

Outershield® T55-H

CLASSIFICATION

AWS A5.20	E71T-5C-JH4 / E71T-5M-JH4	A-Nr	1
EN ISO 17632-A	T 42 4 B C 2 H5 / T 42 4 B M 2 H5	F-Nr	6
		9606 FM	1

GENERAL DESCRIPTION

All position gas shielded basic flux cored wire
 Good weldability, also vertical up [3G]
 Exceptional mechanical properties [CVN >47J at -50°C]
 Superior product consistency with optimal alloy control
 Excellent wire feeding

WELDING POSITIONS (ISO/ASME)



CURRENT TYPE / SHIELDING GAS (ISO 14175)

DC -
 M21 : Mixed gas Ar+ (>15-25%) CO₂
 C1 : Active gas 100% CO₂
 Flow rate: 15-25 l/min

APPROVALS

Shielding gas	ABS	BV	DB	DNV	GL	LR	RINA
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	HDM
C1	0.05	1.5	0.55	0.012	0.010	3 ml/100 g
M21	0.06	1.5	0.6	0.012	0.010	3 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, 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 EN ISO 17632-A			min. 400 min. 420	min. 480 500-640	min. 22 min. 20		min. 27 min. 47	
Typical values SR : 15h/580°C	M21	AW SR	480 425	570 550	27 27	130	85 80	60

PACKAGING AND AVAILABLE SIZES

Diameter (mm)	1.2	1.6
16 kg spool B300	X	X

Outershield® T55-H : rev. C-EN29-01/12/16

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EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Standard	Type
General structural steels	
EN 10025	S185, S235, S275, S355
Ship plates	
ASTM A131	Grade A, B, D, AH32 to EH40
Cast steels	
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/	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, S420
EN 10025 part 4	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 weldmetal
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 PASSES IN SHIELDING GAS Ar + (>15-25)% CO₂

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