

7018-1

CATEGORY SMAW Stick Electrodes

TYPE Basic CTOD tested extra low hydrogen electrode for stick welding

APPLICATIONS High strength steel constructions, offshore platforms, pipe welding, shipbuilding, vessel, rigs, drilling, repair welding etc.

PROPERTIES The 7018-1 is a low-hydrogen electrode suitable for highly stressed joints with very easy weldability and extreme high mechanical properties for steel and steel castings up to 610 N/mm² tensile strength and fine-grained steels with increased yield strength. It is particularly suited for welding on AC and DC+. The 7018-1 is suitable for steel with up to 0.6% carbon and has extreme low hydrogen content. HD < 3 ml/100gr. 7018-1 full fills the US Military specifications (M designation) according AWS against moisture pick up.

CLASSIFICATION

AWS	A 5.1: E 7018-1 H4R
EN ISO	2560-A: E 42 4 B 32 H5
	2560-B: E 49 18 A
DIN	1913: E 51 55 B10

SUITABLE FOR	Base metal	DIN	EN	ASTM
Shipbuilding		A, B, D, E, AH 32 till EH 36	-	A 131 / A 106
Un alloyed steel		St 33, to St 52-3 to St 60.2	P235GH, P265GH,	A 515 / A 715
Boiler steels		H1, H11, 17Mn4, 19Mn5	P295GH	A 283 / A 285
Steel castings		GS-38 to GS-52	-	A 414 / A 662
Pipe steels		St 35.8, St 45.8, St 52.4	P235T1/T2 - P355N	A 372 / A 369
-		StE 210.7TM - StE 380.7TM	L210 - L380	A 210 / A 516
Fine grain steels		StE 255 till StE 355	S255, S355, S420	A 255 / A 333
API steels		X42	X42	A 350 / A 612

W.Nrs: 1.0035 to 1.0060, 1.0461 to 1.0562, 1.0462 to 1.0565, 1.0345, 1.0425, 1.0481, 1.0482, 1.0308 to 1.0581, 1.0307 to 1.0582, 1.0440, 1.0472, 1.0475, 1.0476, to 1.1830, 1.0416 to 1.0551

APPROVALS TUV, CE approved

WELDING POSITIONS:



WELD DEPOSIT WEIGHT %

C	Mn	Si	Cr	Ni	Mo	P	S
0.08	1.00	0.60	-	-	-	<0.015	<0.015

MECHANICAL PROPERTIES

Heat Treatment	R _{p0.2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V	Hardness HRc / HV
AW	>440	510-610	>24	-20°C -40°C -60°C	>47

AW: as welded

WELDING PARAMETERS / PACKING

Welding Parameters		AC (OCV>70V) and DC+	Packing		
D (mm)	Length (mm)	Current (A)	kg / can	kg / 6pack	kg / 1000
2,0	300	40-70	2,5	15	21
2,5	300	65-90	2,5	15	21
3,2	350	110-140	2,6	15,6	36
4,0	350/450	140-180	2,6/3,3	15,6/19,8	52
5,0	450	180-230	3,6	21,6	101,9
6,0	450	240-290	3,6	21,6	150

