

Arosta® 307-160

CLASSIFICATION

AWS A5.4	E307-26*	A-Nr	8	Mat-Nr	1.4370
ISO 3581-A	E 18 8 Mn R 5 3	F-Nr	5		
* Nearest classification, see remarks		9606 FM	5		

GENERAL DESCRIPTION

A rutile 6%Mn-alloyed stainless steel electrode
 Especially developed for steels difficult to weld, such as armour lates and austenitic high Mn-steels
 Often used as a buffer layer in hardfacing applications
 Weldable on DC+ polarity

WELDING POSITIONS (ISO/ASME)



PA/1G



PB/2F

CURRENT TYPE

AC/DC +

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr	Ni
0.06	6.0	1.0	18.0	8.0

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength [N/mm ²]	Tensile strength [N/mm ²]	Elongation [%]	Impact ISO-V(J)	
				+20°C	-10°C
Required: AWS A5.4 ISO 3581-A Typical values	not required min. 350	min. 590 min. 500	min. 30 min. 25	not required not required	
AW	425	650	35	85	60

PACKAGING AND AVAILABLE SIZES

Carton + PE foil	Diameter (mm)	3.2	4.0
	Length (mm)	350	450
Pieces / unit	94	62	
Net weight/unit (kg)	4.7	6.0	

Identification Imprint: AROSTA 307-160

Tip Color: red

Arosta® 307-160: rev. C-EN06-01/02/16

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EXAMPLES OF MATERIALS TO BE WELDED

Various steel grades, such as:

- Armour plate
- Hardenable steels including steels difficult to weld
- Non-magnetic austenitic steels
- Work hardening austenitic manganese steels
- Dissimilar steel grades (CMn-steels to stainless steel)

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time	Energy	Dep. rate	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
			[S]*	E(kJ)	H(kg/h)			
3.2 x 350	110-150	DC+	53	132	1.4	29,1	48	1,39
4.0 x 450	140-200	DC+	86	264	1.7	55,9	25	1,41

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions		
	PA/1G	PB/2F	PC/2G
3.2	150A	140A	140A
4.0	200A	180A	160A

REMARKS / APPLICATION ADVICE

Deviations: chemical composition

Mn = 4.5 - 7.5%

Cr = 17.0 - 20.0%

Ni = 7.0 - 10.0%

AWS: Mn = 3.30 - 4.75%

AWS: Cr = 18.0 - 21.5%

AWS: Ni = 9.0 - 10.7%