

ANNEXURE -I

TECHNICAL SPECIFICATION

The Coated electrodes furnished in this enquiry are for welding and shall conform to the requirements mentioned in this technical specification.

CHEMICAL COMPOSITION REQUIREMENTS:

1. The 'as-deposited' weld metal chemistry (Wire and flux combined) shall conform to the requirements of ASME and the additional restrictions as denoted below:

Sl. No	Element	Percentage	Sl. No	Element	Percentage
1	C	0.08-0.13%	10	Cu	0.25% max
2	Mn	1.00% max	11	Al	0.02% max
3	P	0.010% max	12	Cb	0.02-0.09%
4	Si	0.35% max	13	N	0.04-0.07%
5	S	0.010% max	14	B	0.002-0.006%
6	Ni	0.20% max	15	W	1.5-2.0%
7	Cr	8.5-9.5%			
8	Mo	0.30-0.60%			
9	V	0.15-0.25%			

It is Preferable to limit nickel content to 0.2% max. However, the total amount of Nickel plus Manganese shall not exceed 1.2%

1. The test certificate shall contain the following results after actual tests done:
 - a) Actual Chemical Composition of as deposited weld metal.
 - b) Mechanical Properties:
 - a. Tensile Strength : 630 MPa (Minimum)
 - b. Yield Strength : 440 MPa (Minimum at Room Temperature)
 - c. % Elongation : 18% (Minimum)
 - d. Impact Energy : 41 Joules - CVN (Minimum at +20 degree Celsius)
 - c) Actual Hardness of weld metal (202 HV to 320 HV)
2. PWHT 760 degree Celsius for 2 hours.
3. Soaking condition: 1 hour per 25mm of the thickness of the weld with 30 minute minimum hold time.

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