

# Innershield® NR®-305

## Self-shielded cored wire

### Classification

AWS A5.20-95 : E70T-6

### General description

NR-305 is a self-shielded flux cored wire

Not intended for out-of-position welding, but can be used on 15° max. downhill and 5° max. uphill applications

High deposit rates and fast travel speed

Easy handling

Recommended for maximum productivity, downhand welding

### Welding positions



ISO/ASME PA/1G PB/2F

### Current type

DC +

### Approvals

ABS	BV	DB	DNV
2SA,2YSA	SA2YMH	+	IYMS

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

C	Mn	Si	P	S	Al
0.09	0.9	0.20	0.007	0.008	0.80

### Mechanical properties, all weld metal

	Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation %	Impact ISO-V(J) -29°C
Required:	AWS A5.20-95	min. 400	480	22	27
Typical values	AW	470	550	25	40

### Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)		
		1.7	2.0	2.4
Coils 50C	22.68	X	X	X

Innershield® NR®-305: rev. EN 15

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## Suggestions for use

Typical applications include bridge, ship, barge or offshore drilling rig construction and machinery, structural and general fabrication.

NR-305 can be used for single and multiple pass fillet and lap welds and for deep groove butt welds in the flat position.

## 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, L415
	API 5LX	X42, X46, X52, X60
	EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 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 cm/min	Current (approx. A)	Arc Voltage (V)	Deposition Rate (kg/h)	kg Wire/ kg Weldmetal
1.7	12-25	510	275	24	3.75	1.22
		635	325	25	4.60	1.22
		890	390	27	6.35	1.22
2.0	19-25	510	360	22.5	4.50	1.22
		635	410	25	5.90	1.22
		1140	545	32.5	11.10	1.22
2.4	38-65	405	330	21	5.00	1.23
		610	425	24	7.55	1.23
		1015	525	33	12.70	1.23

## Welding parameters, optimum fill passes

Diameter (mm)	Wire feed speed/ Current/ Voltage	Welding position	
		PA/1G	PB/2F
1.7	(cm/min.)	635	635
	(V)	25	25
2.0	(cm/min.)	890	635
	(V)	25	24
2.4	(cm/min.)	710	610
	(V)	27	24

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