SL® 22G

EMR SAHARA®

CLASSIFICATION

AWS A5.5	E8018-B1-H4	**A-Nr**	3
ISO 3580-A	E Z B 3 2 H5	**F-Nr**	4
		9606 FM	3

GENERAL DESCRIPTION

Basic very low hydrogen all position electrode (HDM< 5 ml/100g)
For welding creep resistant CrMoV-steels
Maximum service temperature 550°C
AC/DC electrode + or –. DC welding by preference. Root pass in open joints, electrode negative preferable
115 - 120% recovery
Only available in vacuum sealed Sahara ReadyPack® (SRP)

WELDING POSITIONS (ISO/ASME)

CURRENT TYPE

AC / DC +/-

APPROVALS

TÜV
+

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

C	Mn	Si	P	S	Cr	Mo	HDM
0.06	0.8	0.6	0.020	0.010	0.5	0.5	3 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, 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) -10°C
Required: AWS A5.5	SR[1]	min. 460	min.550	min. 19	not required	
	SR[2]	570	640	24	180	110
Typical values						

Stress relieved: SR[1] = 690±14°C/1h, SR[2] = 1h/730°C

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	3.2	4.0	5.0
	Length (mm)	350	350	350	450
SRP	**Pieces / unit**	67	50	28	23
	Net weight/unit (kg)	1.4	2.0	1.5	2.6

Identification Imprint: 8018-B1 / SL 22 G Tip Color: orange

SL® 22G: rev. C-EN25-29/08/17

SL® 22G

EXAMPLES OF MATERIALS TO BE WELDED

Steel grades/Code	Type
Creep resistant steels	
DIN	14MoV6-3
	17MnMoV6-4
	10CrSiMoV7
	24CrMoV5-5

CREEP DATA

Test temperature °C	400	450	500	550	575
Yield strength Rp-0,2% (N/mm²)	480	470	450		
Creep strength Rm/1000 (N/mm²)			270	170	150
Creep strength Rm/10.000 (N/mm²)			250	150	130
Creep resistance Rp1%/10.000 (N/mm²)			210	130	110

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (S)*	Energy - per electrode at max. current - E(kJ)	Dep. rate - per electrode at max. current - H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weldmetal B	kg electrodes/ kg weldmetal 1/N
2.5x350	60-90	DC+	64	115	0.7	21.0	82	1.69
3.2x350	80-130	DC+	71	238	1.2	37.5	41	1.54
4.0x350	120-180	DC+	76	353	1.6	55.8	30	1.64
5.0x450	160-220	DC+	101	762	2.6	106.6	14	1.49

*Stub end 35mm

WELDING PARAMETERS, OPTIMUM FILL PASSES

Diameter (mm)	Welding positions PA/1G	PB/2F	PC/2G	PF/3Gup	PE/4G	PH/5Gup
2.5	80A	85A	80A	85A	80A	80A
3.2	130A	120A	130A	120A	120A	120A
4.0	150A	145A	140A	140A	140A	140A
5.0	225A	225A	210A			

REMARKS / APPLICATION ADVICE

Recommended preheat temperature:200 - 300°C
Recommended tempering heat treatment range:700 - 730°C (time depends on material thickness)