

CLASSIFICATION

AWS A5.5 : E8018-G-H4R
ISO 2560-A : E 50 6 Mn1Ni B 32 H5

GENERAL DESCRIPTION

The basic all position pipeline and offshore electrode with max. 1% Ni
Excellent mechanical properties (impact at -60°C)
Extremely low hydrogen content
110 - 120% recovery
Weldable on AC and DC

WELDING POSITIONS

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

CURRENT TYPE

AC / DC + / -

APPROVALS

NAKS

Pending

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

C	Mn	Si	P	S	Ni	H _{DM}
0.05	1.5	0.5	0.010	0.005	0.95	2 ml/100 g

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Condition	0.2% Proof strength (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Impact ISO-V(J)	
				-40°C	-60°C
Required: AWS A5.5 ISO 2560-A	min. 460 min. 500	min. 550 560-720	min. 19 min. 18	not required	min. 47
Typical values AW	550	640	24	140	80

CTOD value at -10°C > 0.25 mm

PACKAGING AND AVAILABLE SIZES

	Diameter (mm)	2.5	3.2	4.0	4.0	5.0
	Length (mm)	350	350	350	450	450
Unit: carton box	Pieces / unit	135	120	85	85	23
	Net weight/unit (kg)	2.7	4.7	4.4	5.9	2.4

Identification Imprint: 8018-G / CONARC 74 Tip Color: white

Conarc® 74: rev. EN 02

Conarc® 74

MATERIALS TO BE WELDED

Steel grades/Code	Type
General structural steels	
EN 10025	S275, S355
Ship plates	
ASTM A 131	Grade A, B, D, AH32 to EH40
Cast steels	
EN 10213-2	G P 240R
Pipe material	
EN 10208-1	L290 GA, L360 GA
EN 10208-2	L290, L360, L415, L445
API 5LX	X42, X46, X52, X60, X65
EN 10216-1/EN10217-1	P275T1, P275T2, P355N
Fine grained steels	
EN 10025 part 3	S275, S355, S420, S460
EN 10025 part 4	S275, S355, S420, S460
EN 10025 part 6	S460

CALCULATION DATA

Sizes Diam. x length (mm)	Current range (A)	Current type	Arc time - per electrode at max. current - (S)*	Energy E(kJ)	Dep. rate H(kg/h)	Weight/ 1000 pcs (kg)	Electrodes/ kg weld- metal B	kg electrodes/ kg weldmetal 1/N
2.5x350	55-80	DC+	59	85	0.72	19.3	86	1.65
3.2x350	80-145	DC+	66	220	1.2	37.7	48	1.79
4.0x350	120-185	DC+	77	355	1.6	54.1	29	1.59
4.0x450	120-185	DC+	90	450	1.8	68.4	23	1.56
5.0x450	180-240	DC+	104	784	2.4	105.2	15	1.53

*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	80A	80A	80A	80A	80A	80A
3.2	140A	120A	145A	120A	120A	120A
4.0	150A	140A	150A	140A	135A	140A

REMARKS / APPLICATION ADVICE

Electrodes after removal from cardboard boxes redry 2-4h 350 ±25°C