WB12018-G M.M.A. WELDING ELECTRODE

Classification	AWS A5.5-96 : E12018-G
Product Description	Fully positional, basic coated, low hydrogen electrode. Exceptional mechanical properties. Has a nominal recovery of ~110%. Excellent de-slag, re-strike and general welder appeal.
Application	Used for the welding of HY80, HY100 and other high yield alloy steels where the weld metal properties must match those of the parent material after normalising followed by quenching and tempering. For the majority of materials to be welded with WB12018-G, minimum preheats between 100°C and 200°C with maximum interpass of 250°C is required to avoid possibility of hydrogen induced "cold" cracking. Note that interpass temperatures above ~200°C may yield lower strength and toughness values.

All-Weld Metal Composition (Weight %)

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	V
min.	0.04	1.00	0.20	-	-	0.50	3.40	0.35	-	-
max.	0.07	1.50	0.40	0.020	0.025	1.00	4.10	0.75	0.050	0.050

Typical All-Weld Metal Mechanical Properties

Ultimate Tensile Strength	N/mm²	*930 **884 ***919
Yield Stress/0.2% Proof Stress	N/mm²	*795 **807 ***788
Elongation on 5D	%	*20 **22 ***24
Impact Energy CV @ -60°C	Joules	*52 **53 ***51 (-20°C)

* As-welded
**Stress-relieved @ 620°C/1 Hr
***Stress-relieved @ 620°C/8 Hr

Electrode Dia (mm)		1.6mm	2.0mm	2.5mm	3.2mm	4.0mm	5.0mm	6.0mm
Electrode Length (mm)		-	-	350	450	450	450	450
Current Range (Amps)	**min.**	-	-	70	90	130	160	230
	max.	-	-	90	130	180	220	280
Packaging Information (Available in Vac Pacs)								
Kg Per Packet		-	-	5	5	5	5	5
Approx. Pieces Per Kg		-	-	44	21	14	10	7

Storage and Re-baking

Storage
It is recommended that the WB range of electrodes are stored in a dry heated store at a minimum temperature of 18°C, and a maximum relative humidity of 60%. To avoid damage to the coatings no more than 6 cartons should be staked on top of another.

Re-drying
Re-dry @ 350°C for 2 hours and then transfer to holding oven and hold @ 100 - 200°C, or 50-100°C in heated quiver.

Current Conditions AC (OCV70) DC+ and Welding Positions