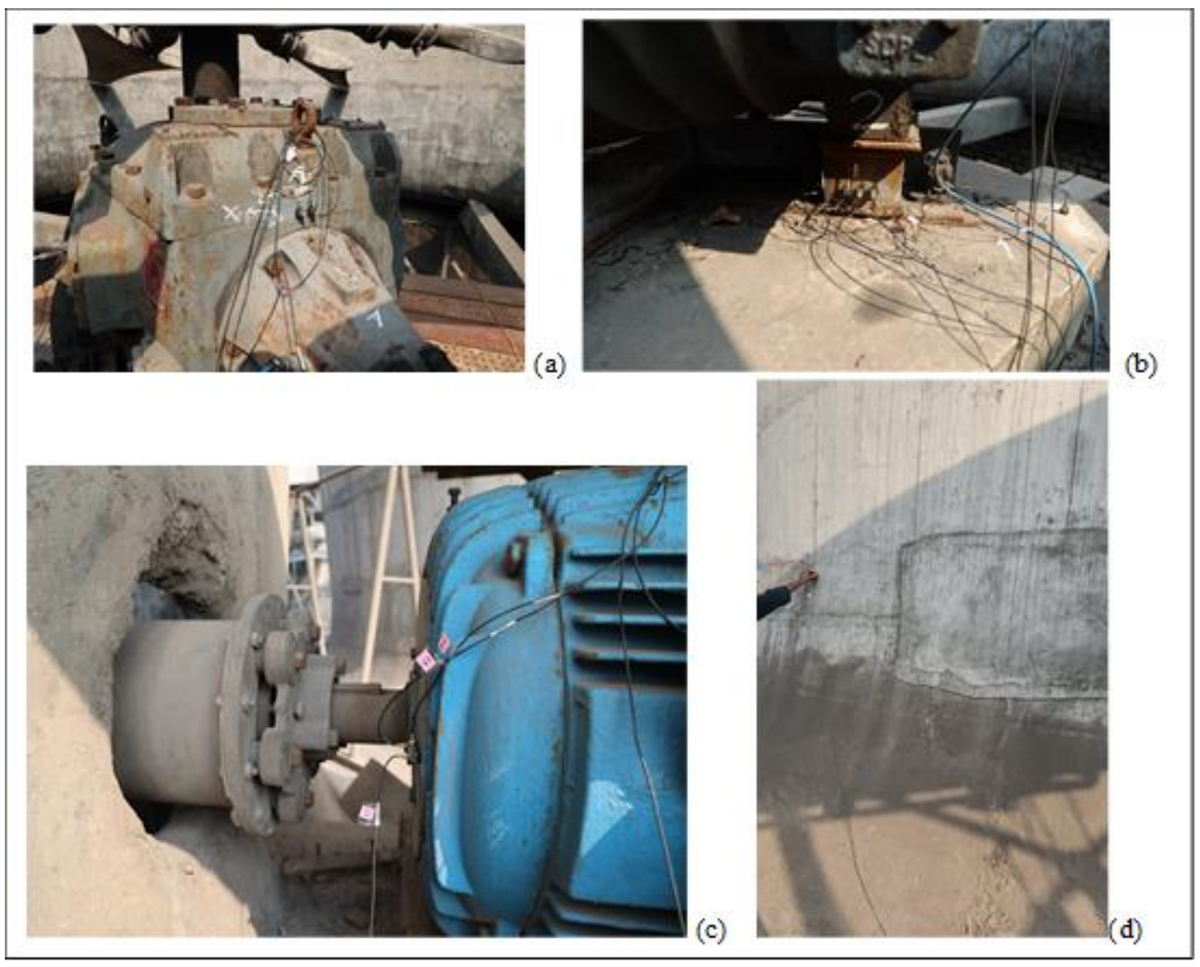
INVESTIGATION ON THE VIBRATION PROBLEM IN COOLING TOWER CELL NO: #9 AT NSPCL, DURGAPUR PP-2

Sponsor: NTPC-SAIL Power Co. Ltd., Durgapur, West Bengal

- NSPCL Durgapur power plant of 120MW capacity houses a cooling tower having 9 numbers of cells, and one of them cell no : #9 (CT9) is found to experience vibration at the gear box end during operation. Number of immediate measures were taken by the authorities to arrest the severe vibrations observed during operation, though it is found to be persistent after attempting a series of remedial measures
- Various field trials were made by varying different parameters like frequency, blade angle, with and without water conditions apart from normal ambient conditions and free vibration at selected locations.
- Detailed investigation including the effect of varying frequencies and other dynamic parameters could identify the salient features pertaining to the vibration at cell no: #9 (CT-9). Possible causes and other identified issues are discussed and suitable recommendations/guidelines are suggested
- A suitable vibration mount assembly is proposed to bring down the higher vibration levels

Entire Structure Array of Cooling Towers

RCC Frame supporting structure of the Cooling Tower-Fan attached to the concrete block



Various locations of Vibration Measurement

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