# TECHNICAL APPENDIX 14.3: SOURCE NOISE LEVELS

# 1. APPENDIX 14.3 SOURCE NOISE LEVELS

**Table 1-1: Equipment Sound Power Levels**

| Equipment | Quantity | Housing Arrangements | Sound Power Level (SWL) (dB(A)) |
|---|---|---|---|
| Transformers | 3 | External | 86 |
| Transformer Cooling | 3 | External | 85 |
| Synchronous Compensator | 4 | Internal | 92 |
| Synchronous Compensators (Step up Transformer) | 4 | External | 83 |
| Synchronous Compensators (Start up Transformer) | 4 | External | 83 |
| Synchronous Compensators (Auxiliary Transformer) | 4 | External | 84 |
| Synchronous Compensator Coolers | 4 | External | 95 |
| Reactor | 3 | External | 85 |
| Reactor Cooling | 3 | External | 84 |

**Table 1-2: Sound Reduction – Building Facades - 200mm Rockspan and Firemaster Ultima**

## Sound Insulation Prediction (v7.0.13)



- Key No. 2517

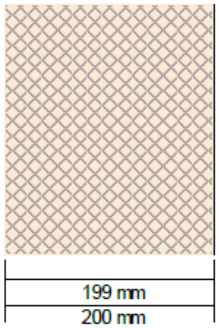
Margin of error is generally within Rw +/- 3 dB

Job Name:

Job No.: Page No.: Notes:

Date: 30 Apr 20 Initials:tim ashley

File Name: insul




| | |
|---|---|
| Rw | 36 dB |
| C | -3 dB |
| $C_{tr}$ | -5 dB |

**System description**

Panel 1 Outer layer: 1 x 200.0 mm Rockspan Ultima 200mm- (m=37.7 kg/m2, fc=119690 Hz, Damping=0.01) Profile

| frequency (Hz) | R(dB) | R(dB) |
|---|---|---|
| 50 | 22 | |
| 63 | 23 | 23 |
| 80 | 25 | |
| 100 | 26 | |
| 125 | 27 | 27 |
| 160 | 29 | |
| 200 | 30 | |
| 250 | 31 | 31 |
| 315 | 32 | |
| 400 | 33 | |
| 500 | 33 | 32 |
| 630 | 30 | |
| 800 | 24 | |
| 1000 | 36 | 28 |
| 1250 | 44 | |
| 1600 | 46 | |
| 2000 | 48 | 48 |
| 2500 | 49 | |
| 3150 | 51 | |
| 4000 | 53 | 53 |
| 5000 | 55 | |

Panel Size 2.7x4 m