SPECIFICATIONS FOR SINGLE CHANNEL EDDY CURRENT TEST SYSTEM

Single Channel Eddy Current Testing system along with required probes with the following features.

MAIN SYSTEM:

- The system should be portable (< 5 kgs) and have the user friendly menu driven calibration set up features.
- The system should be capable of detecting both the surface and sub-surface defects.
- It should be able to sort the mixed metals.
- It should be able to measure the non-metallic coating thickness on metals / metallic coating thickness on non-metals. Thickness range: 5 to 250 microns (min).
- It should be able to measure the conductivity and display in digital values.
- It should be capable of detecting the defects in bolt holes and fasteners.
- The system should be able to use both the differential and absolute type probes.
- The system should have the provision to connect the 4-pin type probes else adopter shall be provided.
- Gain should be of 0 to 96 dB with 1 dB increment with independent setting for both vertical and horizontal.
- It should have the frequency bandwidth of 50 Hz to 10 MHz.
- The system should have the phase band of 0 to 359^{o} with 1^{o} increment.
- The system with dual frequency operation is preferred.
- It should have the audio/visual alarms.
- The system should have the memory for saving min. of 50 set up/trace files.
- The system should have the capability to acquire, store, retrieve and report the data.
- USB ports are preferred for data transfer and printing.

- It should have the low pass and high pass filters based on the frequency levels.
- The system should have the automatic balancing facility.
- The system should be able to work with an AC power supply of 200V to 240V with 50Hz whenever the batteries are exhausted.
- The system shall have the built-in charger for charging batteries as well as external charger. The battery should work for at least 6 hrs of operation.
- The system should be capable of working upto 50^{o}C.
- **Catalogues & brochures** giving complete description and operational details along with photographs of the machine should be submitted along with the quotation for becoming prospective supplier.
- Suitable carrying case shall be provided for system

GENERAL ITEMS/ TERMS.

- The system should be quoted along with the following probes.
  1. Surface probes- 3 Nos. Frequency range shall be 300Hz to 10 kHz, 1 kHz t o 50 kHz and 50 kHz to 500kHz.
  2 Pencil probes – 3 Nos. Frequency range shall be 100 Hz to 1 kHz, 1 KHz 100 kHz and 100 kHz to 2MHz.
  3 Bolt hole probes – 2 Nos. Frequency range shall be 100 kHz to 500 kHz, 500kHz to 2 MHz.
  4 Conductivity probes. Frequency range shall match for both ferrous and non ferrous metals.
- The offered system shall be demonstrated at BHEL R&D before technical acceptance.
- Optional features, if any shall be quoted separately.
- Training at BHEL R& D shall be provided.
- Necessary spares including one set of rechargeable batteries to be provided for trouble free operation of 2 years.
- Special tools, accessories, etc to be quoted separately.
- Standard blocks/ samples for mentioned applications should be quoted along with the system.

- The suppliers should provide the list of various organizations (including in India) with their contact addresses, where the Eddy Current testing equipment has been supplied. Certificate at least from two customers should be provided that the system is working for last two years satisfactorily.
- Two sets of operating and instruction manuals shall be provided.
- Supplier should have service centers in India.
- Warranty for one year should be given after commissioning.
- Supplier should quote for AMC for two years after the warranty period.

For any Technical Clarifications please contact –

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