Jungo® 4455

Stainless steel electrode

SMAW

Classification

EN 1600-97 : E 20 16 3 Mn N L B 22

Temperature Range

pressure parts: -269 ... +350°C
oxidation resistance: n.a.

General description

Basic coated electrode for fully austenitic CrNiMo-steels
Service temperature from -269°C to 350°C
Cryogenic austenitic stainless steels
Cryogenic nickel steels and their joining
Non magnetic stainless steels

Welding positions

ISO/ASME PA/1G PB/2F PC/2G PF/3G up PE/4G PF/5G up

Current type

DC electr. +

Approvals

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

C	Mn	Si	Cr	Ni	Mo	N
0.030	7.3	0.4	20.0	16.0	3.0	0.16

Mechanical properties, all weld metal

	Condition	0.2% Proof strength (N/mm²)	Tensile strength (N/mm²)	Elongation (%)	Impact ISO-V(J) +20°C	Impact ISO-V(J) -196°C
Required: EN 1600-97		min. 320	min. 510	min. 25	not required	
Typical values	AW	460	650	35	80	50

Packaging, available sizes and identification

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
Unit: Box	Pieces / unit (nominal)	135	150	100	70
	Net weight/unit (kg)	2.7	4.7	4.8	6.5

Identification Imprint: Jungo 4455 Tip colour: purple

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Materials to be welded

Steel grades	Code	Type	W.Nr.	ASTM/ACI	UNS
Austenitic	EN 10088-1/-2	X2 CrNiN 18-10	1.4311	(TP)304LN	S30453
nitrogen alloyed		X2 CrNiMoN 17-11-2	1.4406	(TP)316LN	S31653
CrNi-and		X2 CrNiMoN 17-13-3	1.4429		
CrNiMo-steel		X2 CrNiMoN 17-13-5	1.4439	317LN	S31726
Austenitic	SEW 390	X2 CrNiMoN 22-15	1.3951		
A-magnetic		X2 CrNiMoN18-14-3	1.3952		
steel		X2 CrNiMo 18-15	1.3953		
		X8 CrMnNi 18-8	1.3965		
Steel for	SEW 685	GX6 CrNi 18-10	1.6902		
low temperature		GX5 CrNiNb 18-10	1.6905		
	EN 10028-4	12 Ni 14	1.5637		
		X12 Ni 5	1.5680		

Calculation data

Sizes Diam. x length	Current range type	Current	Arc time - per electrode at max. current -	Energy - per electrode at max. current -	Dep.rate - per electrode at max. current -	Weight/ 1000 pcs.	Electrodes/ kg weldmetal	kg Electrodes/ kg weldmetal
(mm)	(A)		(s)*	E(kJ)	H(kg/h)	(kg)	B	1/N
2.5 x 350	45 - 70	DC+	44	71	0.96	19.0	85	1.52
3.2 x 350	70 - 105	DC+	53	132	1.4	31.0	48	1.39
4.0 x 350	100 - 130	DC+	86	264	1.7	47.6	25	1.41
5.0 x 450	120 -155	DC+	82	388	2.7	92.8	16	1.39

* stub end 35mm

Welding parameters, optimum fill passes

Welding positions Diameter (mm)	PA/1G Current (A)	PB/2F	PC/2G	PF/3G up	PE/4G	PF/5G up
2.5	60	60	60	60	60	60
3.2	90	90	90	70		
4.0	140	115	130	95		
5.0	160	165				

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