

Prepared by Daniel Amahatsion	Qualified by P-O Oskarsson	Approved by Neil Farrow	Reg no EN008689	Cancelling EN008468	Reg date 2019-06-25	Page 1 (2)
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REASON FOR ISSUE

RINA approval grade changed (PN - M21)

GENERAL

A multi-purpose all positional rutile cored wire for use with C1 or M21 shielding gas.

Shielding Gas: M21, C1 (EN ISO 14175)

Alloy Type: CMn

Polarity: DC+

Fill Type: Rutile

CLASSIFICATIONS Weld Metal

SFA/AWS A5.36	E71T1-C1A0-CS2-H4
SFA/AWS A5.36	E71T1-M21A0-CS2-H8
EN ISO 17632-A	T 42 3 P C1 1 H5
EN ISO 17632-A	T 46 4 P M21 1 H10

APPROVALS

ABS	4YSA H10 (M21)	3YSA H5 (C1)
BV	SA3M, SA3YM H10 (C1)	SA3M, SA3YM H5 (M21)
BV	SA3M, SA3YM H10 (M21)	SA3M, SA3YM H5 (C1)
CE	EN 13479	
CRS	3Y H5S (C1 & M21)	
DB	42.105.07	
DNV-GL	IV YMS H10 (M21)	III YMS H5 (C1)
LR	3YS H10 (M21)	3YS H5 (C1)
NAKS/HAKC	1.2MM	
PRS	4YS H10 (M21)	3YS H5 (C1)
RINA	3YS H5 (M21)	2YS H5 (C1) PV
RINA	4YS H10 (M21)	2YS H5 (C1) PN
RS	3Y H5 (M21)	3Y H5 (C1)
VdTÜV	04902	

CHEMICAL COMPOSITION

All Weld Metal (%)

	M21 shielding gas		C1 shielding gas	
	Min	Max	Min	Max
C	0.04	0.08	0.04	0.08
Si	0.30	0.60	0.30	0.60
Mn	1.00	1.40	1.00	1.40
P		0.025		0.025
S		0.030		0.030
Cr		0.20		0.20
Ni		0.50		0.50
Mo		0.2		0.2
V		0.08		0.08
Nb		0.05		0.05
Cu		0.3		0.3

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MECHANICAL PROPERTIES OF WELD METAL

All Weld Metal

Properties	C1 Shielding gas			M21 Shielding gas		
	Min	Max	Typ	Min	Max	Typ
As welded				As welded		
Rp0.2 (MPa)	420		495	460		535
Rm (MPa)	510	610	585	540	640	601
A5 (%)	22		25	22		25
Charpy V at -30°C (J)	47		65			
Charpy V at -40°C (J)				47		70

Comments:

The diffusible hydrogen values are determined in accordance with the method given in ISO 3690.

Welding parameters for hydrogen determination: Wire diameter 1.2mm, current 250 amps, voltage 29v, stickout 15mm, DC electrode positive

ECONOMICS & CURRENT DATA

Dimension (mm)	Current (A)		W	η	H	Feed			U	
	Min	Max				Min	Max	Min		Max
\emptyset			Nom	Nom	Min	Max	Min	Max	Min	Max
1.0	100	300	20	88	1.2	6.2	4.5	23	22	35
1.2	150	350	20	85	2.1	7.5	5.8	20.7	23	35
1.4	150	350	20	85	1.8	6.3	3.3	11.6	22	34

W = Gas consumption (l / min)

η = Recovery, g weld metal / 100g wire (%)

H = Deposit rate (kg weld metal / hour arc time)

Feed = Feeding rate (m/min)

U = Arc voltage (V)