPTION

Designed to produce a nickel bearing weld deposit
apable of producing weld deposits with impact toughness capable of exceeding 27 J at -29°C
Color match on weathering steels
Handles poor fit-up
Root bead capability

WELDING POSITIONS (ISO/ASME)



PA/1G **PB/2F** **PC/2G** **PF/3Gu** **PG/3Gd** **PH/5Gu** **PJ/5Gd** **PE/4G**

CURRENT TYPE

DC -

APPROVALS

ABS	BV	DNV	GL	LR	RINA	TÜV
3SA,3YSA	SA3YMHH	IIIYMSH10	3YSH10	3S,3YSH15	3S,3YS	

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

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

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

	Condition	Yield strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) -29°C
Required: AWS A5.29		min. 400	480-620	20	27
Typical values	AW	465	540	26	115

PACKAGING AND AVAILABLE SIZES

Diameter (mm)	2.0	2.4
6.35 kg coil 14C	X	
22.68 kg coil 50C	X	X

Innershield® NR®203 Ni1: rev. C-EN23-01/02/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Standard	Type
General structural steels	
EN 10025 part 2	S185, S235, S275, S355
Ship plates	
ASTM A131	Grade A, B, D, AH32 to DH36
Cast steels	
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 steels	
EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steels	
EN 10025 part 3	S275, S355
EN 10025 part 4	S275, S355

CALCULATION DATA

Diameter (mm)	Electrical stick-out (mm)	Wire Feed Speed (cm/min)	Current (A)	Arc Voltage (V)	Deposition rate (kg/h)	kg wire/ kg weldmetal
2.0	19	125	145	16	1.10	1.30
		230	235	20	1.95	1.30
		355	310	23	3.15	1.30
2.4	19	125	215	18	1.60	1.20
		240	315	21	3.25	1.20
		330	385	24	4.30	1.20

WELDING PARAMETERS, OPTIMUM FILL PASSES

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

REMARKS/APPLICATION ADVICE

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