Building Acoustic Treatment

Interior Acoustic Strategy




By : Retno Ajeng Pratiwi – Acoustic Engineer at Acourete

Outline

Acourete

Acoustics

Acoustics in our daily life

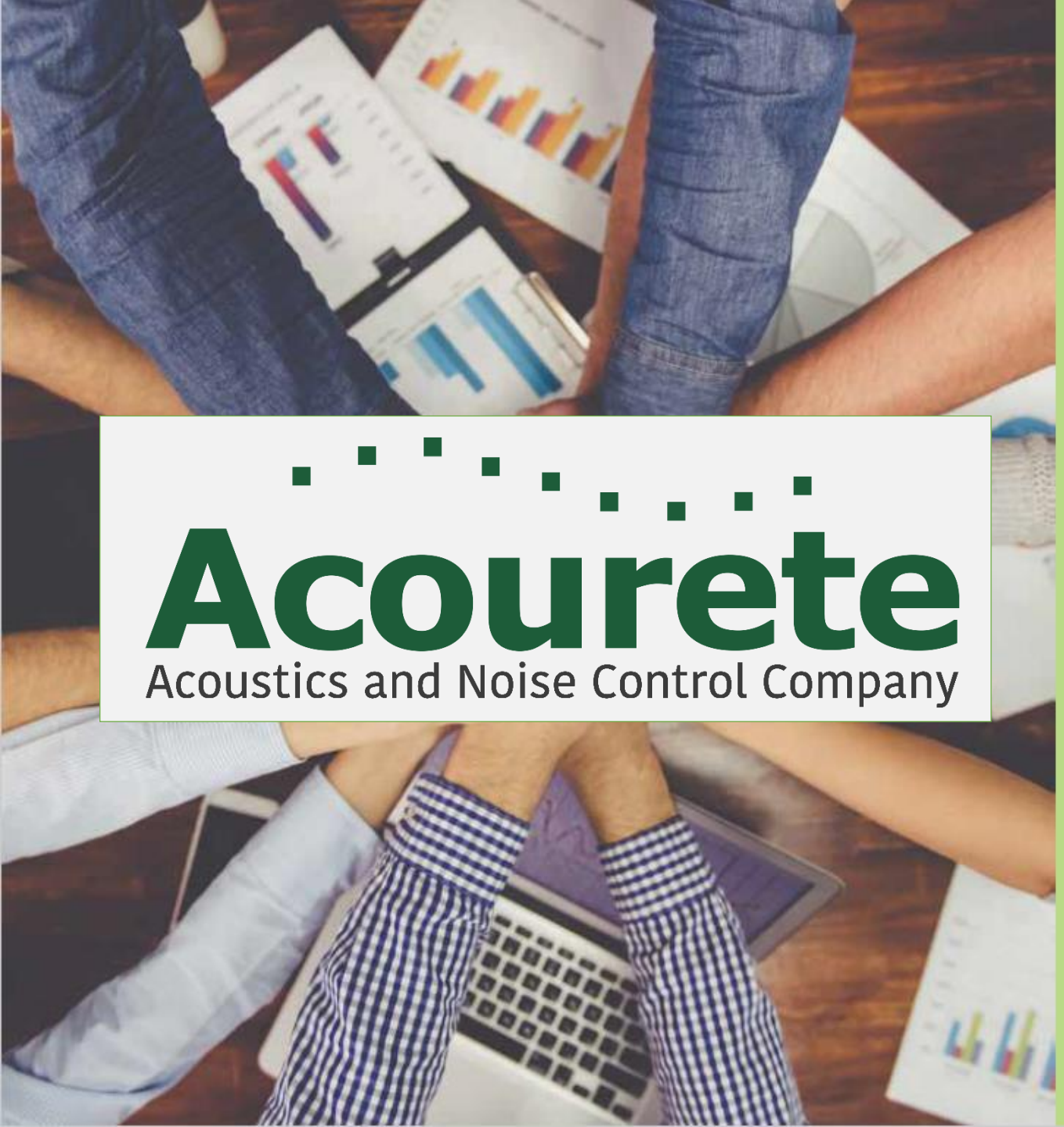
Problems come with poor acoustics

Acoustics Material

Acoustic Engineer at Acourete

Acoustic Engineer design flow

Case studies



Acourete

Acoustics and Noise Control Company

ABOUT
OUR COMPANY

Distraction takes many forms in various locations, such as rain, footsteps, engine noise, airplanes, road traffic noises, and music.
In addition to the various disturbance challenges, there are also architectural challenges where materials must be able to blend in with the architectural design. Then, physical challenges in the form of extreme conditions such as humidity, air temperature, dust, and others.

Since 2006 Acourete (Acoustic Revolutionary Technology) has been present in Indonesia to answer all the challenges that have been mentioned.
With the spirit of revolutionary thinking, Acourete comes with revolutionary technology, to answer various challenges that are difficult to overcome with generic products available in the market.

We have best revolutionary material solutions,
1. High acoustic performance
2. Easy to apply
3. Blend with design challenges and environmental conditions
4. Meet the criteria for green and healthy buildings.

Come join us to carry out the Technological Revolution to produce healthy sound quality !

PRODUCTS SOLUTIONS

Acoustics for Transportations

Noise Control inside the transportation

Architectural Acoustics

Noise Control Around The Room

Acoustics for Industrial

Industrial Machinery Noise Control and Around The Room

Building Acoustics

Noise control from Around The Building or Room

Acoustic Treatment

Noise Control for Better Quality

Acoustics

Acoustics is the science that deals with the production, control, transmission, reception, and effects of sound (as defined by Merriam-Webster).

Acoustics

Building Acoustics
Room Acoustics

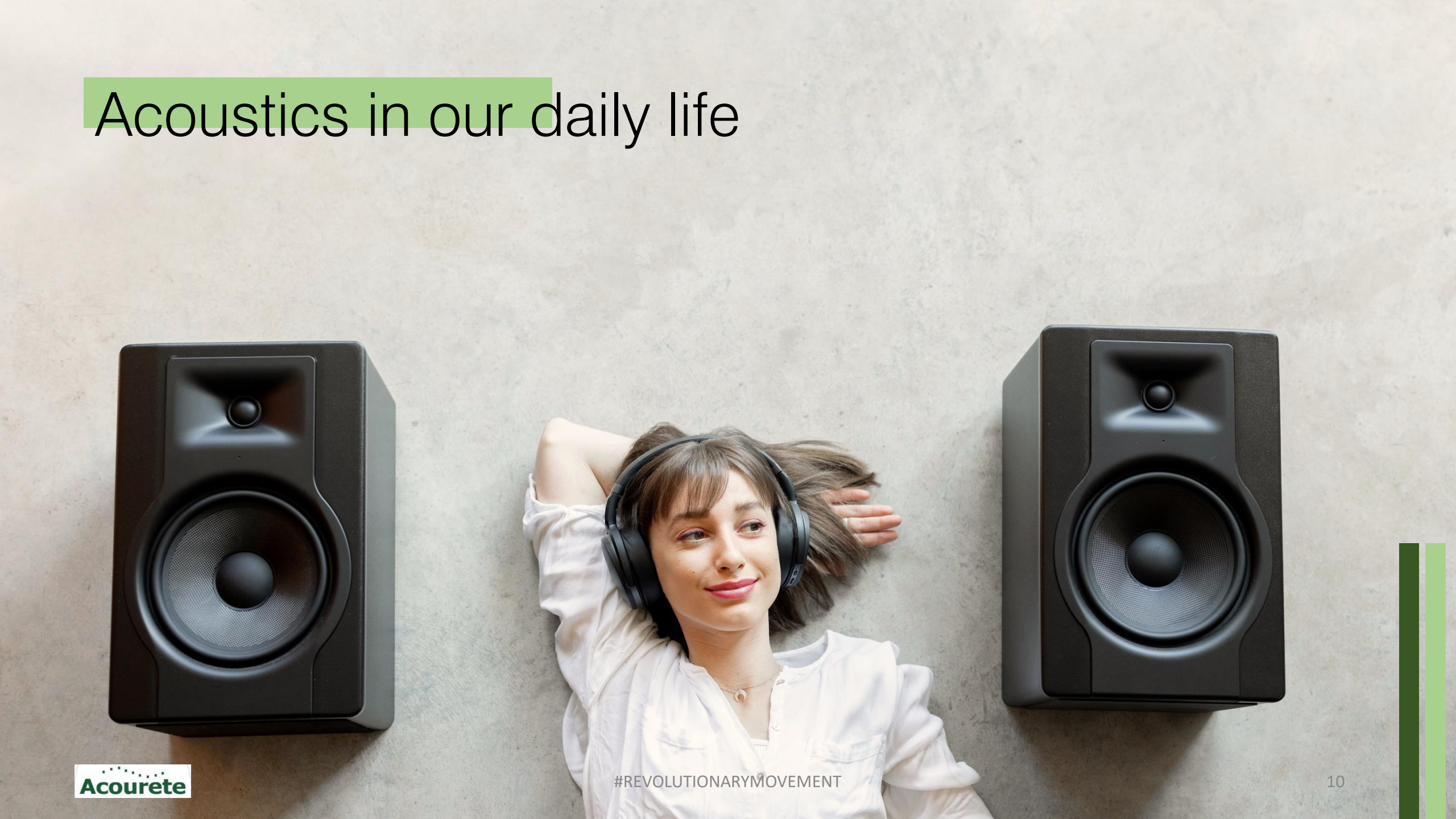
Photo by Manuel Nägeli on Unsplash

Acoustics in our daily life

Acoustics in our daily life

Acoustics in our daily life

Acoustics in our daily life



Acoustics in our daily life

Problems come with poor acoustics

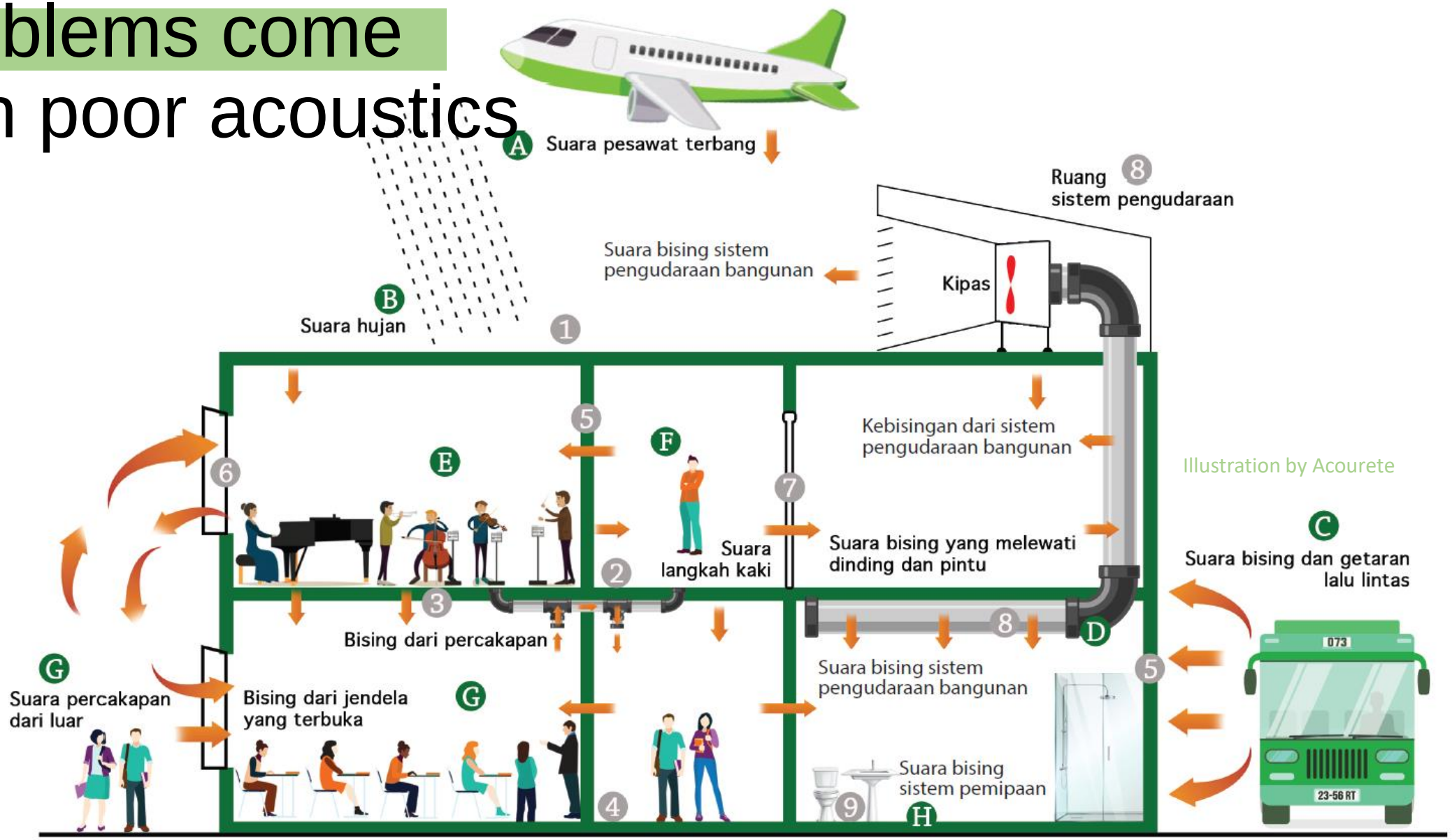


Illustration by Acourete

Problems come with poor acoustics

Problems come with poor acoustics

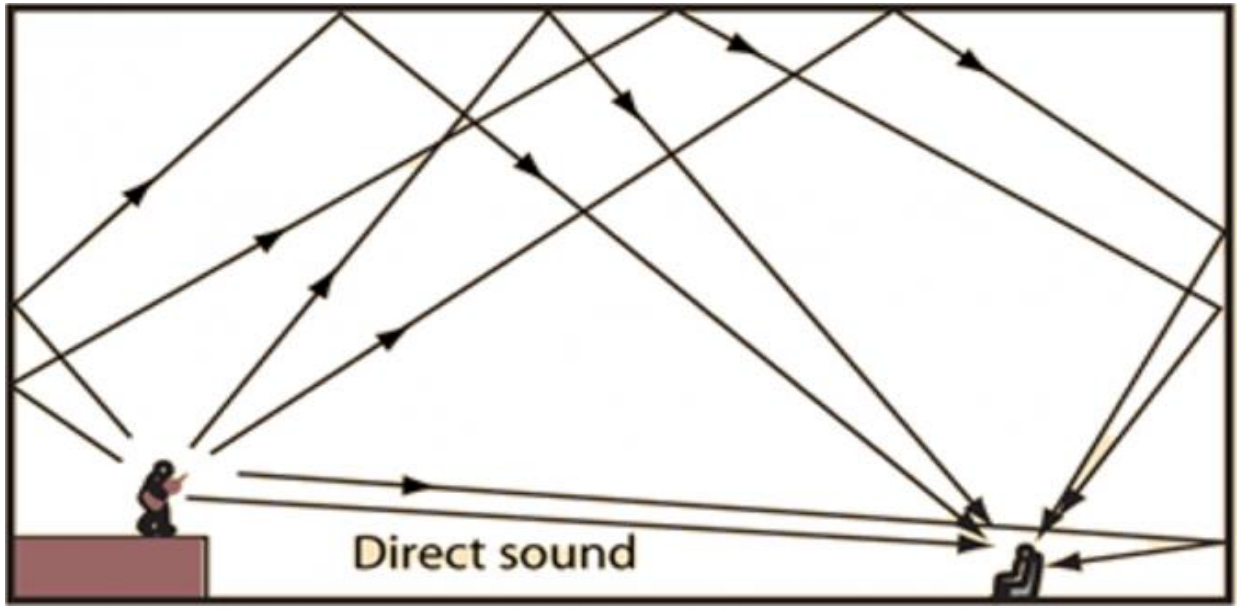
Problems come with poor acoustics

Cause of Echoes

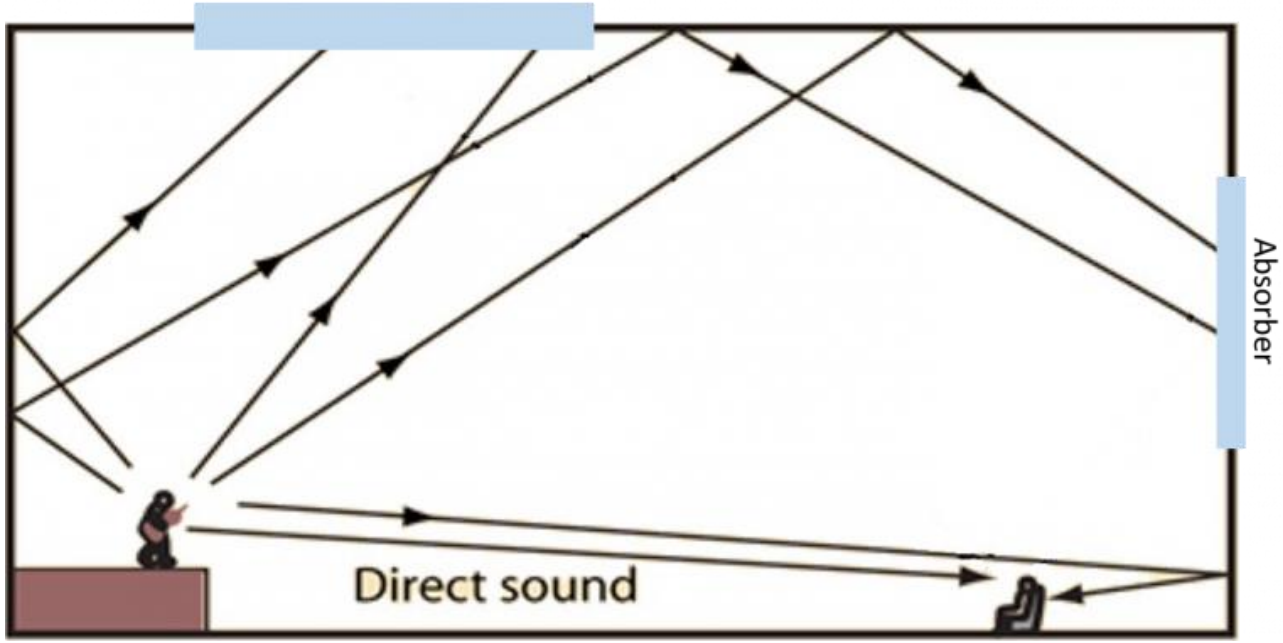
Reflector materials are dominant

Room shape

Sound system position



Absorber



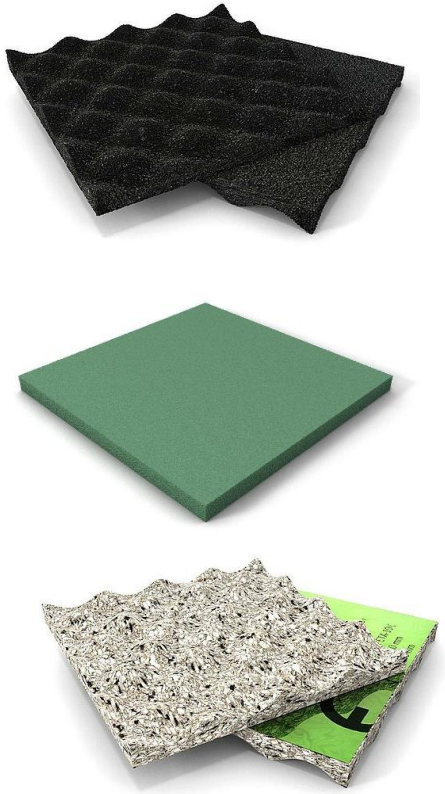
Before Treatment

Suara Ucap	Choir	Musik

After Treatment

Suara Ucap	Choir	Musik

Acoustics Material



Acoustic Engineer design flow

Problem definition

Set the criteria, standard, & client expectation

Other considerations

Initial condition

Design recommendation

1. Problem Definition

Acoustic Engineer design flow

The problem
The cause
Hypothesis

2. Set the criteria, standard, and client expectation

Acoustic Engineer design flow

Purpose and function

Criteria and standard

Expectation and limitation

3. Other Considerations

Acoustic Engineer design flow

Budget

Interior & Architectural

Civil, MEP, etc

4. Initial Condition

Acoustic Engineer design flow

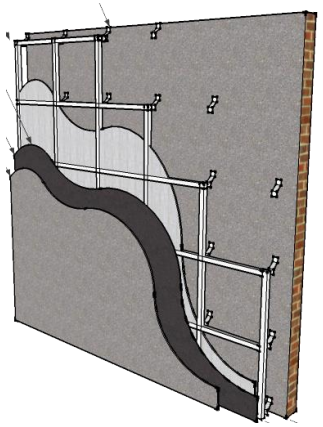
Survey

Measurement

Simple calculation or simulation

5. Design Recommendation

Acoustic Engineer design flow



Design & material recommendation (simple calculation, simulation)

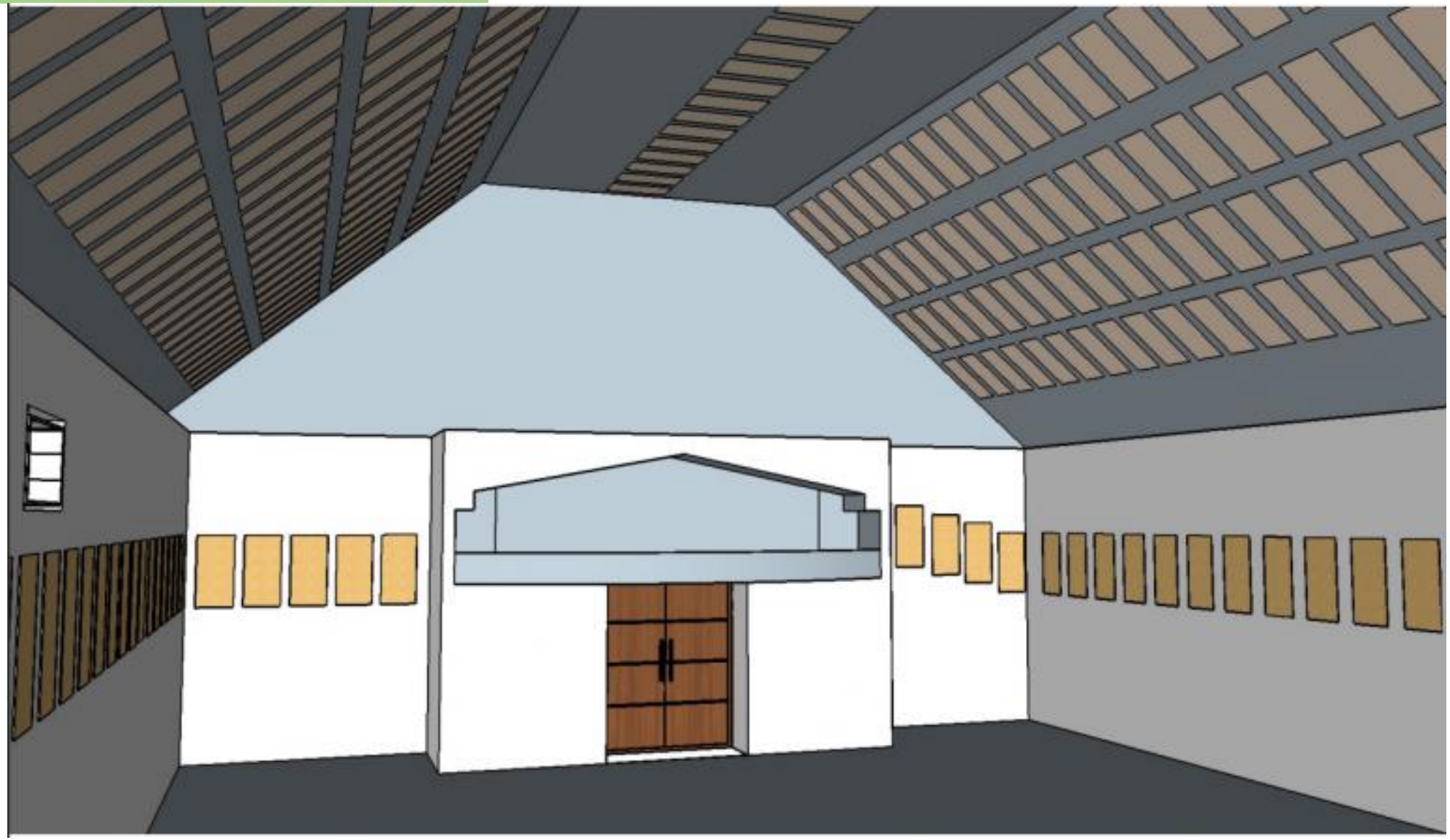
Total material needed

Spend (cost) estimation

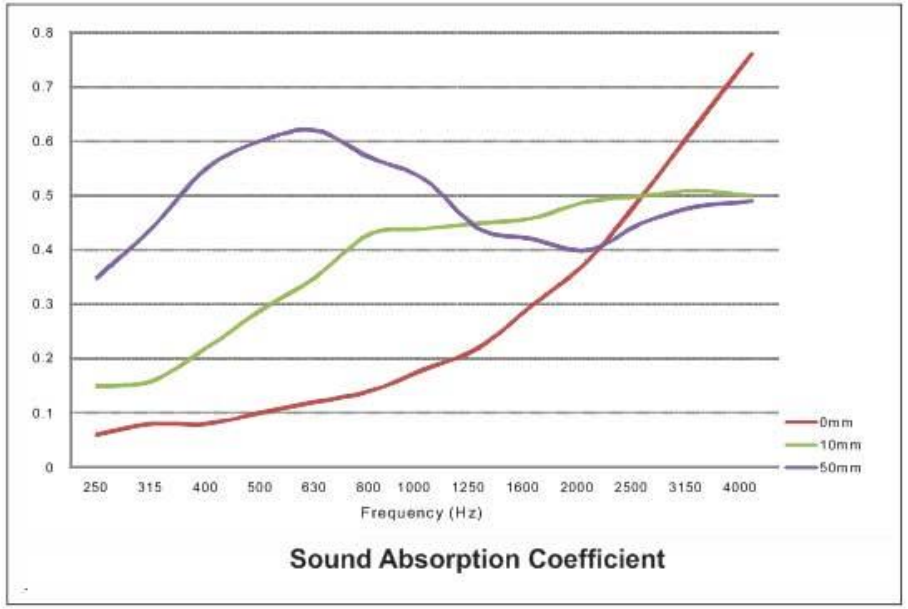
Gedung Paroki Santo Yohanes Rasul

Case study 1

Panel Position Drawing



ACOURETE BOARD 230

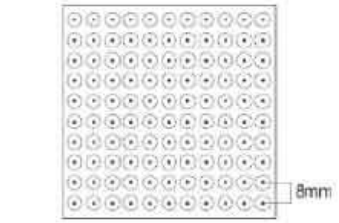


Description	Value
Type	Acoustics Board Ceiling Wall
Dimension	1200mm x 600mm x 9mm
Material	Polyester
Density	230 g/m^3
Weight	1.5 kg
NRC	0.47
Colour	White
Country of Origin	Korea

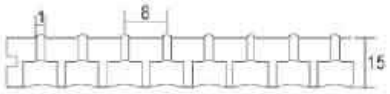
Alergy free, Toxic free, fire safety

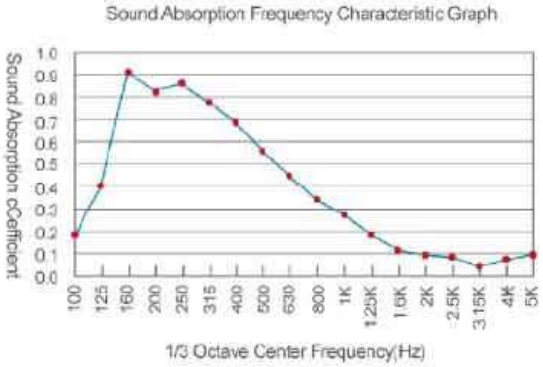
Hall, Home theater, Karaoke room, Music lounge, Office, Hospital, Hotel

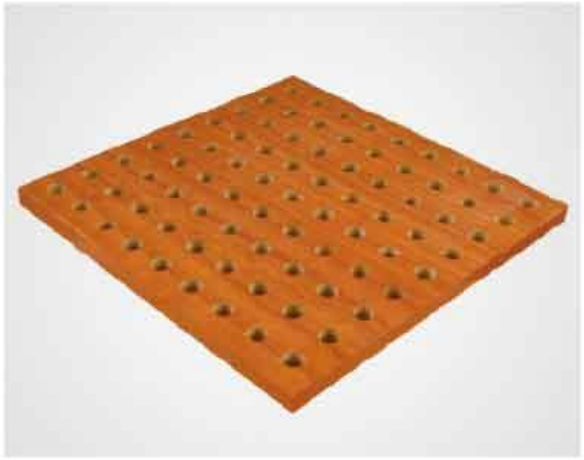
ACOURETE PERFOWOOD

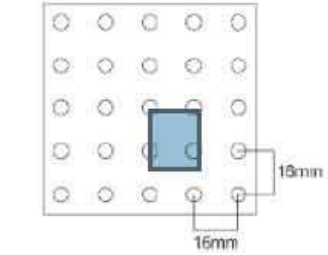


Pattern:
8-8-1 Micro Holes

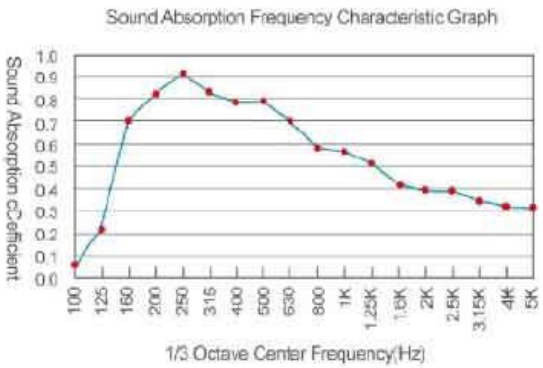








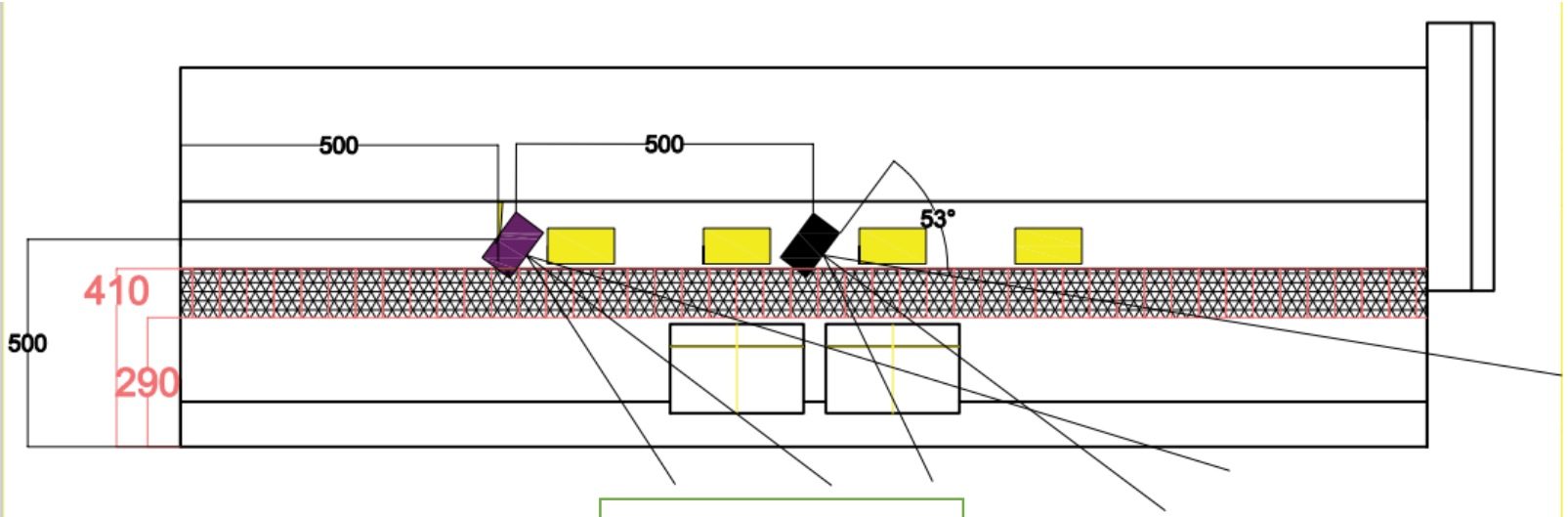
Pattern:16-16-6



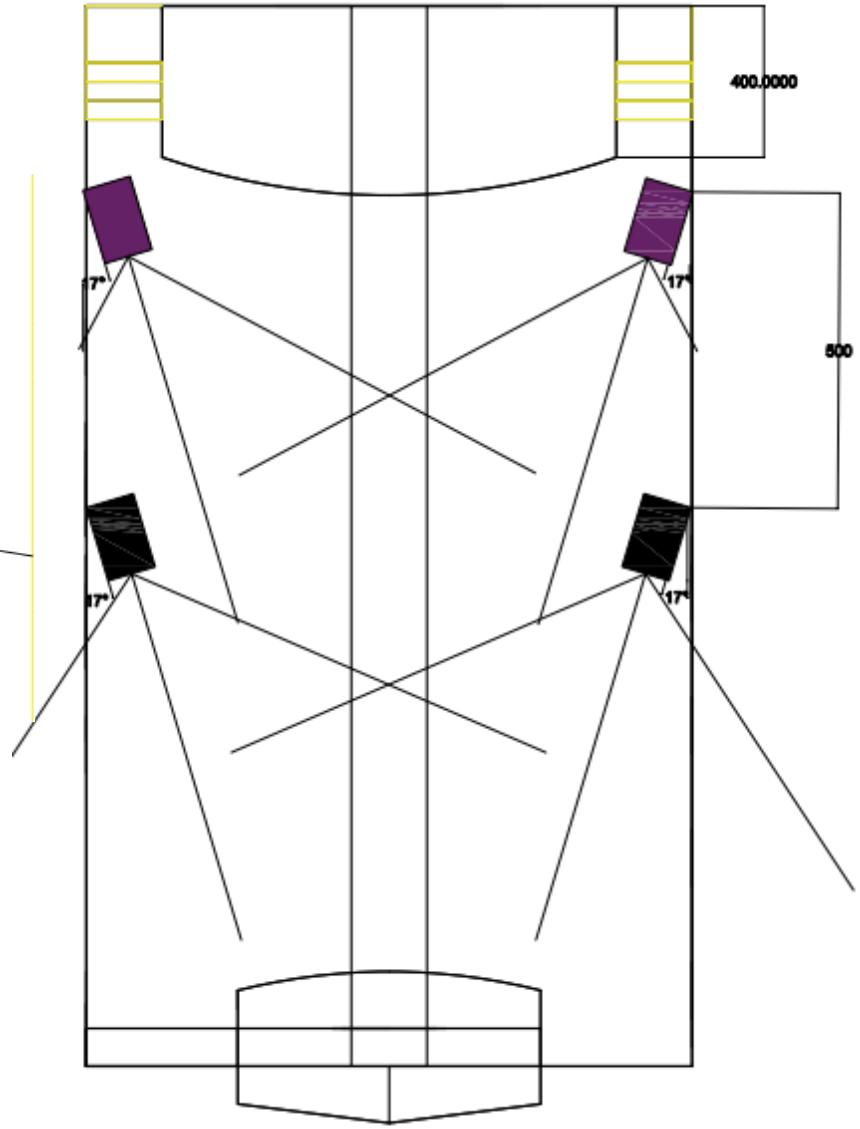
Description	Value
Surface Density	8.5 kg/m^3
Material	MDF
Front Finish	Melamine
Back Finish	Unfinish + Acoustics Felt
Length	1200mm / 600mm
Width	600mm
Thickness	12mm
Fire Rating	No
Eco Friendly	No
Color	See Color Table
NRC Perfowood 881	0.44
NRC Perfowood 16166	0.66
Country of Origin	China

Hall, Home theater, Karaoke room, Music lounge, Auditorium, Worship house

Sound System Position Drawing



Tampak Samping



Tampak Atas

Acourete

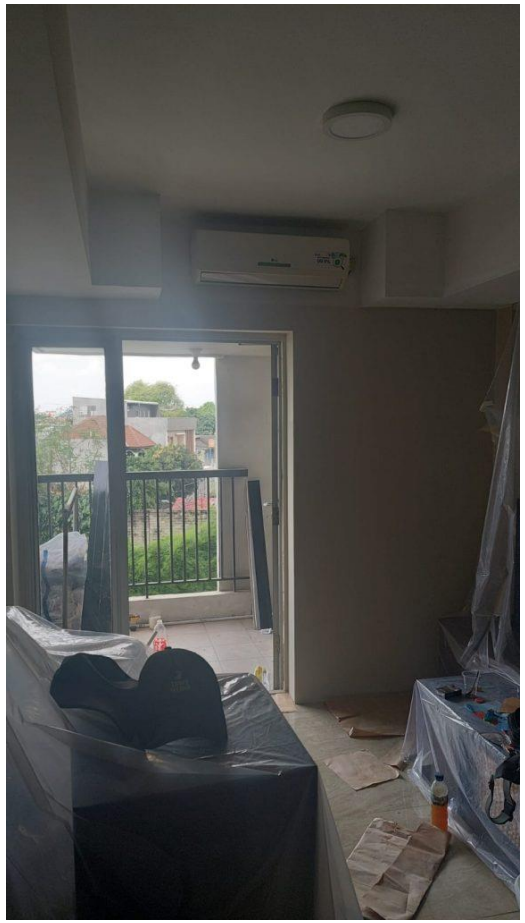
“Suara menjadi jelas, gema tidak berlebihan, dan acara berlangsung dengan lancar dan baik”

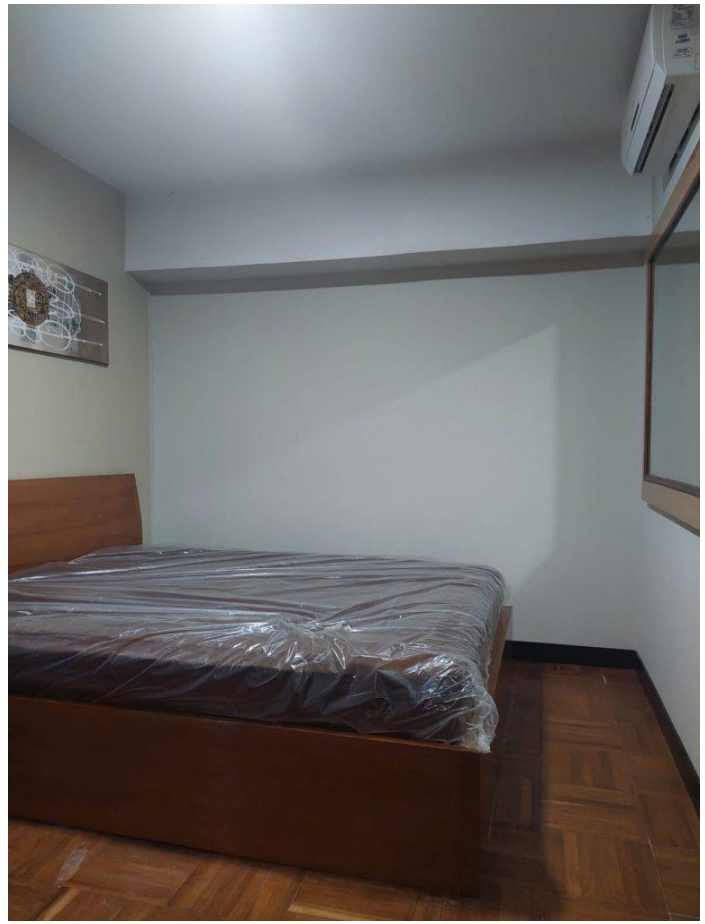
,- Pa Widodo

Acourete

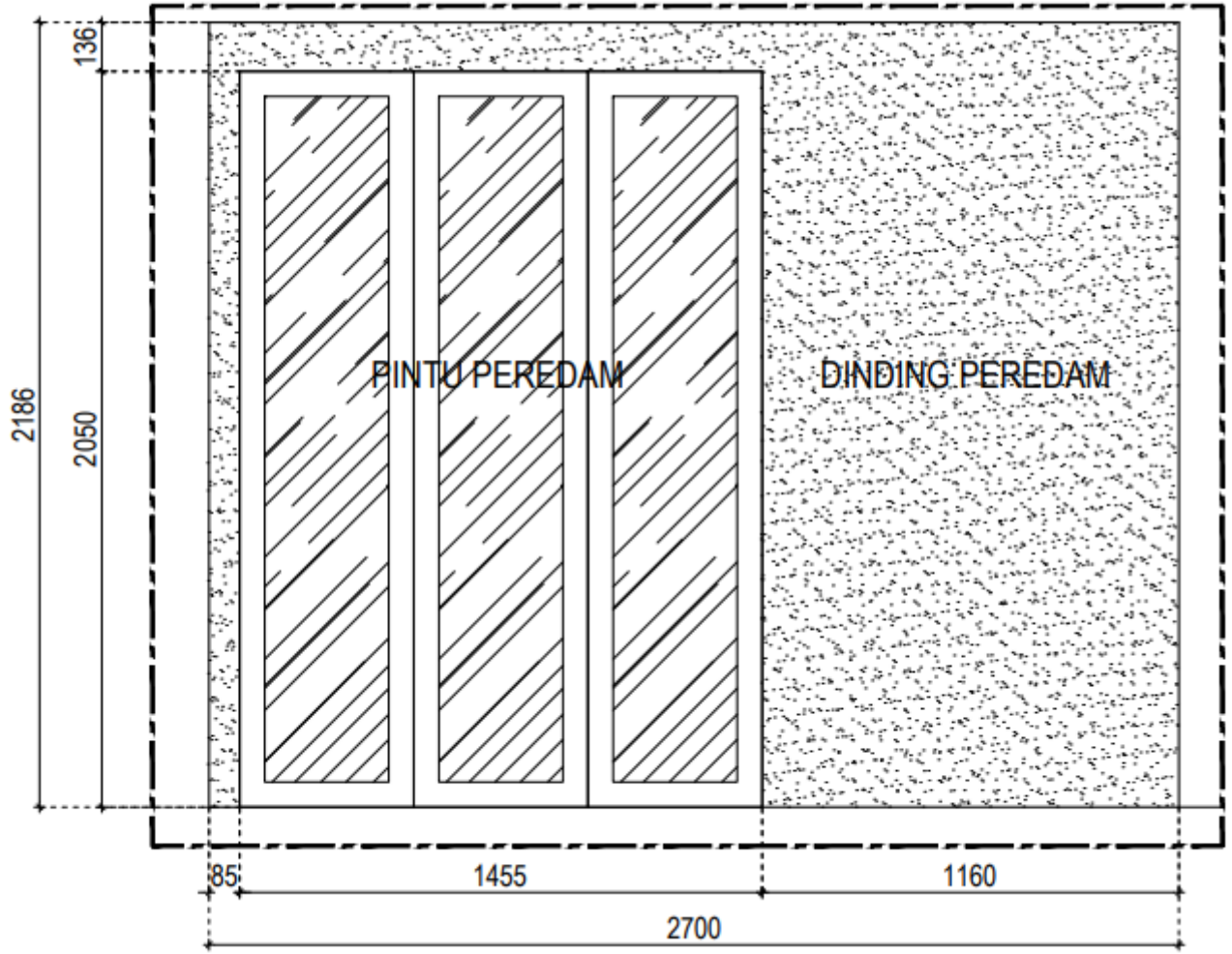
Apartment Sand and Coral Epicentrum

Case study 2

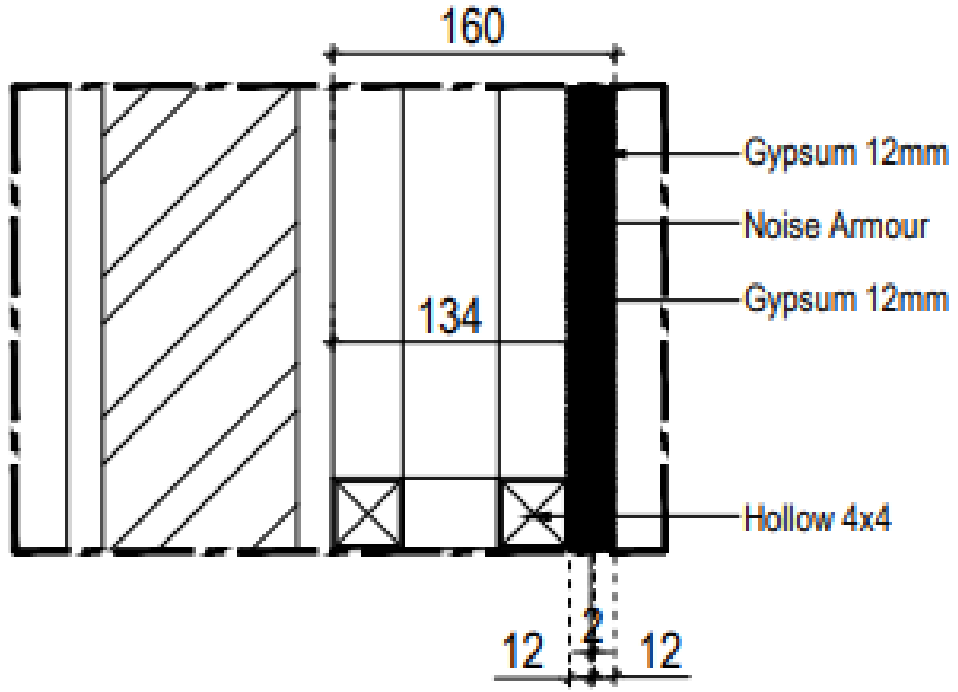




Insulation Drawing : Living Room

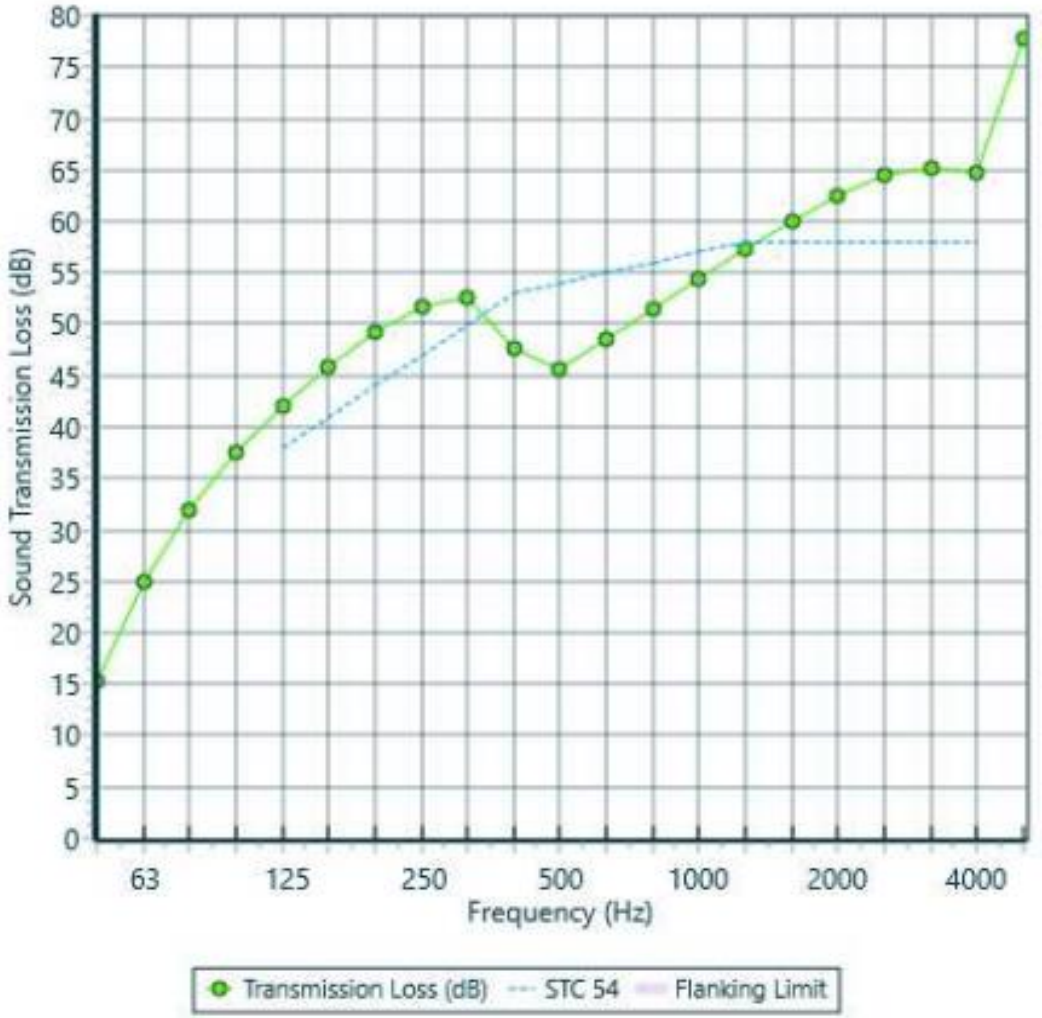


Insulation Prediction : Living Room

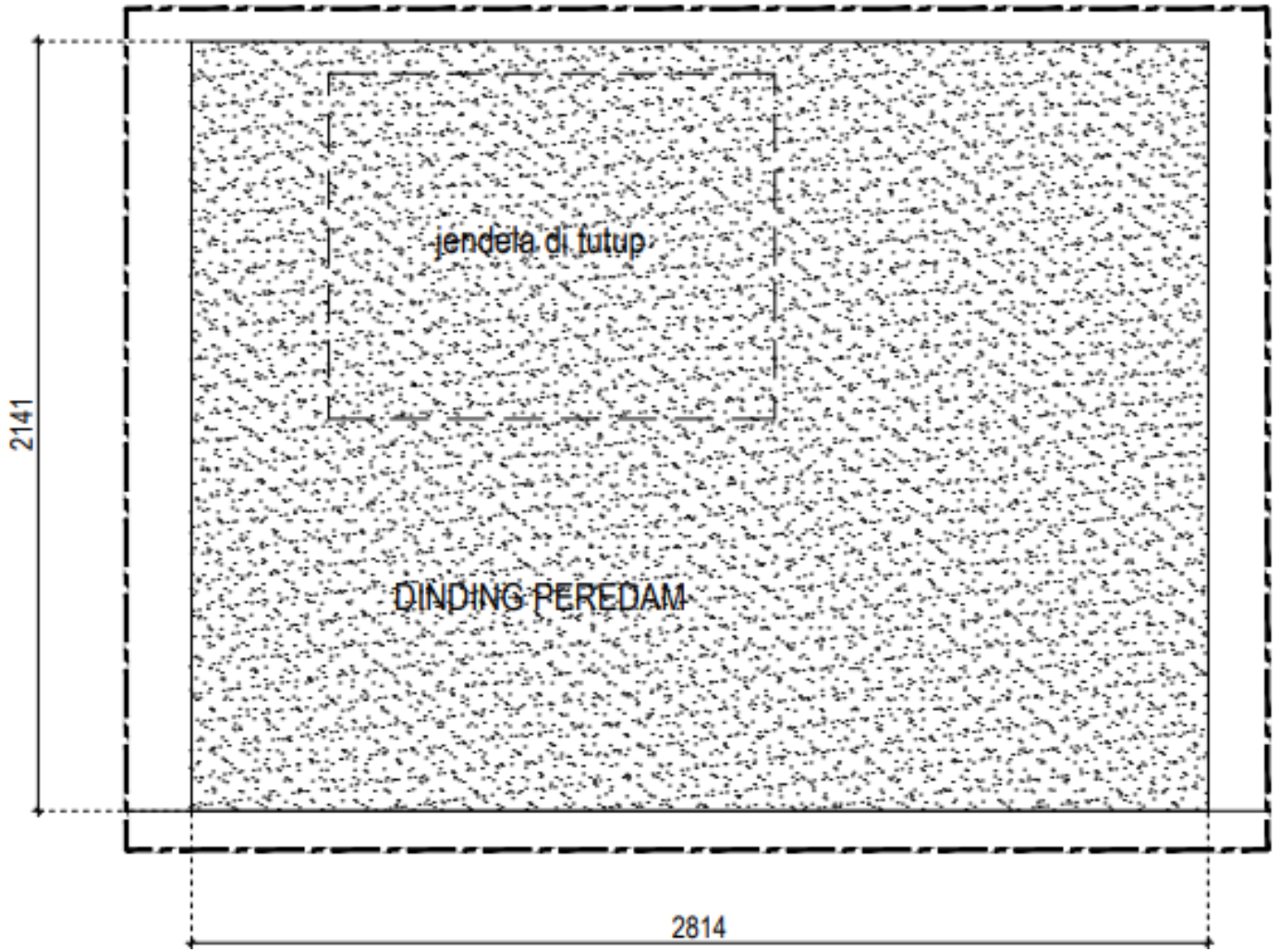


STC 54
OITC 47

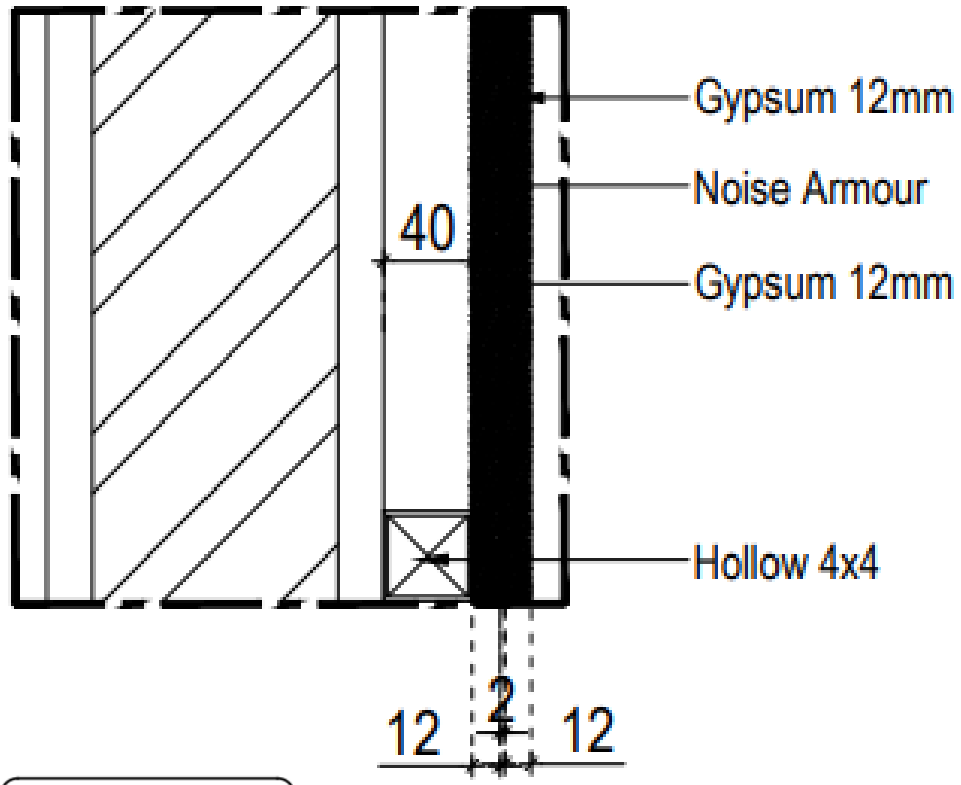
Loud Speech not Audible



Insulation Drawing : Bedroom

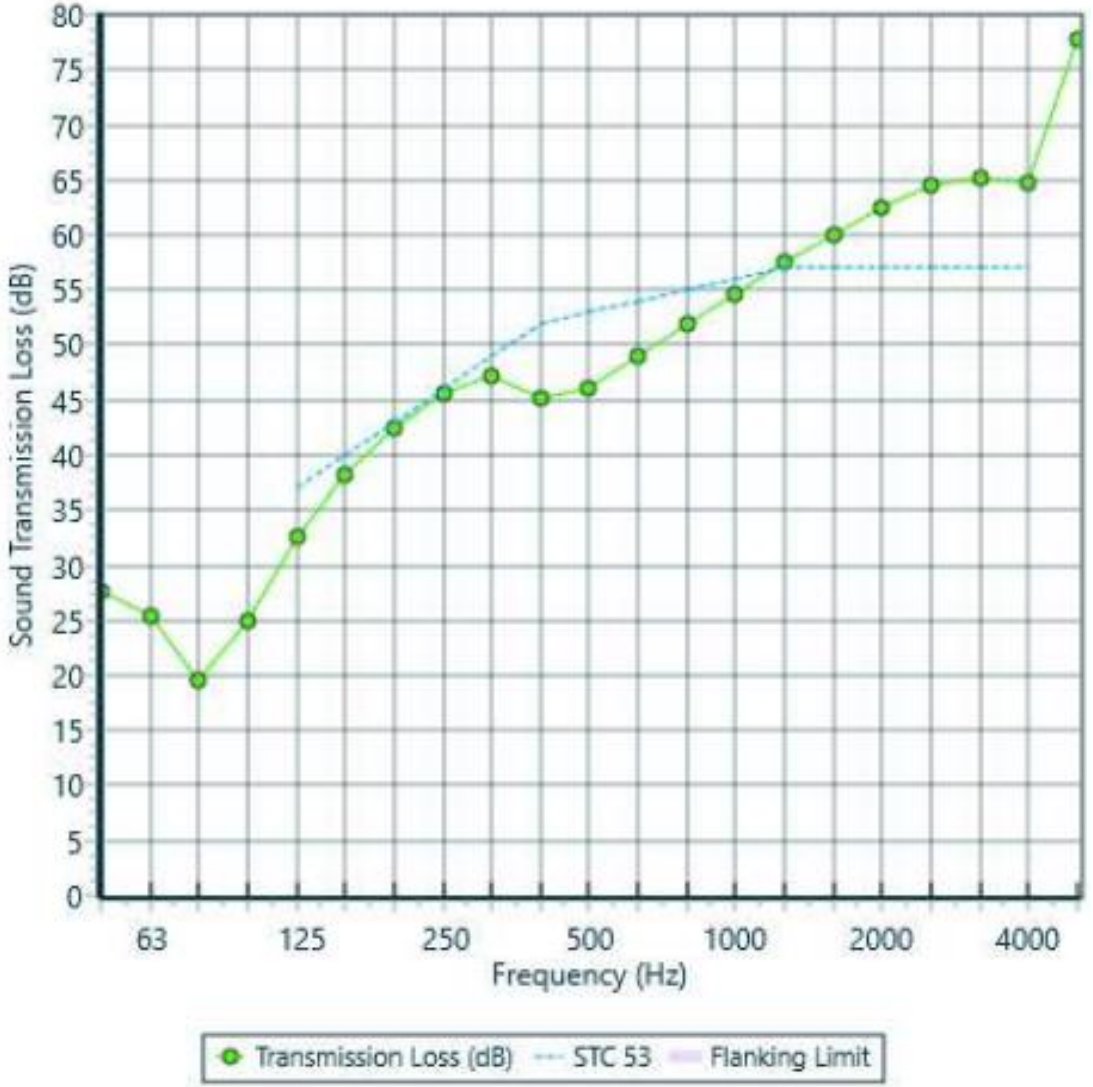


Insulation Drawing : Bedroom

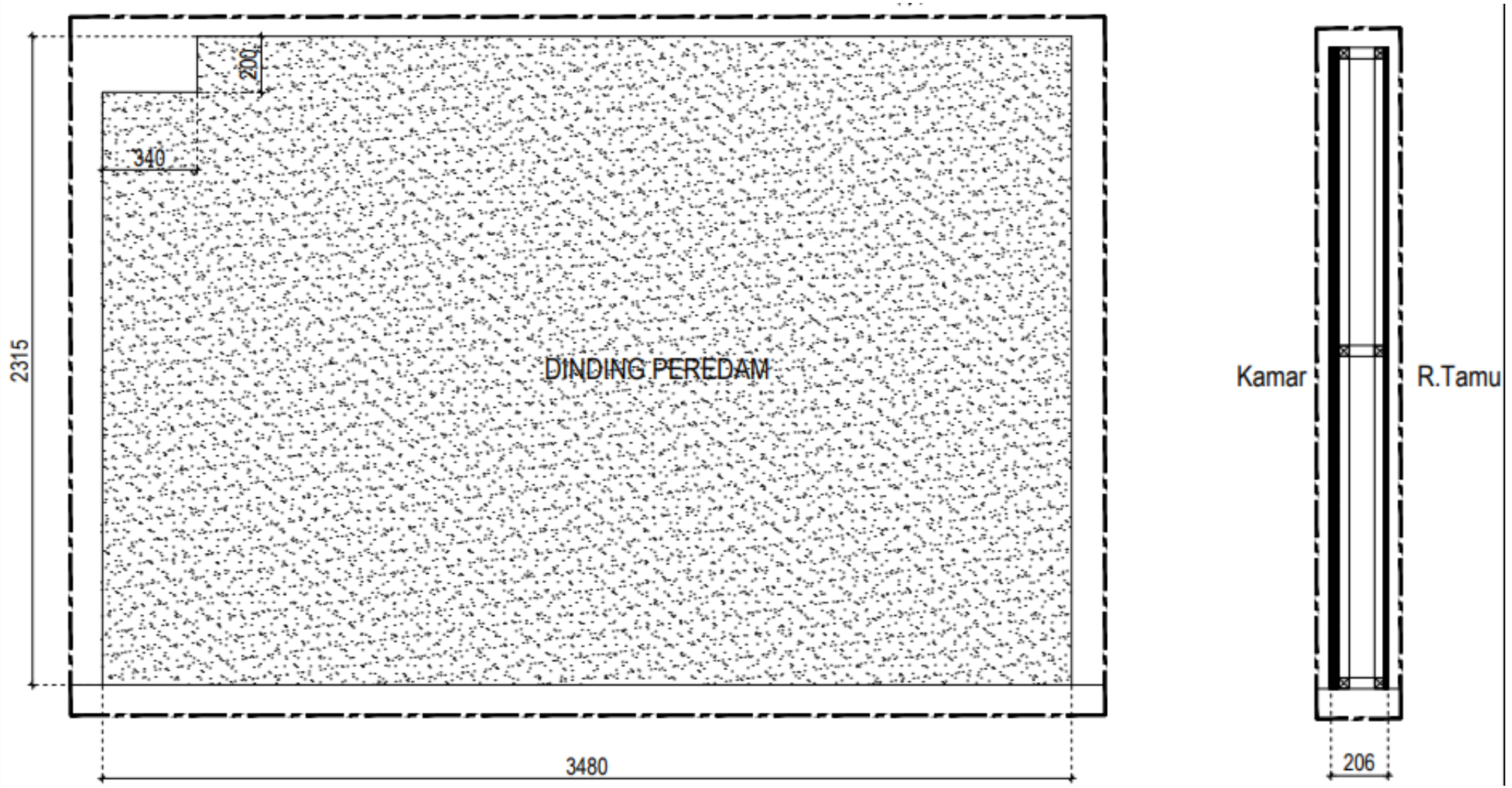


STC 53
OITC 37

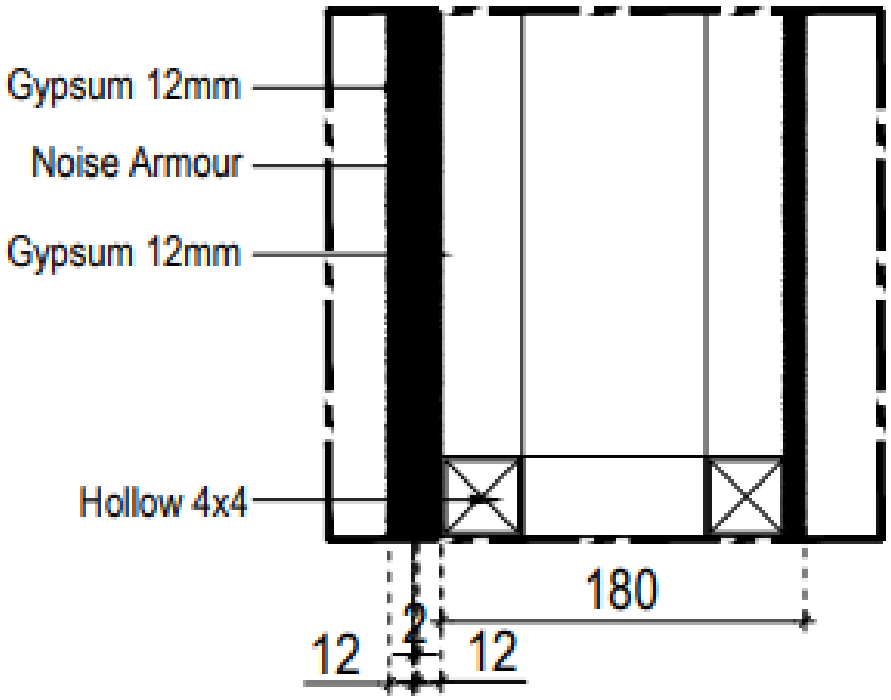
Loud Speech not Audible



Insulation Drawing : Room Partition

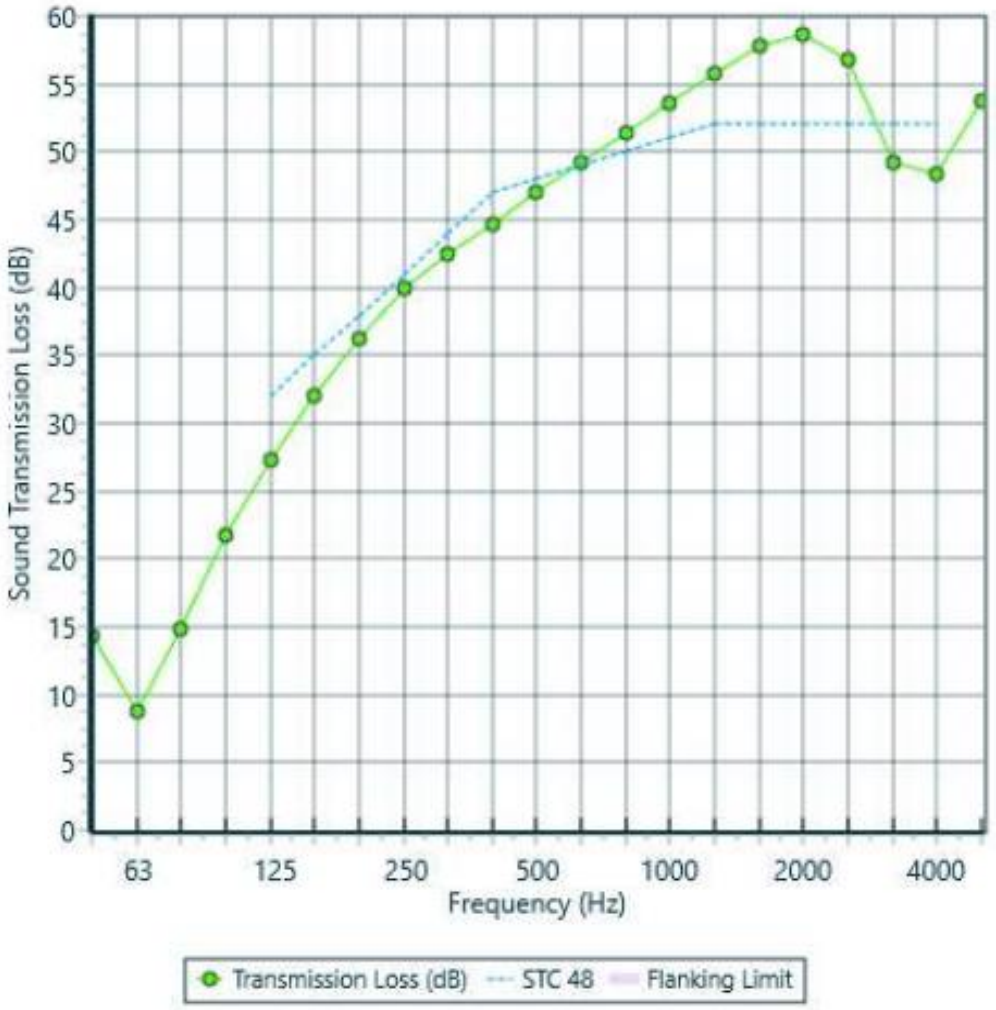


Insulation Prediction : Room Partition



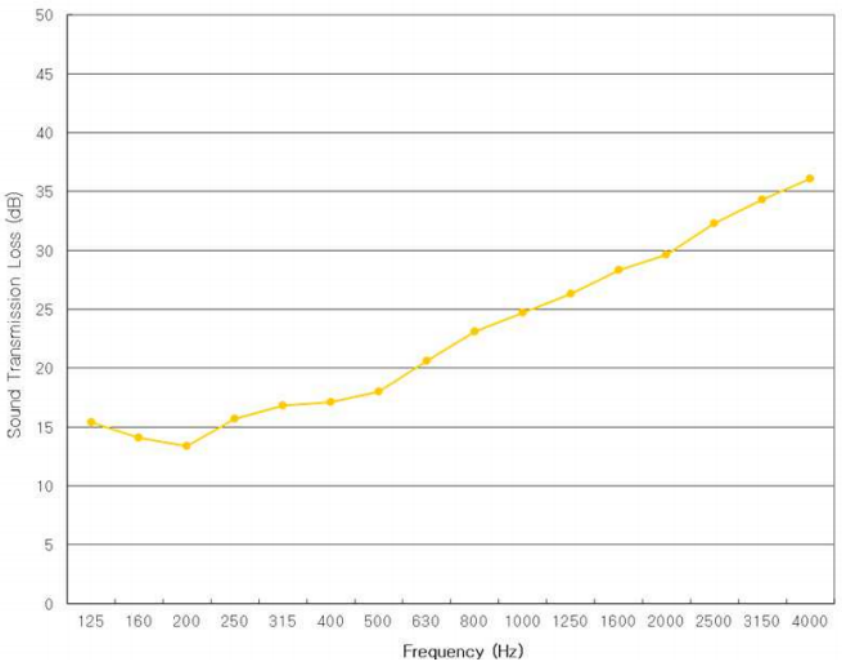
STC 48
OITC 32

Normal Speech not Audible



Material's Acoustic Property : Acourete Noise Armour

Description	Value
Type	Acoustic Vibration Insulation
Dimension	1.000 mm x 1.000 mm x 2 mm
Material	Resin
Mass	4 kg
Density	2.000 kg/m3
STC	24
Color	Black
Country of Origin	South Korea



Broadcast studio
Music recording
Home theater
Karaoke room
Auditorium
Music hall
Discotheque
Office
Machine room

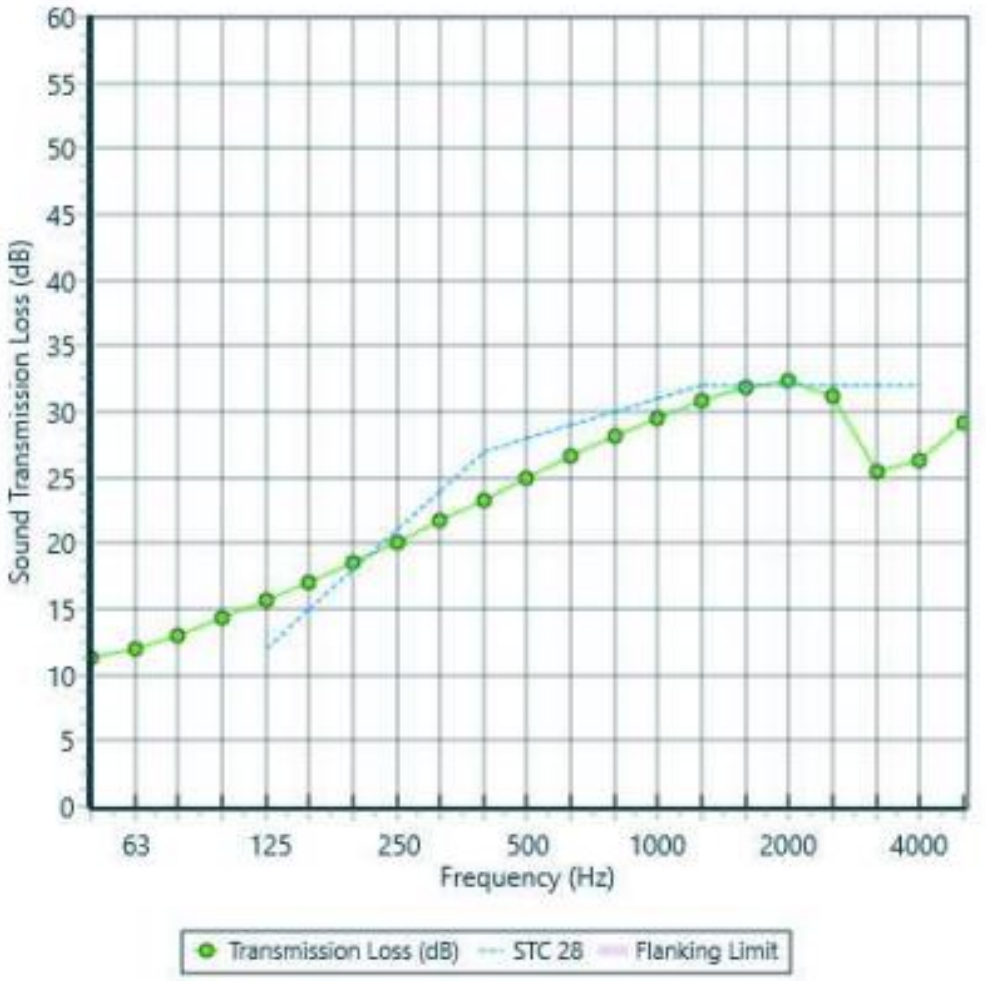
Alergy free, Toxic free, fire safety, viscoelastis

Acourete

Material's Acoustic Property : Gypsum Board

STC 28
OITC 23

Normal Speech can be Understood



Before-After Treatment Measurement

'' Wah yg kamar udah berkurang banyak bgt mba desibel nya (saya cek pake aplikasi) suara ceramah juga udah ga jelas & jadi kecil sekali ''

Nuri, penghuni unit apartemen

NOICE Podcast Studio

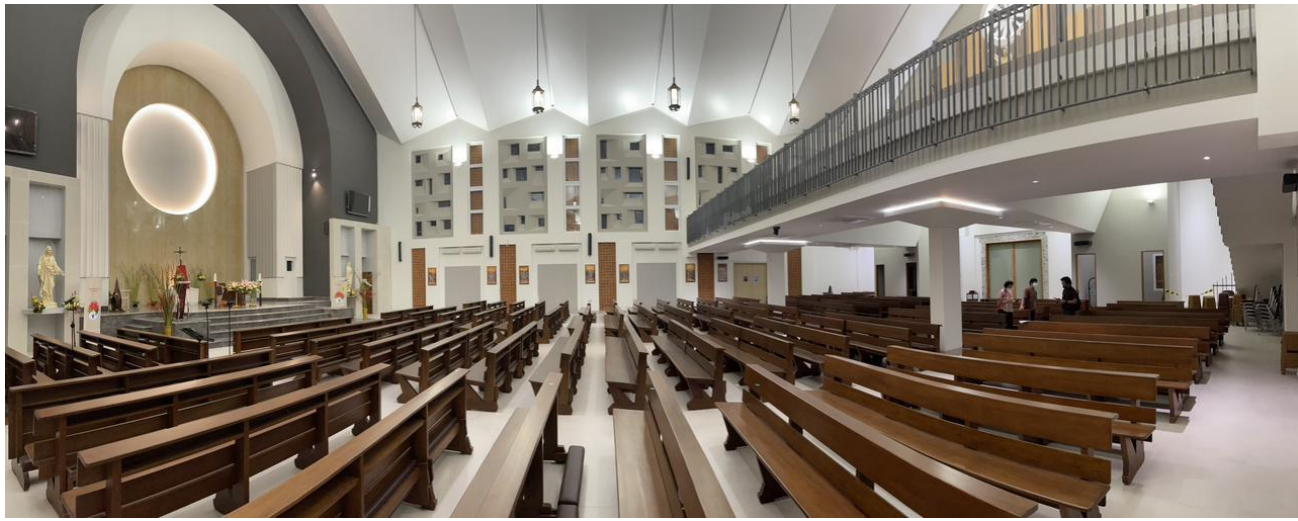
Case study 3

Home Theater Taman Ratu

Case study 4

Gereja Damai Kristus at Duri Selatan

Case study 5



Participant Feedback

https://bit.ly/AcoureteGoesToCampus3