



P 110MR

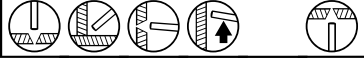
SMAW - (Stick) - MMA
Low-alloyed

Date: 2002-12-05
Revision: 14

Description:

P 110MR is a basic-coated low hydrogen electrode specially designed for welding high-strength low-alloy quenched and tempered steels with a yield strength of 700 N/mm². The weld metal combines very high strength properties with good fracture toughness at temperatures down to -60°C. P 110MR is an all-positional electrode with strong welder-appeal and produces mechanical properties highly suitable for applications such as mobile jack-up rigs and submarine construction.

Welding positions:



Coating type:

Basic

Welding current:

DC +, AC OCV ≥ 70 V

Hydrogen content / 100 g weld metal

< 5 ml

Metal recovery:

120%

Redrying temperature:

350-400°C, 2h

Chemical composition, wt.%

	C	Si	Mn	P	S	Cr	Ni
Min		0,20	1,20				1,6
Typical	0,05	0,40	1,50	0,01	0,005	0,01	1,8
Max	0,08	0,60	1,80	0,020	0,015	0,1	2,3

	Mo	Cu	V	Nb
Min	0,20			
Typical	0,25			
Max	0,50	0,2	0,05	0,05

Mechanical properties

	<u>Specified</u>	<u>Typical</u>
Yield strength, Rp0.2%:	690-760N/mm ²	740 N/mm ²
Tensile Strength, Rm:	760-960 N/mm ²	790 N/mm ²
Elongation, A5	≥ 20%	24%
Impact energy, CV:	-60°C • ≥47 J	-60°C • 60 J

Product data

Diam.mm	Length mm	Product code	Current A	Voltage V	Kg weld metal/kg electrodes	No. of electrodes/kg weld metal	Kg weld metal/hour arc time	Burn-off time/electrode (sec.)
2,50	350	71602500	70-110	22	0,7	66	0,9	52
3,25	450	71603200	100-150	24	0,7	29	1,4	81
4,00	450	71604000	135-200	24	0,72	19	1,9	93

Classification:

EN 757-97 ~E 69 6 Mn 2NiMo B 32 H5
AWS A5.5-96 ~E 11018-M

Approvals:

ABS 4YQ690

Note

AWS: Slight deviation in Mn and Mo.
EN: Slight deviation in Mn and Mo.

Core wire:

P < 0.012 %

S < 0.012 %

N < 0.060 %

ABS: 55J@ -60C