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Brooke -**
Wealth from Waste

KNOWLEDGE
**Total Quality
Management**
in Architectural Education

INSIGHT
**A Holistic Definition
of Architecture -**
Bridging gaps between Norms and Practice

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**Building the
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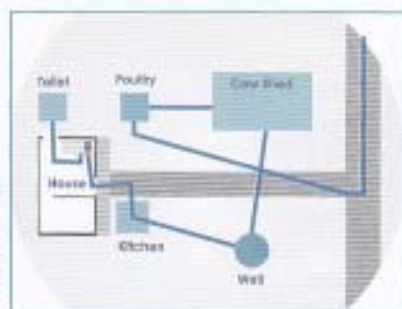


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Hotel Acoustics

Ensuring guests return!

Smita Chogle



Smita Chogle

Hotels are always designed for visual delight but if acoustics is also built in then the interiors can be a true delight. The acoustical environment of a hotel contributes to the quality of the interiors and their occupancy success.

The hospitality industry in the country is currently witnessing an unprecedented boom. Diverse in nature, hotel projects draw on a wide range of acoustical design skills that include construction noise control, acoustics of large lobbies and the atrium, sound isolation and privacy between guest rooms, isolation of noise and vibration producing spaces such as discotheques and lounge bars, recreation facilities such as swimming pools and gyms, meeting and conference space design, banquet hall and presentation space design.

The acoustical design of hotels also encompasses a wide variety of industrial

noise control issues such as control of noise from plumbing, noise from rooftop mechanical equipment to sensitive spaces below, ducted noise from supply and return air-conditioning to sensitive spaces and control of noise from elevator shafts and equipment vibration.

Hotel lobbies and corridors are frequently used areas, being huge and reverberant, giving rise to a cacophony of sounds. The boundary walls of such spaces being hard and reflective, the noise generated gives rise to successive reflections. Due to long reverberation time, noise generated keeps lingering

and gets amplified. Due to poor sound absorption, the amplified signal gets transmitted to all nearby spaces. Such anomalies can be avoided if the ceilings and walls are designed acoustically.

Atrium buildings combine attractive aesthetics and daylighting features. Being often complex in their design, acoustical characteristics of atria is important in designing these spaces to accommodate various parameters including ambient noise levels during typical working days, sound decays, sound propagation to adjacent areas, sound propagation into or out of the atrium including rain noise. The use of hanging baffles that allow daylighting yet control sound can improve atrium ambience.

Guest rooms are private spaces that encourage guests to relax and feel comfortable. They must be designed to control traffic noise (if the windows are facing the road), HVAC noise and eliminate noise transfer through common walls of two guest rooms. Hotels located near airports; adjacent to a rail track or over an underground train station must consider special precautions to prevent noise and vibration issues due to moving aircraft/trains. The permissible noise levels at the headboard is usually 35 dBA with HVAC switched on which can be quite a challenge to achieve.



Banquet halls are multi-purpose spaces that must provide an acoustical environment appropriate for meetings, social gatherings, weddings, receptions, corporate functions etc. They must be designed, to achieve noise and vibration isolation, with speech and music intelligibility. It is best to float the banquet halls as a room within a room to structurally decouple and avoid any transmission of low frequency induced vibrations.

Conference rooms are spaces where a variety of communication styles, audio and video, are effectively used without any distractions. As air travel becomes increasingly stressful and business visitors become conscious of carbon emissions, more and more corporates will pre-

fer long-distance video-conferencing. Speech intelligibility, a function low background noise and low reverberation time, is crucial for the success of such spaces. Acoustics would mean elimination of potential noise impacts from exterior sources. It would also mean HVAC noise control and sound absorption.

Control rooms for jacuzzi, cooling towers, chiller plants, pump rooms etc contribute to noisy environment. Machine vibration, like sound, travels in all directions away from a source to surfaces where it can be radiated as noise. The objective is to minimize noise generated to the comfort levels and to offer noise and vibration isolation by designing louvers, attenuators, base mountings.

By considering acoustics during the design phase of a hotel project and through a thorough understanding of end user needs, effective acoustical designing can be achieved in terms of accomplishing the goal of quality spaces and guest satisfaction. ■

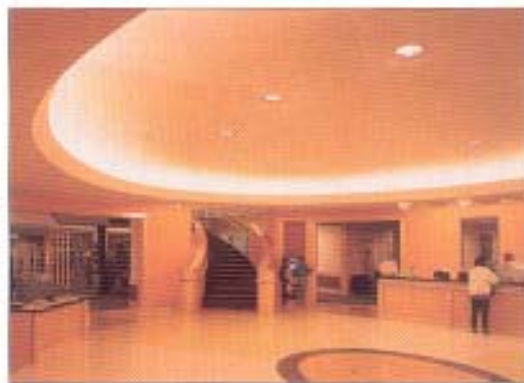
Dr. Smita Chogle is PhD in Acoustics, and is currently Senior Manager at Soundesigns, an acoustical consulting and interior design firm. She can be reached at smita@soundesigns.in

Photographs: Courtesy the Author.



Hotel Interiors Wow the guests!

Anutone launches SoundSwank interiors for hotels. SoundSwank is a bouquet of interior products that enliven the décor and enhance the guest experience. Right from the lobby to the guestrooms, the banquet halls to the recreation areas and for everything else in between Anutone presents an incredible range of breathtaking products and systems that are lab-certified and factory-finished ensuring snag-free installs in minimal time.



► **Reception Lobby** – SoundStretch Eurospan ceilings that are seam-free for giant spans upto 5x25m or 16'x80'! And all this installed in a few hours to result in a smooth, white ceiling finish that reflects diffused cove lighting very well. For the walls Anutone presents SoundSlats Ideacoustic wood panels in attractive veneers and SoundSoft Respond vinyl panels that come in single giant sizes of upto 1.5x4.2m.

► **Corridors** – Full width single span ceiling planks in either Tectopanel SoundPixel or SoundSerge Aspen metal finishes for easy access again and again. Or even SoundSoft Respond ceiling islands in rich textures with an exposed black plenum that adds volume to the space. These ceiling islands have a high light reflectance so that wall luminaries can focus on them and result in diffused lighting on the floor.

► **Banquet halls** – A hall within a hall concept that is decoupled from the main structure with SoundSet Kinetics floating floors, walls and ceilings. This avoids low frequency noise and vibration transfer to guest rooms a major problem in many of the best of hotels. For the interiors choose from an incredibly wide range of SoundSoft Respond fabric panels for the walls and Designpanel SoundPixel for the ceilings.

► **Guestrooms** – Achieve noise separation between guest rooms with SoundSmart Septum walls and SoundStay doors & windows. Ensure comfortable interiors with SoundStretch Eurospan as a single ceiling component and walls with a combination of SoundSlats Ideacoustic wood panels and SoundSoft Respond fabric panels.

Anutone, a dynamic techno-economic brand for speciality interiors, provides these systems in a complete design-supply-build solution package, ensuring smooth and perfect execution from intent to reality.

For more details visit www.soundselec.com/soundswank.htm

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