

ANNEXURE –I

TECHNICAL SPECIFICATION

1 GENERAL:

- 1.1 The wire shall comply with the requirements specified in the latest edition and addenda (applicable on the date of issue of purchase order) of ASME Sec.II.C.SFA-5.14, ERNiCrFe-7A. All tests, acceptance criteria shall be in accordance with this. Additional requirements specified in this document shall also be complied.
- 1.2 The wires are intended for use as a welding electrode for butt-welding of tubes in pulsed GMAW process with Argon and Carbon dioxide as gas shielding in automatic straight tube butt welding machine for radiographic quality high pressure boiler components.

2 CHEMICAL & MECHANICAL COMPOSITION:

- 2.1 The chemical and mechanical composition of the wire shall conform to latest edition of ASME SEC.II.C SFA-5.14, ERNiCrFe-7A.

3 RADIOGRAPHIC SOUNDNESS & USABILITY:

- 3.1 The wire when used as an electrode in GMAW with Argon and Carbon dioxide as gas shielding shall deposit a weld metal that flows freely, uniformly without sputtering or any other defects and shall exhibit excellent wetting characteristics.
- 3.2 The resultant weld metal shall be smooth, uniform with no visible evidence of cracks, porosity or any other defects and shall meet the radiographic soundness requirements as per ASME SEC.II.C SFA-5.14, ERNiCrFe-7A.

4 SIZE, FORM & WEIGHT:

- 4.1 The wire shall be supplied in diameter 0.8/0.9/1.0 mm.
- 4.2 The tolerance on diameter shall be as per SFA-5.02.
- 4.3 The wire shall be precision layer wound in S300 spools as per SFA-5.02 having net weight of the wire shall be 10/12.5/13.6/15Kg.

5 FINISH & UNIFORMITY:

- 5.1 The wire shall meet the requirements of clause 4.2 of SFA-5.02.

6 WINDING REQUIREMENTS:

6.1 The wire shall meet the requirements of clause 4.4 of SFA-5.02.

7 IDENTIFICATION:

7.1 The wire shall meet the requirements of clause 4.5.2 & 4.5.5 of SFA-5.02.

8 MARKING:

8.1 The wire shall meet the requirements of clause 4.6 of SFA-5.02.

9 PACKAGING:

- 9.1 The wire should be completely devoid of moisture or any other foreign material with adequate sealing in suitable cartons to ensure no deterioration in the electrode quality during transportation by sea or long duration storage.
- 9.2 The cartons shall be packed in waterproof boxes with crates so as to protect them from damage during shipment and storage under normal conditions. Weight of each crate shall not exceed 1000kg. The cartons shall have product information as per clause 4.6 of SFA-5.02.

10 TESTING & CERTIFICATION:

- 10.1 Each consignment of electrodes supplied shall be from one batch only.
- 10.2 Batch /lot classification shall be Class S1 as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C. (Latest edition and addenda).
- 10.3 The level of testing shall be Schedule K as per SFA-5.01 filler metal procurement guidelines of ASME Sec.II.C (Latest edition and addenda).
- 10.4 Three copies of original test certificates in English countersigned by inspecting authority (latest) approved by IBR for the country of origin giving details of the tests done in compliance with this purchase instruction and ASME Sec.IIC, SFA-5.14, ERNiCrFe-7A shall be sent.
- 10.5 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-5.14, ERNiCrFe-7A.
- 10.6 The Test Certificate should also contain Purchase Order number, Purchase order Date, Supplier Quantity and Brand Name