THERMET R17.38H

BASIC MMA ELECTRODE TO MATCH HIGH CARBON 18/37 HEAT RESISTING ALLOYS

PRODUCT DESCRIPTION

MMA electrode with a basic-rutile flux covering on a high alloy core wire.
Moisture resistant coating giving sound, porosity-free deposits. Sizes above 3.2mm are not recommended for positional welding.
Recovery is about 120% with respect to core wire, 65% with respect to whole electrode.

SPECIFICATIONS

AWS A5.4M (E330H-16) Thermet R17.38H has higher C, Cr & Ni than AWS specification.

ASME IX QUALIFICATION

QW432 F-No 5

(This is nearest because the electrode does not strictly conform to AWS)

QW442 A-No --

WELDING POSITIONS (ISO/ASME)

PA/1G PB/2F PC/2G PF/3Gu PE/4G

CHEMICAL COMPOSITION (WELD METAL WT %)

	C	Mn	Si	S	P	Cr	Ni	Mo
Min.	0.35	1.0	0.3	--	--	17.0	35.0	--
Max.	0.60	2.0	1.0	0.030	0.040	20.0	40.0	0.5
Typical	0.45	1.5	0.5	0.01	0.015	18.5	38	0.4

ALL-WELD MECHANICAL PROPERTIES

As welded		Min.	Typical
Tensile strength (MPa)		620	780
0.2% proof strength (MPa)		--	520
Elongation (%)	4d	10	16
	5d	5	14
Reduction of area (%)		--	15
Hardness (HV)		--	250

These alloys are designed for operation at elevated temperatures and modest ambient temperature elongations in the range 10-20% are normal.

TYPICAL OPERATING PARAMETERS, DC +VE OR AC (OCV: 70V MIN)

Diameter (mm)	2.5	3.2	4.0
min. A	60	75	100
max. A	90	120	155

PACKAGING DATA

Diameter (mm)	2.5	3.2	4.0
Length (mm)	300	350	350
kg/carton	12.6	15.6	15.6
Pieces/carton	639	396	264

STORAGE

3 hermetically sealed ring-pull metal tins per carton, with unlimited shelf life. Direct use from tin is satisfactory for longer than a working shift of 8h. Excessive exposure of electrodes to humid conditions will cause some moisture pick-up and increase the risk of porosity.
For electrodes that have been exposed:
Redry 200 – 250°C/1-2h to restore to as-packed condition. Maximum 250° C, 3 cycles, 10h total.
Storage of redried electrodes at 50 – 200°C in holding oven or heated quiver: no limit, but maximum 6 weeks recommended.
Recommended ambient storage conditions for opened tins (using plastic lid): < 60% RH, > 18°C.

FUME DATA

Fume composition, wt % typical

Fe	Mn	Ni	Cr	Mo	Cu	F	OES (mg/m3)
4	7	4	5	<0.1	<0.2	16	1