

Specification of Portable Vibration Analyzer:

1. Item description: Portable Vibration Analyzer (FFT).
2. Application: Measurement of natural frequency of Steam Turbine free standing, twisted Low Pressure Moving Blades of lengths varying between 100 mm to 800 mm. The accelerometer shall be attached to the twisted blade profile (with clay/magnet base of the accelerometer) and the measurement shall be possible with single and gentle strike on the blade profile.
3. Number of channels: Minimum one.
4. Frequency range: 5 Hz to 10000 Hz, linear scale in selectable ranges.
5. Weight of the total system: Less than 10 kg.(including all accessories)
6. Accuracy: +/- 0.50% of FSD
7. The equipment shall also be operable with Rechargeable battery power supply.
 - (a) 1 No. Rechargeable battery, with minimum 4 hours battery backup, shall be supplied.
 - (b) 1 No. matching Battery Charger 230V shall be supplied.
8. Ambient temperature: 5-45 Deg. Centigrade
9. Weight of Accelerometer: ≤ 4 gms (Magnet base - optional)
10. Display screen size: 125 mm (Length) minimum X 60 mm (Width) minimum.
11. Display functionality: zoom, unzoom, etc.
12. Cursor for selection of frequency and amplitude: shall be provided.
13. Resolution: 800 lines (minimum)
14. Carrying case: capable to carry total instrument.
15. Tuning hammer : 1 number (Optional)
16. Internal memory: Capable to store 150 Spectrum data (minimum)
17. Import/Export functionality: Capable to export Spectrum and frequency reading at the cursor for a spectrum into MS Excel format/other spreadsheet file to PC.
18. Laptop of latest configuration to store spectrum and frequency data.
19. Strong construction with a high resistance to adverse effects of water, dust, vibration and shock.
20. Dynamic range: 60 db (minimum).
21. Commissioning to be done at BHEL.
22. Training for a period of six days in operation & maintenance at BHEL.
23. The supplier should have supplied minimum of three such instruments of the same model. Performance certificate for satisfactory working over past three years for minimum one instrument shall be furnished.
24. If such an equipment has been supplied to any of the units or regions of BHEL, the equipment(s) must be working satisfactorily for past six months. Performance certificate(s) for satisfactory working of these equipment(s) over past six months shall be furnished.
25. Spares and consumables for five years' trouble-free operation shall be quoted.
26. Warranty for two years shall be provided.