



TECHNICAL SPECIFICATION FOR 500 Hz MOTOR GENERATOR SET

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- 1.0 **Equipment** : 12.5 kVA, 0-500 V, 25 A, 500 Hz, AC Motor Generator set.
- 2.0 **Introduction** : The Motor Generator set is used for measurement of Impedance on Generator rotors during manufacturing for inter turn insulation checks.
- 2.0 **Scope** : Supply of Motor Generator set along with control, excitation and measurement panel mounted on transportable trolley as per the following specifications..
- 3.0 **Technical Specifications :**
- 3.1 **Motor Generator set**
- Motor : 3 phase induction motor
- Input voltage : 50 Hz, 415 V +/- 10% Three phase
- Rating : As required by the Generator output.
- 3.2 **Generator**
- Output kVA : 12.5 kVA
- Output voltage : Variable 0-500 V
- Output frequency : 500 Hz
- Output current : 25 A
- Excitation : Variable DC voltage (Rectified voltage from control panel)
- 3.3 **Coupling** : Flexible
- 3.4 **Base frame** : Motor and Generator set shall be coupled with flexible coupling and mounted on common base frame. The common base frame shall be rigid for containing vibrations of the set .
- 3.5 **Control panel**
- Star Delta starter shall be provided for starting the MG set.
- One number of output contactor of three pole, one number of input contactor of three pole for induction motor shall be provided.
- Dimmer stat, rectifier bridge for variable DC voltage to field of generator shall be provided.
- Indicating lamps for Input supply 3 Nos. (for three phase), Input contactor ON lamp, Output contactor ON, Output contactor OFF
- Current sensing relay unit for selecting suitable range of output current and trip load current.
- Interlock between excitation system and operation of generator contactor.
- Voltmeter with selectable switch for measurement of input voltage to motor.
- CT for Out put current measurement and ammeter suitable for 500 Hz of class 1 accuracy.
- Output frequency meter, one number of Output voltmeter for 500 Hz frequency of Cl.1 accuracy shall be provided. All meters shall be of digital meters.

Date : 21.08.2006

Prepared by :

Approved by :

B.D. PANDEY

वरि. उप. महा प्रबंधक, परीक्षण
Sr. Dy. General Manager, Testing
बी एच ई एल / BHEL, Hyd-32



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- 3.6 **Trolley**
Motor – Generator set and Control panel shall be mounted on trolley. Wheels with hard castled steel wheels with hard rubber lining shall be provided for movement in the industrial shop. Lifting hooks shall be provided. The unit shall be fenced with grill all round the equipment.
- 4.0 **Testing** : The total equipment supplied shall be tested at works. The equipment shall be offered for Witnessing the test. Test procedures, drawings shall be submitted at least 15 days in advance.
- 5.0 **Dispatch** : The equipment and accessories supplied shall be packed against mechanical damage during transport and storage and proper marking (BHEL Purchase Order details) shall mentioned on the consignment.
- 6.0 **Commissioning** : The equipment supplied shall be commissioned and demonstrated for proper Operation and functioning at BHEL works.
- 7.0 **Documents** : 1. Test Certificates shall be supplied.
2. Three sets of Operation and Maintenance manuals (complete wiring drawings for control panel and Generator winding and MG set layout) are to be supplied.
- 8.0 **Guarantee** : The entire supply shall be guaranteed for satisfactory performance and workmanship for a period of 18 months from date of commissioning.
- 9.0 **General** : The bidder shall submit compliance statement basing on the Specifications.
All other terms and conditions as per BHEL guidelines.

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Sr. Dy. General Manager, Testing
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