

Technical Specifications of Transformer tank welding positioner with clamps

This specification covers technical requirement, PQR & Scope of supply: Transformer tank welding positioner with clamps

1. Scope of supply:

Design, manufacturing, supply, installation and commissioning of Transformer tank welding positioner with clamps. All type of clamps must be suitable for weld positioner hole, pitch etc. in all manner.

2. Drawings

Sketch along with purpose of clamp and modular table are provided in technical requirements

3. Technical requirement

- a) All Machined surface must have Fine dimensional tolerance as per ISO:2768
- b) Minimum overall Size: LXWXH 3600x2000x750-900mm with side clamping provision, 3rd dimension of table: min 200mm.
- c) Flatness of surface less than 0.3mm per meter
- d) Table Top plate thickness minimum: 15.0mm
- e) Standard Hole diameter for clamps, preferable: top surface hole or combination of holes & slot having suitable pitch 50x50mm & suitable slot/hole of 16mm for clamps
- f) Highly machined holes for clamping accessories fixing for achieving accurate jobs,
- g) Surface material: Steel ISO:2062 or FG-200
- h) Frame material: Steel ISO:2063
- i) Case depth of Nitriding minimum: 0.01 – 0.5mm
- j) Surface Hardness minimum: VICKERS HARDNESS HV 450 or Rockwell C Scale Hardness HRC 45.9
- k) Co-efficient of friction ($\mu = F/L$) = 0.37
- l) Loading capacity minimum: 3 MT
- m) Top surface must be anti-corrosive, Anti spatter, wear resistive and tough.
- n) Bottom stand must be painted to avoid rusting.
- o) Height adjustment leveling pad at welding positioner /table required.
- p) Must have provision for module addition or removal with provided clamp/connectors.
- q) Welding positioner /table required 3D option for side clamping, suitable 3D brackets required.
- r) The modular assembly table must have provision of rotation.

4. Documents to be submitted:

- a) 1 set of Operation & maintenance manual.
- b) 1 set of soft copy.
- c) Dimensional drawing of each component and assembly video copy is required.

5. Installation and commissioning

Demonstration, erection and commissioning with leveling arrangement in all X, Y & Z direction of total system (welding positioner with clamps) and fixing procedure of the system /equipment to be done by supplier at BHEL CFP Rudrapur.

6. Warranty:

Minimum one-year warranty from date of commissioning.

7. Inspection:

- a) Party may visit CFP Rudrapur for assessing the requirement.
- b) BHEL/Third party quality check before dispatch.

8. Make of equipment:

Supplier has to declare make of all the equipment's during technical evaluation.

9. Pre-Qualification Requirements:

- a) NABL lab test certificate for composition properties of the material supplied and Nitriding.
- b) Bidder has to submit performance / Execution certificate from at least two customers of similar works.
Similar work consists of: modular table meeting minimum five technical requirements out of clauses 3a,3c,3i,3j,3l & 3m as mentioned in technical requirement mentioned above.
- c) Bidder should submit proof of owning any valid license design software's like auto-cad/ANSYS/PROE etc.
- d) Calibration certificate of 3D table required.

Note: Non acceptance /submission of point no 09 will be liable for rejection in T/C bid

31st Nov 2020