



Selectarc B77

High Strength
Basic Electrode

Classification

AWS A5.5 : E11018-M H4R

ISO 18275-A : E 69 6 Mn 2NiCrMo B 4 2 H5

Description & Applications

Basic electrode with a deposit which is very resistant to cracks and has a high strength. The deposit contains Ni, Cr, Mo, Mn for welding similar fine grain steels (service temperatures : -40 to +450°C) Very good radiographic quality and very low diffusible hydrogen (3 ml H₂/100g metal deposit). Soft fusion, stable arc, low spatters and good removal of the slag.

Main applications: For low alloyed, tempered coated steels, pressure vessels, with a yield strength R_e>650 MPa.

Base materials

Fine grain and cold tough steels:

NF A 36-204	E 500T* . E 620T* . E 690T* .
DIN 17102	StE 590* . StE690* . TStE 500* . WStE 500* . 17MnCrMo 33, 11 NiMnCrMo 55, 16 NiCrMo 12, 12MnNiMo 55.
Werkstoff Nr.	1.8928* - 1.7279* - 1.6780* - 1.6782* - 1.6343* etc.
ASTM	A517 - A533GrA - A537 - A678 - A633Gr C bis E N-A XTRA; N-A TRA70* (Thyssen).
Tube steels	API 5 LX: X70* . X75* . X80*

(*) with eventual pre- and post weld heat treatment (consult us)

Typical Weld Metal Composition (%)

C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	V	Co	O/T
<0.10	0.4	1.5	0.4	2.1	0.4	<0.1	0.01	<0.020	<0.015	<0.01	<0.04	<0.50

Typical All Weld Metal Mechanical Properties

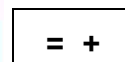
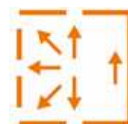
R _e (MPa)	R _m (MPa)	A ₅ (%)	KV (J)
755	810	23	+20°C 120 -50°C 60 -60°C 55

Welding Current & Instructions

Electrode	ØxL (mm)	2,5x350	3,2x350	4,0x450	5,0x450
Current	(A)	80	115	150	190

Redrying at 350 °C during 2 hours. Eventual preheating of the base metal depends on the thickness and the nature of the steel (50 to 130°C). Maintain an interpass temperature <150°C.

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