

## Classification

AWS A5.1-91 : E7018-1 H4R  
EN 499-94 : E 46 4 B 32 H5

## General description

**Basic, low hydrogen electrode ( $H_{DM} < 5\text{ml}/100\text{g}$ )**  
**100 - 120% recovery**  
**Excellent X-ray weld quality**  
**Good penetration on both AC and DC**  
**Especially suited to root passes on joints with a root face**

## Welding positions



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

## Current type

AC / DC electr. +/-

## Approvals

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

C	Mn	Si	P	S
0.06	1.5	0.6	0.017	0.008

## Mechanical properties, all weld metal

Condition	Yield strength (N/mm <sup>2</sup> )	Tensile strength (N/mm <sup>2</sup> )	Elongation (%)	Impact ISO-V(J)			
				-20°C	-30°C	-40°C	-46°C
As welded							
Required:	AWS	min. 399	min. 482	min. 22			min. 27
	EN	min. 460	530-680	min. 20		min. 47	
Typical values		550	610	26	135	125	

## Packaging, available sizes and identification

Diameter (mm)	2.5	3.2	4.0	5.0	6.0
Length (mm)	350	450	450	450	450
Unit: box					
Pieces / unit (nominal)	175	115	80	55	45
Net weight/unit (kg)	3.9	5.2	5.3	5.6	6.3

Identification Imprint: Hyrod 7018 LT/7018-1 Tip colour:

Liability: All information in this data sheet is based on the best available knowledge, is subject to change without notice and can only be considered as suitable for general guidance.

Fumes: Consult information on Welding Safety Sheet, available upon request

MDE Hyrod 7018 LT

## Materials to be welded

General structural steel	EN 10025	S185, S235, S275, S355
Ship plates		Grade A, B, C, D, A(H)32 to D (H) 36.
Cast steel	EN 10213-2	GP240R
Pipe material	EN 10208-1	L210, L240, L290, L360
	EN 10208-2	L240, L290, L360, L415
	API 5LX	X42, X46, X52, X60
	EN 10216-1/	P235T1, P235T2, P275T1
	EN 10217-1	P275T2, P355N
Boiler & pressure vessel steel	EN 10028-2	P235GH, P265GH, P295GH, P355GH
Fine grained steel	EN 10113-2	S275, S275, S355, S420
	EN 10113-3	S275, S355, S420

## 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 weldmetal B	kg Electrodes/ kg weldmetal 1/N
2.5 x 350	60 - 85	DC+	55	99	0.78		84	1.65
3.2 x 350	90 - 115	DC+	65	217	1.2		45	1.69
4.0 x 450	125 - 160	DC+	100	444	1.7		21	1.47
5.0 x 450	180 - 215	DC+	90	632	2.6		15	1.60
6.0 x 450	270 - 310	DC+	106	976	3.5		10	1.33

\* stub end = 35mm

## Welding parameters, optimum fill passes

Welding position Diameter(mm)	1G Current (A)	2F	2G	3G up	4G
2.5	70	70	70	80	70
3.2	115	115	110	90	100
4.0	150	140	150	140	135
5.0	210	200	200	180	
6.0	300	290			

## Remarks

## Application advice