VSR SYSTEMS & SERVICE

Superior Vibratory Stress Relief Technology

VIBRATION ANALYSIS

VSR offers a variety of vibration simulation and analysis services to heavy industry. Our experience includes vibration testing and analysis of a wide variety of structures, including:

- **Large bins and hoppers, to determine the correct choice of vibrators to use for material flow aid**
- **Cyclotron, to simulate vibration generated by normal operation, testing mechanical and electrical integrity**
- **Building structure, to simulate vibration of operating equipment and its effects on building integrity and noise levels**

Capabilities include:

- **Rotary vibration generation:**
  - **Range: 10 - 8000 RPM (~ 0.17 - 133 Hz)**
  - **Unbalance: 0.2 - 4.0 in-lbs.**
  - **Data gathering;**
    - **Scan rates: 1 - 50 RPM / sec**
    - **Scan composites: In-field: 2 (limitless, post-field)**
  - **Data record formats: Adobe pdf or byte-map files**

- **Acoustic analysis:**
  - **Frequency range: 10 Hz - 20 kHz**
  - **SPL: 50 - 150 dB**
  - **Channels: 2 (channel data can be added or subtracted from the other)**

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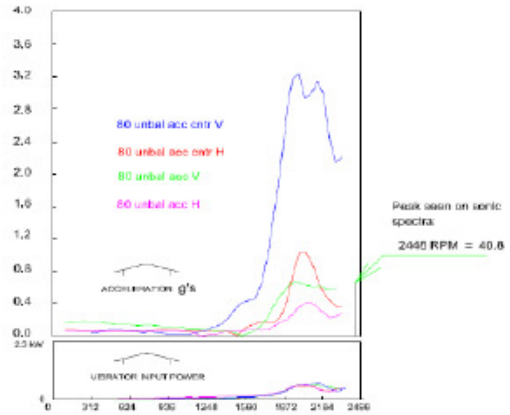
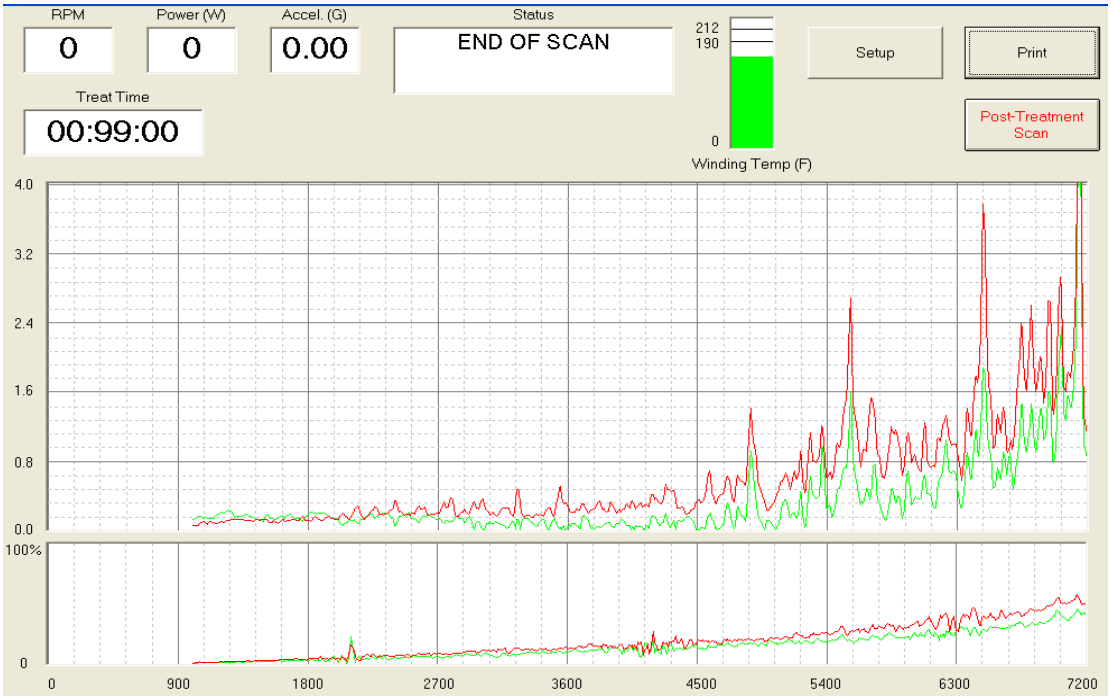
USA
215.366.3315 / 215.901.5742 / www.vsr2.net



To the left is shown a beam that is part of a support for a large feeder tray at a coal-fired power plant. In the blue circle is a VSR Vibrator used to simulate the feeder's excltatlon

A composlte of scan data showed that the beam was being excessively resonated by the feeder.

Adding stiffening members, one of which was landed where the green clrcle appears, resolved the issue, lowering both the bulldlng's vlbratlon and nolse level, even with higher feeder speeds and coal passage.



A typical set of vibration data gathered using the VSR 5.0 Operating System.

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