

MRI Scanner Room B0 & Vibration Measurements (DC & AC)



Where modern equipment such as MRI (Magnetic Resonance Imaging) Scanners and SEM (Scanning Electron Microscopes) require benign magnet field and vibration environments an early survey of their intended locations will be necessary. Detailed below is a description of the survey methods used by EEP.

Methodology

Vibration Survey

Using a chalk line, a survey grid will be marked on the slab. The vibration probe will be temporarily attached to the slab at the intersections of the grid. The survey equipment will be switched to the correct mode and once ready, readings will commence. At each reading, the probe will be removed from the slab and moved to the next survey position.

Magnetic Survey

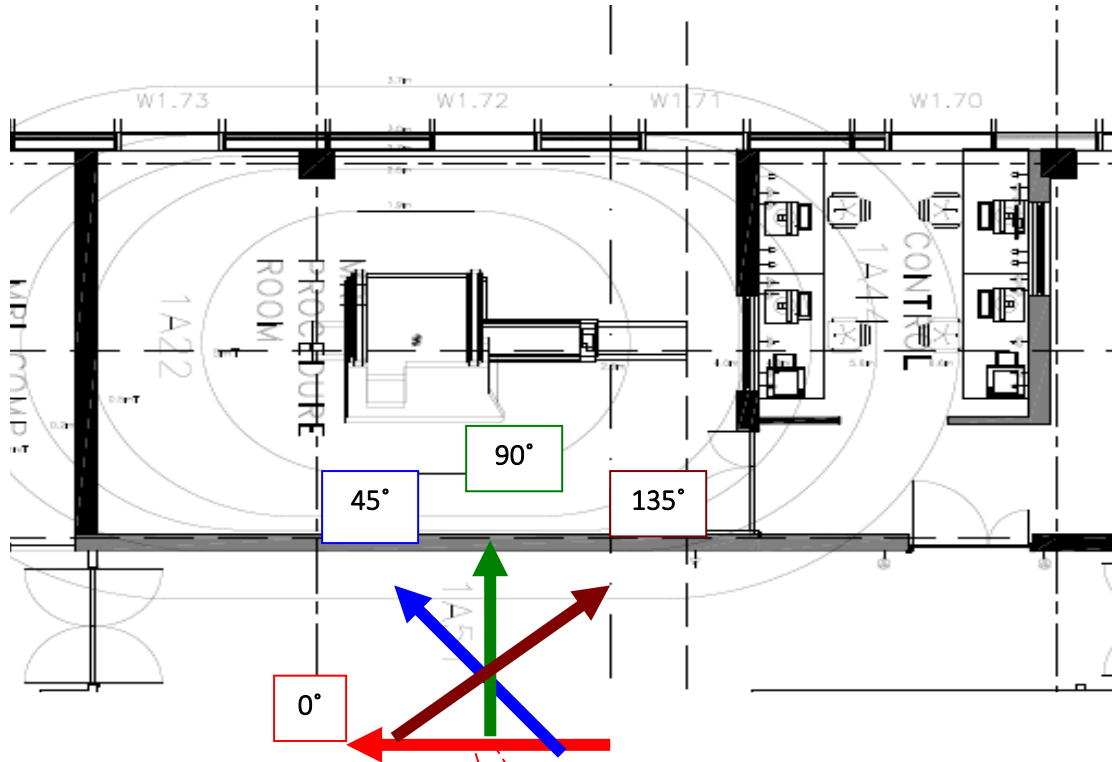
The marked-up dust sheet will be laid out, using the centre of the room as a reference point. The survey equipment will be switched to the correct mode and once ready, the probe will be moved vertically on the tripod at each pre-determined height and the tripod horizontally at each point on the grid marked on the dust-sheet.

Specifications

Measurements taken will be compared with requirements for Philips, GE and Siemens.

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Magnetic Field Fluctuation Measurements



Sensor

Z axis along MRI bore

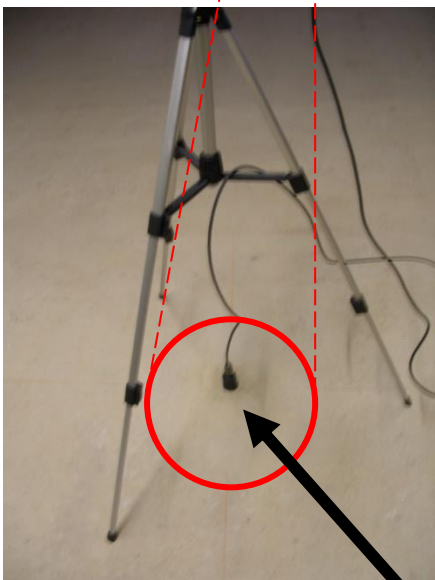
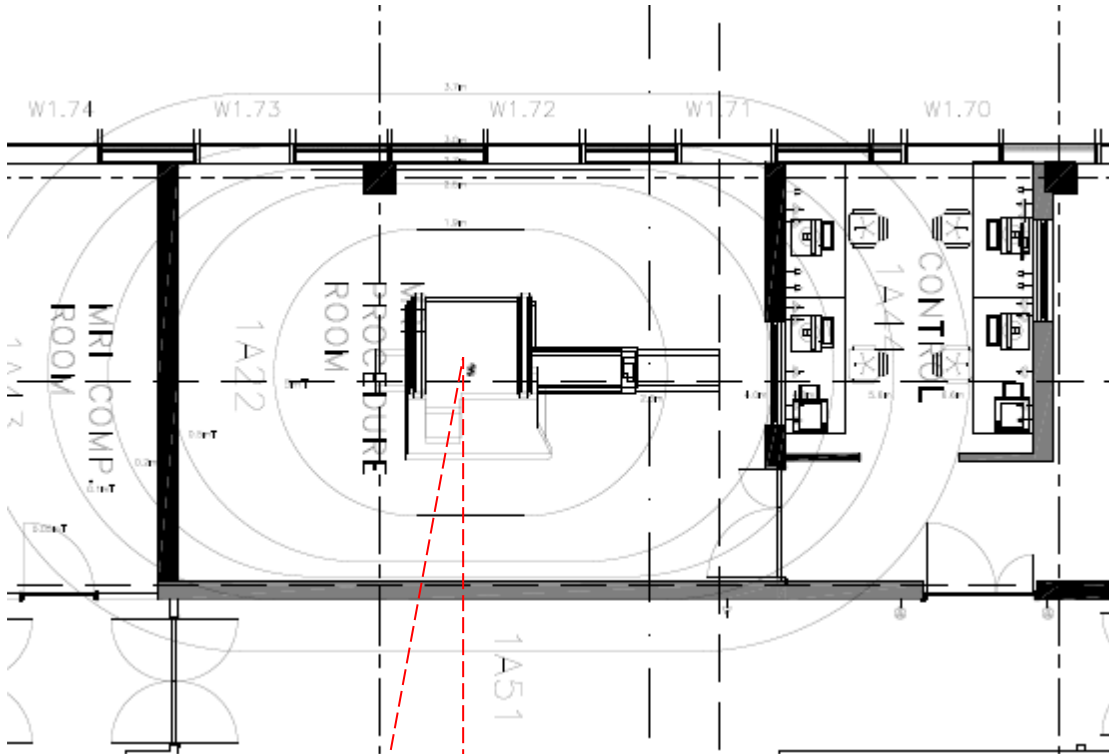
X axis vertical

Y axis across room

Measurements taken at 0°, 45°, 90° and 135°

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Vibration Measurements



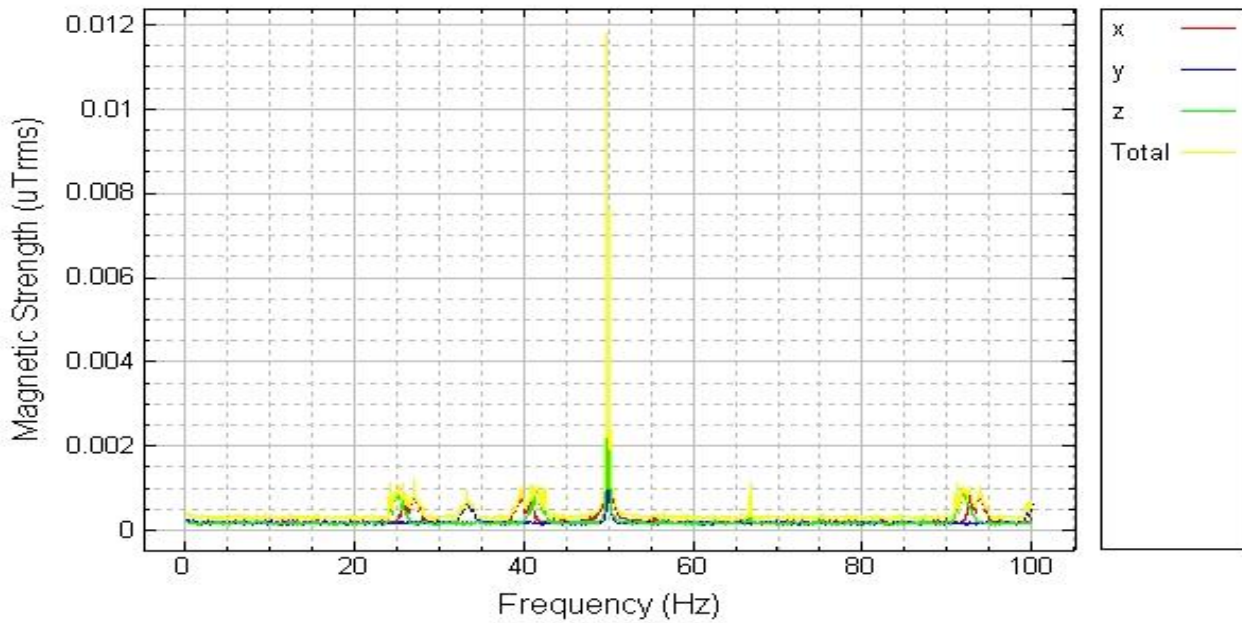
Sensor

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Typical Survey Results

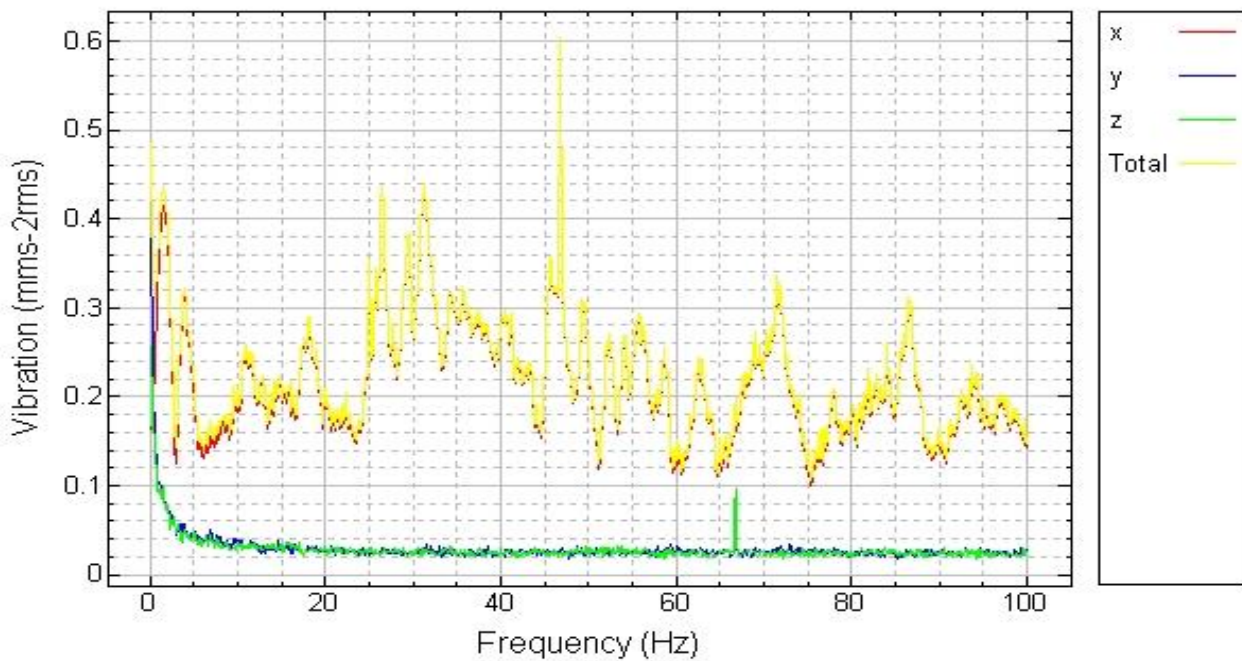
Magnetic Field Fluctuation Test Results: Sensor at 0°

Input 1 Frequency Domain



Vibration Test Results: Measurement 1

Input 1 Frequency Domain



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About Us

Established in 1996, European EMC Products (EEP) are an established British company whose experience and understanding of the science of shielding makes it an ideal partner in whom you can place your trust with confidence. The purpose of installing EEP shielding systems is to protect people and equipment against the threats posed by electromagnetic and radio frequency (RF) interference, radiation, magnetic fields and electromagnetic pulses. Our diverse range of turnkey products and services, including design, project management, testing and consultancy are delivered across multiple sectors to an international client base.

Quality

European EMC Products Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.
Registered Scope: The design, assembly, installation, servicing and testing of RF Shielded Structures and equipment including EMI Shielding, Blast Doors, Gas Tight Doors and specialised mobile Electromagnetic Pulse Protection (EMPP) containers.

Radio Frequency, Magnetic Shielding and Quench systems for MRI (Magnetic Resonance Imaging) scanners.

The design, assembly and installation of Ionising Radiation Protection facilities.

The design, manufacture and installation of LED lighting systems for medical applications.

EEP Filters Limited are registered to BS EN ISO 9001:2015, Certificate Number FS38901.

Registered Scope: The design, manufacture, management of installation and testing of high performance EMC and EMP Power and Data Line Filters.

Disclaimer

NB: All the information provided within this datasheet is for reference only. Product specifications are subject to change without notice.