

## CLASSIFICATION

AWS A5.4 : E2209-16\*  
EN 1600 : E 22 9 3 N L R 32

## TEMPERATURE RANGE

Pressurized parts : -40 ...+250°C  
Oxidation resistance : n.a

## GENERAL DESCRIPTION

A rutile-basic all position electrode for duplex stainless steel welding  
Excellent weldability for filling as well as for root runs  
Applicable up to a service temperature of 250°C  
High resistance to general corrosion, pitting and stress corrosion (PREN ~35)  
High yield strength > 500 N/mm<sup>2</sup>  
Weldable on AC and DC  
EMR-Sahara product

## WELDING POSITIONS



## CURRENT TYPE

AC/DC + /-

## APPROVALS

BV	DNV	GL	RINA	TÜV
2209	+	4462	2209	+

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

C	Mn	Si	Cr	Ni	Mo	N	FN (acc.WRC 1992)
0.02	0.8	1.0	22.5	9.5	3.2	0.16	30-55

## MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)		
				+20°C	-30°C	-40°C
Required: AWS A5.4 EN 1600	not required	min. 690	min. 20	not required		
Typical values	min. 450 650	min. 550 800	min. 20 27	not required 60	50	40

## PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	Length (mm)	Available Sizes			
			2.5	3.2	4.0	5.0
Unit: carton box	Pieces / unit	120	152	95	55	
	Net weight/unit (kg)	2.6	5.0	4.8	4.6	
Unit: SRP	Pieces / unit	69	52	29	24	
	Net weight/unit (kg)	1.5	1.8	1.6	2.0	

Identification Imprint: 2209-16 / AROSTA 4462 Tip Color: white

Arosta® 4462: rev. EN 24

# Arosta® 4462

## MATERIALS TO BE WELDED

Steel grades	EN 10088-1/-2/-4	Mat. Nr	ASTM / ACI A240	UNS
<b>Duplex stainless steels</b>				
	X2CrNiMoN22-5-3	1.4462		S31803
		1.4417		S31500
	X3CrNiMoN27-5-2	1.4460		S31200
	X2CrNiN23-4	1.4362		S32304
	X2CrMnNi21-5-1	1.4162		S32101

Dissimilar joints such as un- and low alloyed steel to duplex stainless steel

## CALCULATION DATA

Sizes		Current type	Arc time (S)*	Energy - per electrode at max. current - E(kJ)	Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weld- metal B	kg electrodes/ kg weldmetal 1/N
Diam. x length (mm)	Current range (A)							
2.5 x 350	40 - 75	DC+	61	127	0.73	20.6	81	1.67
3.2 x 350	80 - 110	DC+	56	184	1.4	34.3	46	1.59
4.0 x 350	80 - 150	DC+	59	205	2.0	51.5	30	1.52
5.0 x 350	140 - 220		65	357	2.8	77.4	20	1.61

\*Stub end 35mm

## WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions					
	PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PF/5Gup
2.5	70A	70A	70A	60A	80A	60A
3.2	100A	100A	100A	70A	70A	70A
4.0	140A	140A	140A	80A		
5.0	180A	180A	180A			

## REMARKS / APPLICATION ADVICE

Welding with Heat-Input max. 2.5 kJ/mm

Interpass temperature max. 150°C

Deviations chemical composition:

Si = 0,4-1,2      AWS = max 1,00