

ANNEXURE –I

TECHNICAL SPECIFICATION

1 GENERAL:

- 1.1 The electrodes shall comply with requirements specified in the Latest Edition of ASME Sec.II.C.SFA-5.11, ENiCrFe-3. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.
- 1.2 The electrodes are intended for use in radiographic quality butt welded joints in high pressure boiler tubes and pipes. The electrode shall be suitable for joining dissimilar materials such as Super 304H to steel and steels to nickel Alloys. The electrode shall be suitable for welding joints that undergo stress relieving.
- 1.3 Every batch of electrodes shall be inspected & test certificates countersigned by Inspecting authority approved by IBR for country of origin (latest).
- 1.4 The electrode shall be of Non-Synthetic type with an alloyed core wire that nearly matches with weld metal chemistry.

2 Chemical Composition & Mechanical Properties:

- 2.1 The chemical composition of the undiluted weld metal shall confirm to ASME SECII.C SFA-5.11, ENiCrFe-3.
- 2.2 The tension test and bend test shall meet the requirements of ASME SECII.C SFA-5.11 ENiCrFe-3.

3 RADIOGRAPHIC SOUNDNESS:

- 3.1 The radiographic test shall meet the requirements of ASME SECII.C SFA-5.11 ENiCrFe-3.

4 SIZE:

- 4.1 The electrodes shall be supplied in diameter: 4.00mm and length: 300 / 350 / 400 mm.
- 4.2 The tolerance on diameter and length shall be as per SFA-5.11.

5 CORE WIRE & COVERING:

- 5.1 The electrodes shall meet the requirements of clause 3.2 of SFA-5.02.

6 EXPOSED CORE:

- 6.1 The electrodes shall meet the requirements of clause 3.3 of SFA-5.02.

7 IDENTIFICATION:

7.1 All electrodes shall be identified as per SFA-5.11.

8 PACKAGING:

- 8.1 Electrodes in standard quantity shall be wrapped tightly in a corrugated paper and then packed in moisture proof polythene bags and sealed. These shall be further packed either in hermetically sealed containers or in cardboard packets and then packed in polythene bags and sealed. The number of electrodes per packet shall be such that the net weight of each packet does not exceed 5Kg. Packets shall be further packed in cardboard cartons each weighing not more than 25kg. The Cartons shall be packed in waterproof boxes with crates so as to ensure no damage during shipment and normal storage conditions.
- 8.2 Weight of each crate shall not exceed 1000kg.
- 8.3 Markings of packages shall be as per clause 4.6 of SFA-5.02.

9 TESTING & CERTIFICATION:

- 9.1 Each consignment of electrodes supplied shall be from one batch only.
- 9.2 Batch /Lot classification shall be Class C1 as per SFA-5.01 Filler metal procurement guidelines of ASME Sec.II.C. (Latest Edition and Addenda)
- 9.3 The Level of Testing shall be Schedule J as per SFA-5.01 Filler metal procurement guidelines of ASME Sec.II.C. (Latest Edition and Addenda)
- 9.4 Three copies of Original Test certificates in English countersigned by Inspecting Authority (Latest) approved by IBR for country of origin giving details of following tests done in compliance with this Purchase Instruction and ASME Sec.II.C, SFA-5.11, ENiCrFe-3 shall be sent.
- 9.5 The Testing Authority shall certify that supplies made against the batch conform to the requirements of the Latest Edition & Addenda (Applicable on the date of issue of Purchase Order) of ASME Sec.II.C.SFA-5.11, ENiCrFe-3.
- 9.6 The Test Certificate should also contain Purchase Order number, Purchase order Date, Supplier Quantity and Brand Name