

Innershield® NR®-233

Self-shielded cored wire

Classification

AWS A5.20/A5.20M E71T-8

General description

Self shielded: easiest equipment arrangement

Due to new production technology and formulation: welder friendly wire with wide range of parameter settings

Forgiving arc, with increased penetration gives better quality welds with great bead appearance

High deposition rate, even in out of position welding

Good impact properties

NR-233 has been developed to minimize gas marking, even after the electrode has been exposed to the atmosphere

Welding positions



ISO/ASME

PA/1G



PB/2F



PC/2G



PF/3G up



PE/4G



PF/5G up

Current type

DC -

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

C	Mn	Si	P	S	Al
0.16	0.65	0.21	0.010	0.003	0.60

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 A5.20	min. 400	480	22	27
Typical values	AW	440	570	26	40

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)	
		1.6	1.8
Plastic spool	5.7	X	
Plastic spool Foil Bag	11.3	X	X

Innershield® NR®-233: rev. EN 20

Innershield® NR®-233

Suggestions for use

Vertical up fillet and groove welds
Overhead fillet and groove welds
Seismic structural steel erection
General structural steel erection
Ship and barge fabrication

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/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
	Boiler & pressure vessel steel	EN 10028-2
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 cm/min	Current (approx. A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg Weldmetal
1.6	13-32	380	220	17-19	1.9	1.26
		510	245	19-21	2.5	1.31
		640	270	21-23	3.0	1.35
		760	295	23-25	3.5	1.35
		890	315	25-27	4.3	1.31
1.8	19-25	250	185	17-18	1.6	1.25
		380	250	18-19	2.5	1.24
		510	295	20-21	3.2	1.25
		640	330	22-23	4.0	1.26
		760	355	23-24	4.8	1.26