Vibration Monitoring Services

Vibration monitoring is an invaluable way of assessing possible damage to existing buildings and infrastructure as a result of unwanted vibrations caused by programmed construction, demolition, blasting or other activities, thereby limiting a contractor’s liability. Pre- and post-vibration surveys of properties adjacent to client-controlled sites subject to large vibrations can also help property owners by detecting, documenting and monitoring pre-existing damage that may not previously have been apparent.

THE Applus+ SOLUTION

Applus+ has highly experienced staff who have worked in many different environments and can therefore adjust to changes in the field. Applus+ responds rapidly to vibrations that are approaching the action levels defined by the client’s engineers (who determine the ‘permissible’ vibration limits). The real-time response provided by our on-site team allows a contractor to adjust its processes immediately to eliminate large, possibly damaging vibrations.

Thanks to our wide geographical reach, we can provide local field experts at the same time as offering our clients access to office-based supervisory personnel, helping to limit the cost to the client. Reporting is carried out daily.

Target customers

Vibration monitoring can be instrumental in limiting liability for many types of clients undertaking a wide variety of projects involving a range of assets. Pipeline infrastructure, bridges, government buildings, hospitals, historic buildings and monuments and individual homes can all be monitored for potentially harmful vibrations.
Many public authorities require the monitoring of vibrations for certain types of construction, demolition or blasting projects. It can calm the fears of the general public if they see that a contractor is taking the safety of their homes seriously.

Initial vibration monitoring should begin prior to any substantial vibration-inducing activity so that a baseline of vibrations is recorded at the subject site. For instance, subway traffic may create a larger vibration signature than pile driving at the site in question.

Vibration monitoring can be performed for a single day of blasting at a construction site or over the longer term, for example during the demolition of a large building.

**Key customer benefits**

Large vibrations can cause previously existing, yet unobserved, cracks or other damage to come to light. Applus+ can help to protect its clients from paying for damage that they did not cause.

Furthermore, if a contractor is aware of both the permissible vibration limits and actual vibration levels, they can either increase vibration (and therefore productivity) if under the threshold or decrease vibration if approaching the vibration threshold.