SoundGood

Acoustic Solutions

Case Study:

PEPSI Factory in KSA

Mob. + 962 79094 73 58
Mail info@sg-acoustics.com
Mob. + 962 79651 75 06

Amman 11118
P.O. Box 182409
www.sg-acoustics.com

SoundGood

Acoustic Solutions

Challenges

- Client complaint of the entire first floor vibrating due to machine operations.
- Ensuring accurate vibration measurements and collecting detailed information about the building structure, mechanical details of running machines, and areas affected by noise and vibration.
- Identifying the problem, determining the causes, and suggesting effective solutions.
- Supervising the vibration treatment process and verifying results through repeated measurements.
- Finalizing the report to demonstrate improved isolation.

SoundGood

Acoustic Solutions

Rejected Solutions

Relocating machines to the ground floor due to impracticality, high cost, and long production stoppage.
Using floating floor technology, which was infeasible due to the weak concrete slab.

SoundGood

Acoustic Solutions

Implemented Solution

Use of 4” deflection restrained springs for machine vibration isolation.
Installation of 1” & 2” deflection spring isolators for piping systems.
Use of rubber and stainless steel flexible joints for water and refrigerant pipes.
Relocation of the water chiller to align its center of gravity with the supporting joist axis.

SoundGood

Acoustic Solutions

Results

- Isolation efficiency improved dramatically from -54% to 97%.
- Achieved a new natural frequency of 1.6Hz, approaching the ideal target.
- Vibration transmissibility reduced to 3%, with negligible perceptible effects.
- Enhanced structural stability and reduced the risk of resonance and potential floor damage.

SoundGood

Acoustic Solutions

Contact Us

- + 962 79094 73 58
- info@sg-acoustics.com