

Outershield® T55-H

Mild steel basic cored wire

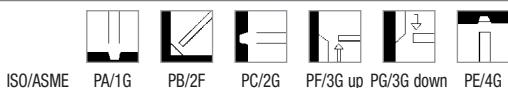
Classification

AWS A5.20-95 : E71T-5J H4/E71T-5MJ H4
EN 758-97 : T 42 4 B C 2 H5/T 42 4 B M 2 H5

General description

All position gas shielded basic flux cored wire
Good weldability, also vertical up (3G)
Exceptional mechanical properties (CVN >47J at -50°C)
Very low hydrogen H_{Bm} <5ml/100g)
Superior product consistency with optimal alloy control
Excellent wire feeding

Welding positions



Current type/Shielding gas

DC -
Ar+ (>5-25)% CO₂ (EN 439: M21)
CO₂ (EN 439: C1)
15-25 l/min

Approvals

Shielding gas	ABS	BV	CTL	DB	DNV	FORCE	GL	LR	RINA	TÜV
M21	3SA,3YSA	SA3,3YMHH	+	+	IVYMSH5	+	4YH10S	4Y40SH15		+
C1	3SA,3YSA	SA3,3YMHH	+	+	IVYMSH5		4YH10S	4Y40SH15	3YS	+

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

Shielding gas	C	Mn	Si	P	S	H _{Bm} ml/100g
C1	0.05	1.5	0.55	0.012	0.010	3
M21	0.06	1.5	0.6	0.012	0.010	3

Mechanical properties, all weld metal

	Shielding gas	Condition	Yield strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V (J)		
						-20°C	-40°C	-50°C
Required: AWS A5.20-95			min. 400	min. 480	min. 22		min. 27	
EN 758-97			min. 420	500-640	min. 20		min. 47	
Typical values	M21/C1	AW	480	570	27	130	85	60

Packaging and available sizes

Unit type	Net weight/unit (kg)	Diameter (mm)			
		1.0	1.2	1.6	2.4
Plastic spool S200	4.5	X	X		
Wire reel B300	15		X	X	
Wire reel B435	25			X	X

Outershield® T55-H: rev. EN 15

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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 EH40
Cast steel	EN 10213-2	G P 240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240NB, L290NB, L360NB, L360QB, L240MB, L290MB, L360MB, L415MB, L415NB
	API 5LX	X42, X46, X52, X60
	EN 10216-1/ EN 10217-1	P235T1, P235T2, P275T1 P275T2, P355N
	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Boiler & pressure vessel steel	EN 10113-2	S275, S275, S355, S420
Fine grained steel	EN 10113-3	S275M, S275ML, S355M, S355ML, S420M, S420ML

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 weld metal
1.2	20	510	130	25-27	1.6	1.20
		760	185	26-28	2.5	1.20
		1015	225	27-29	3.3	1.20
		1270	260	28-30	4.1	1.20
		1525	290	29-31	5.0	1.20
		1780	310	30-32	5.8	1.20
1.6	20	380	170	24-26	2.5	1.15
		510	225	25-27	3.1	1.15
		760	310	27-29	4.7	1.15
		1015	380	29-31	6.3	1.15
		1270	430	31-33	7.9	1.15

Welding parameters, optimum fill, shielding gas Ar + (>5 - 25)% CO₂

Diameter (mm)	Current/ Voltage	Welding position			
		PA/1G	PB/2F	PC/2G	PF/3G up
1.2	(A)	215-290	215-290	215-250	110-150
	(V)	28-34	28-34	28-30	17-20
1.6	(A)	320-390	320-390	280-350	130-180
	(V)	28-34	28-34	28-32	18-22
2.4	(A)	350-550	350-550		
	(V)	30-34	30-34		