

APPLICATION NOTE

Vibration Monitoring



MRI Equipment Installations: Site Pre-Screening

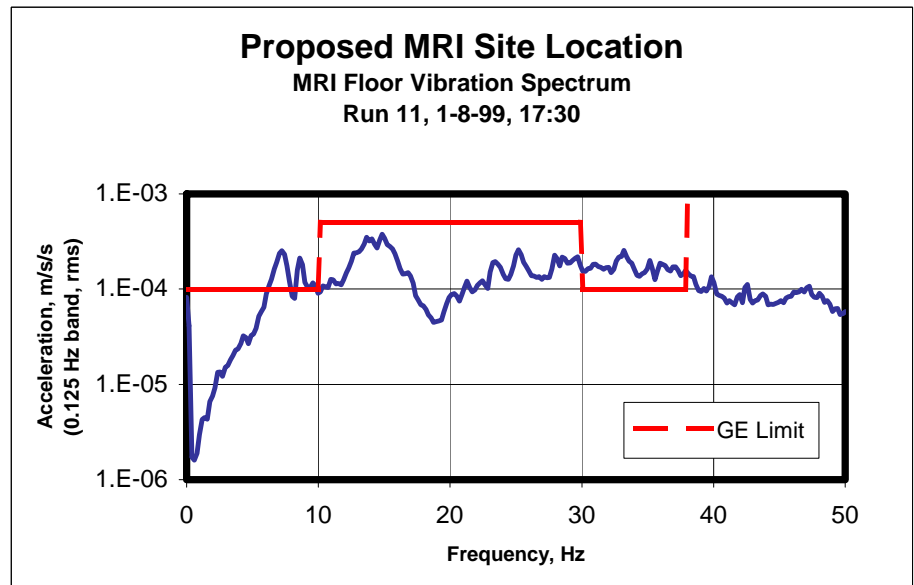
Vibrations Can Severely Compromise Image Quality

In accordance with manufacturer specifications, normal operation of an MRI system requires that the system be installed on a stable platform in order to achieve high resolution image quality. In particular, the magnet may be sensitive to vibrations in the range of 0.5 to 45 Hz. Pre-screening of proposed installation sites is necessary to ensure that vibrations are minimized to maximize system performance.

Typical Scope of Work

GEOVision engineers and geophysicists have more than 35 years experience in vibration monitoring. **GEOVision** is responsible for planning the pre-screening survey, collecting & processing the data, and submitting a final report. Typical tasks include:

1. Setup the vibration monitoring system at the proposed MRI installation site. This includes a Kinemetrics Model FBA-23 Force Balance Accelerometer.
2. Collect data at multiple locations during peak traffic periods. Based on conversation with staff at the proposed installation site, GEOVision will measure vibrations at times during the day when peak traffic and other influencing factors occur, such as trains.
3. Processing of vibration data yields a summary of vibration monitoring results. Information includes the maximum steady state and transient measurements at each location.
4. Discussion of results and conclusion. This provides the site owner with a recommendation as to whether vibrations at the site meet or exceed the manufacturers specifications as well as suggestions on mitigating any sources of excessive vibrations.



Key Benefits

The important benefits of vibration monitoring are:

- Compliance with manufacturers specifications. Assures operator of maximum system performance under normal conditions.

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