



# STC Testing for Breakout Noise

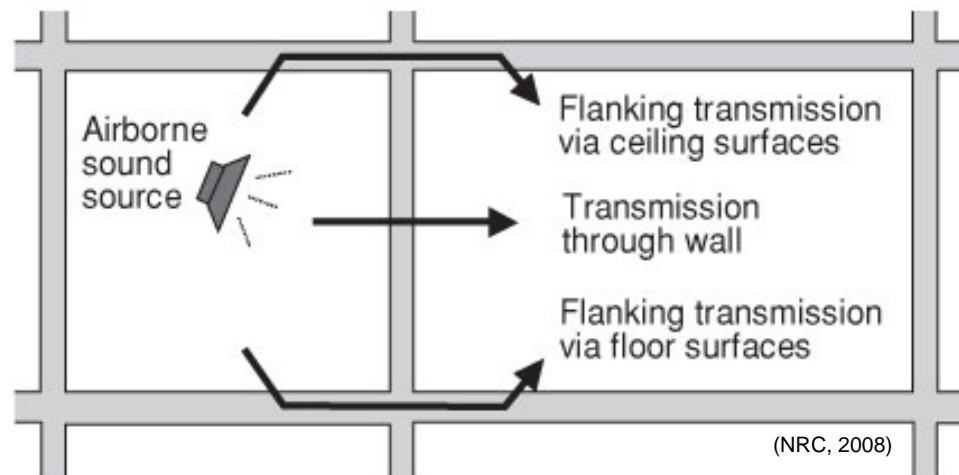
Matthew Brenner

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# What is Breakout Noise?

“Breakout noise is undesirable sound that is caused by the transmission of sound through the walls of a duct, building or other enclosure. It can normally be remedied by applying absorptive cladding or erecting acoustical barriers.”

-dB Noise Reduction



(NRC, 2008)

# Why do we need to consider breakout noise?

- Often overlooked
- Can effect compliance (Industry)
- Can effect comfort (Condos)



# How can we measure breakout noise?

## Directly

- Source Measurements (Not always possible)

## Indirectly

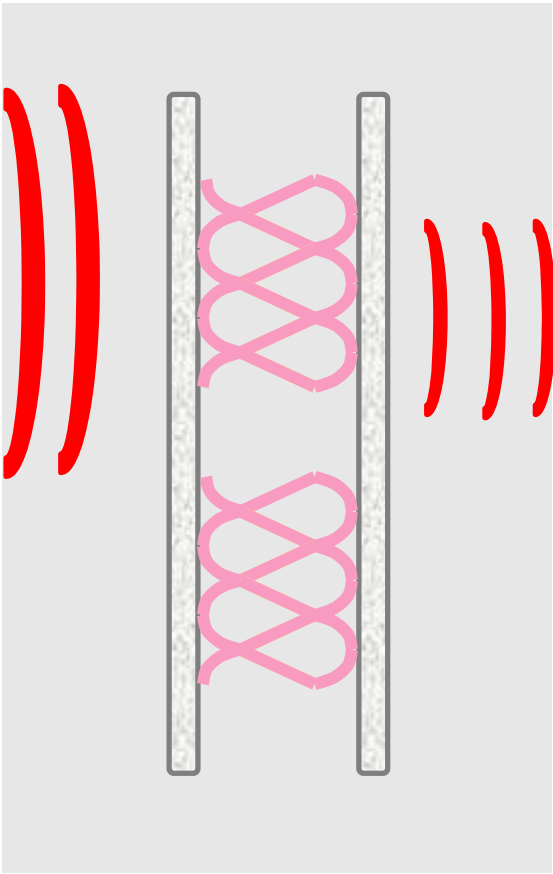
- Sound Transmission Class (STC) Testing
- Apparent Sound Transmission Class (ASTC) Testing
- Outdoor-Indoor Transmission Class (OITC) Testing



# STC Testing 101



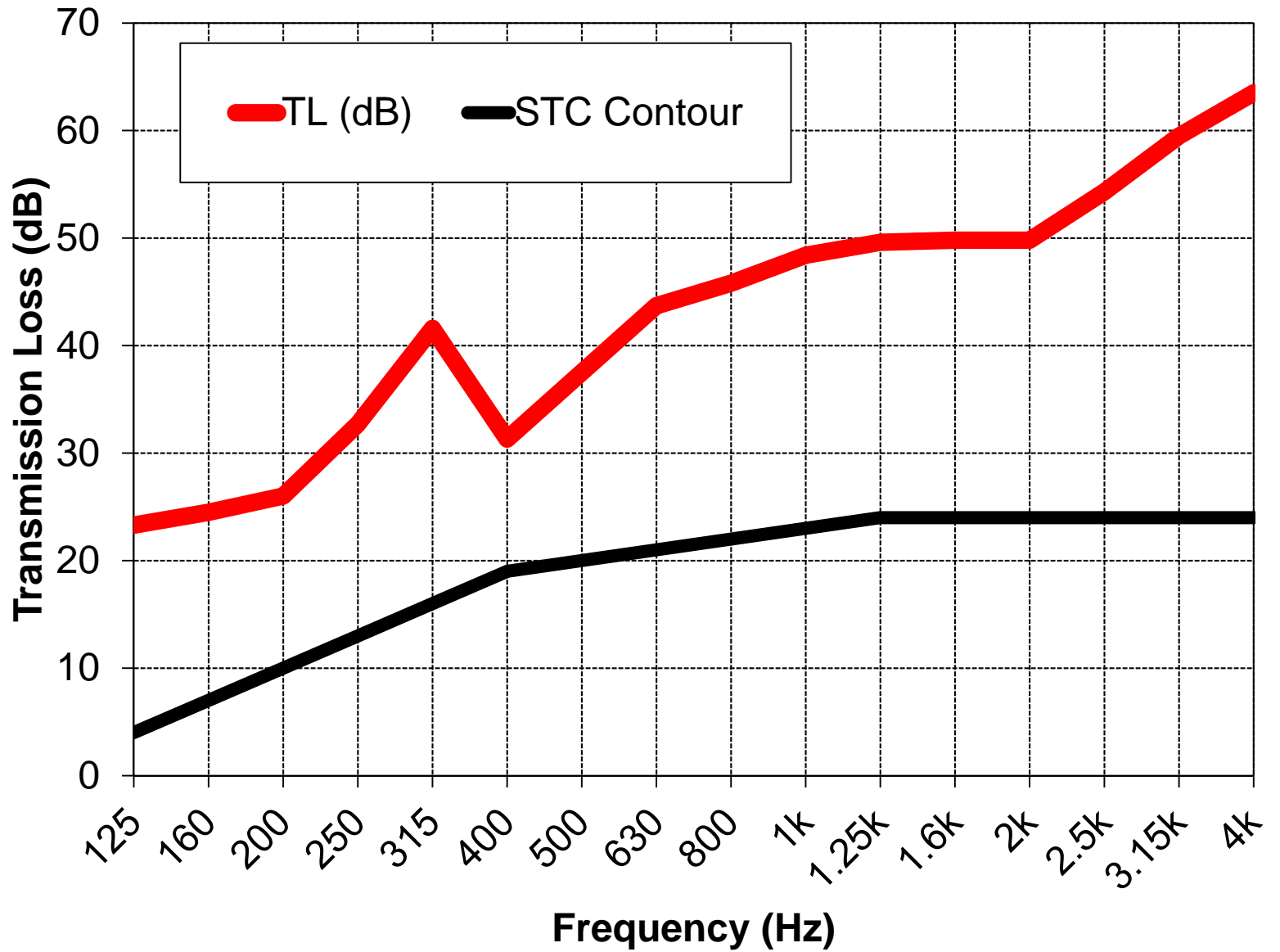
(Norsonic)



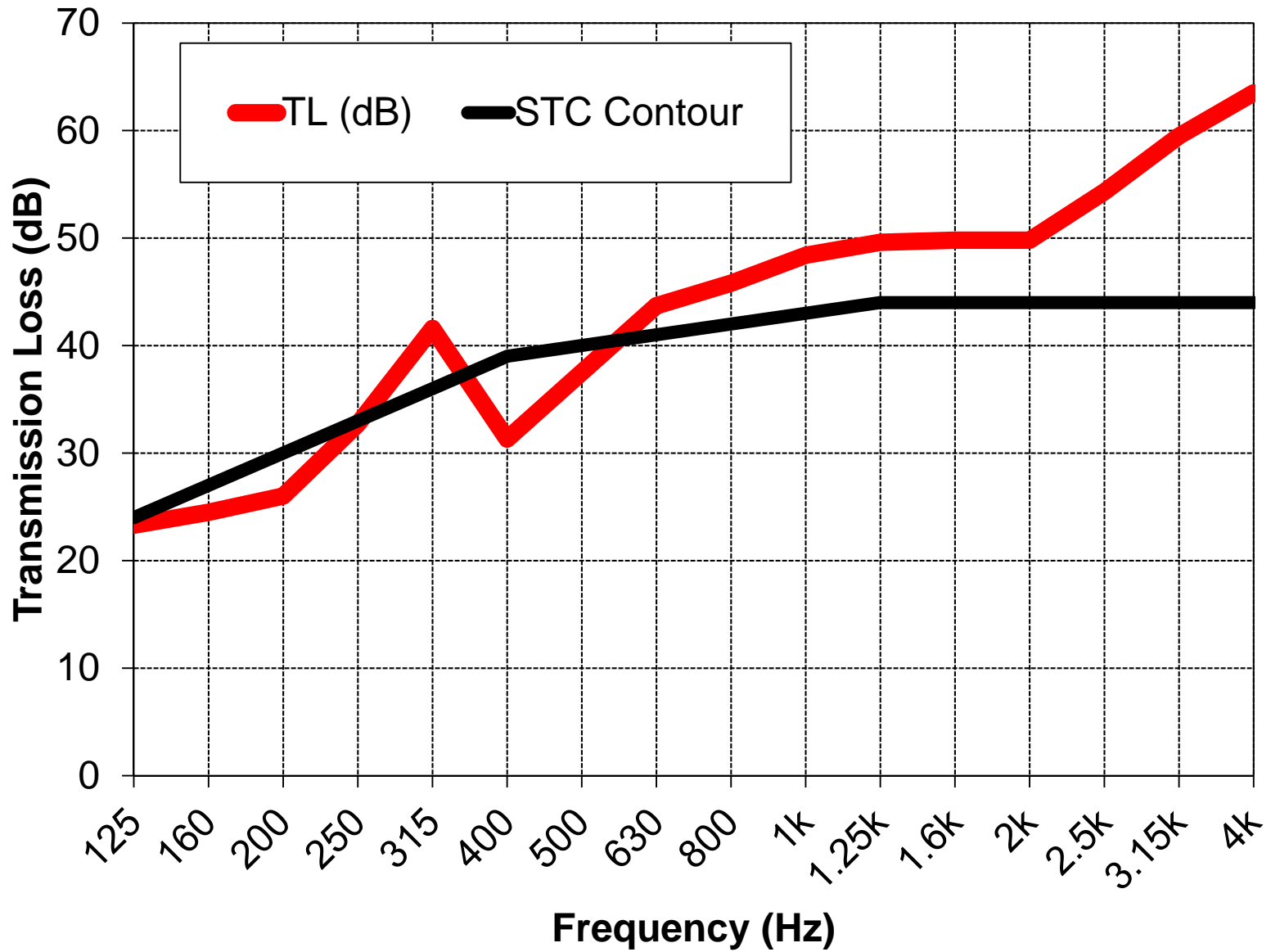
(Briel & Kjaer)



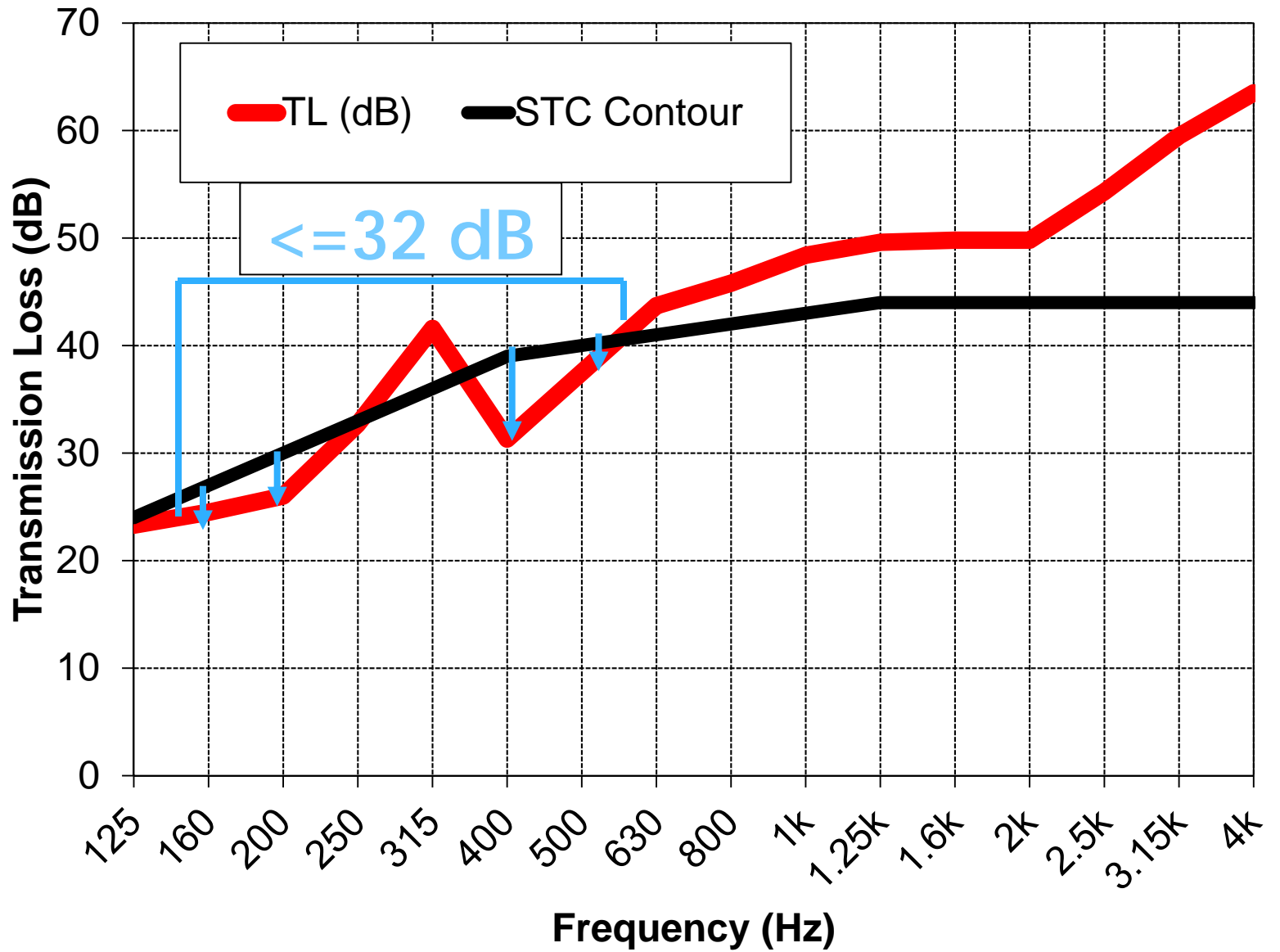
# STC Testing Example



# STC Testing Example

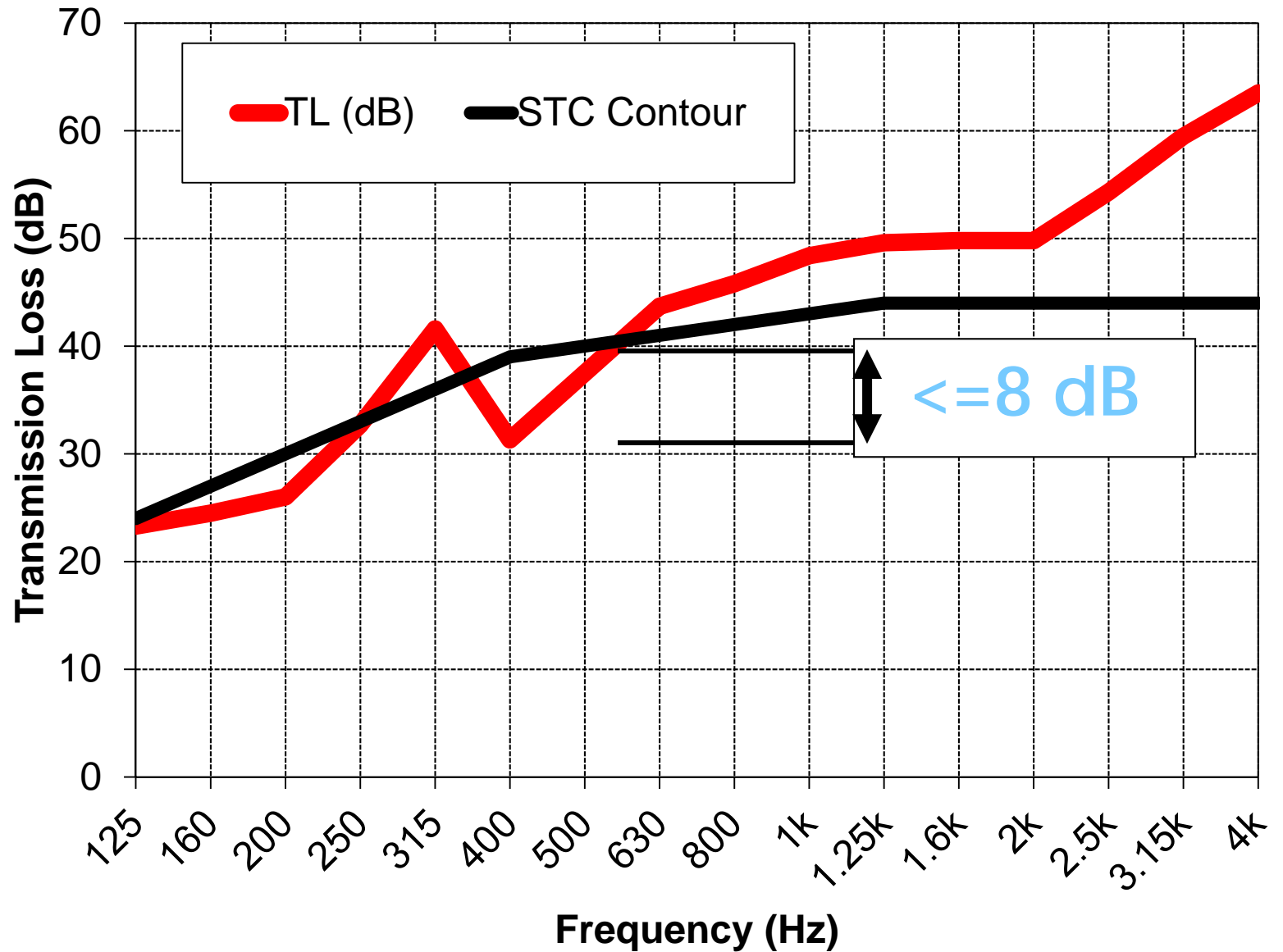


# STC Testing Example

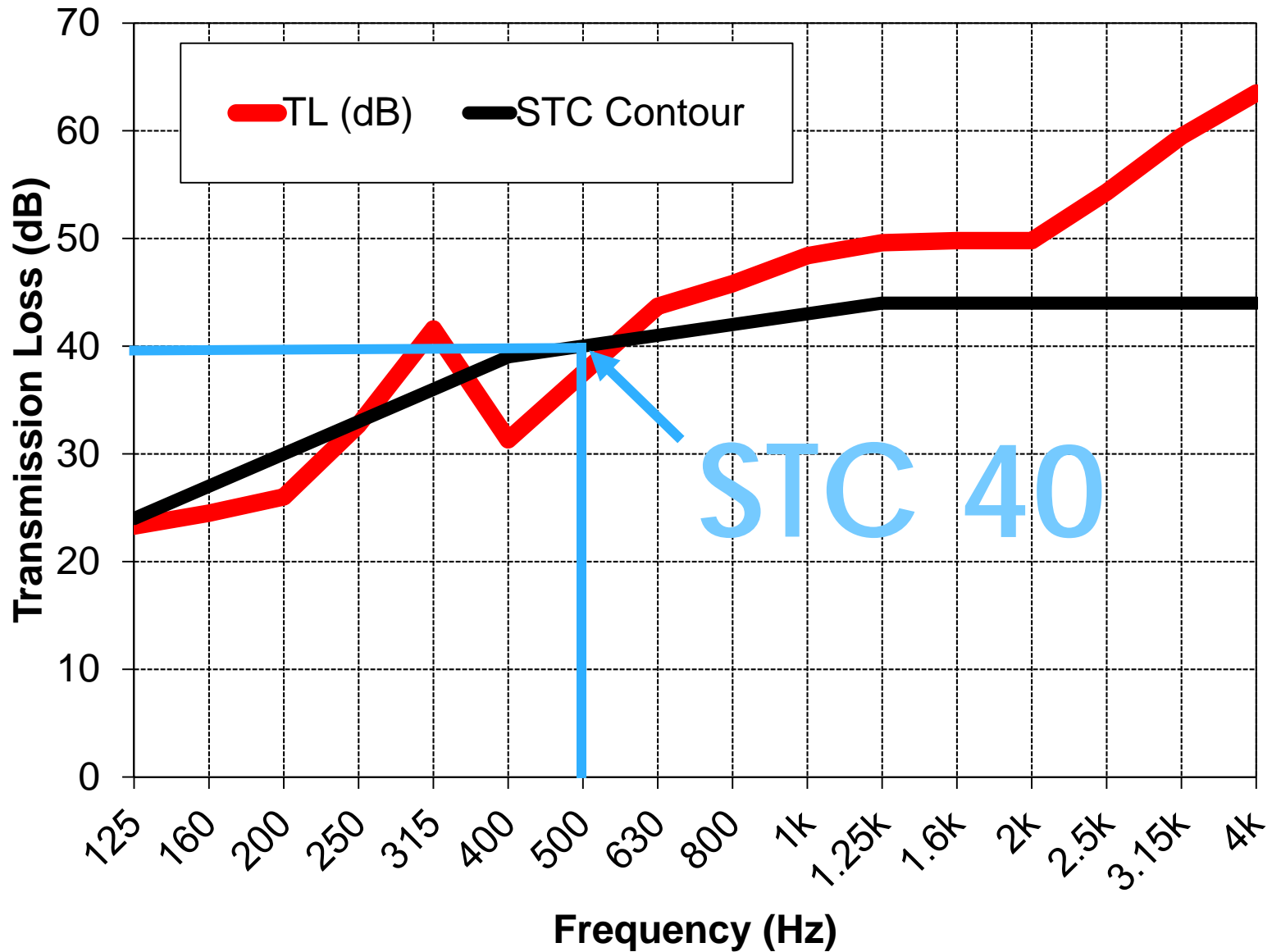




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## Why not use published data?

- Lab Tests don't reflect as-built conditions
- Unique construction
- Regulatory requirements
  - Ontario Building Code
  - STC 50 walls separating units/corridors
  - STC 55 walls separating units from mechanical equipment



(Litebuilt)

# Why not use published data?

- Construction Deficiencies



Questions?



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