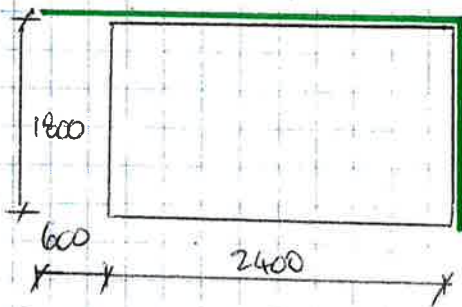


Aluminium Hood fixing



- $q_z(vit) = 0.96 \text{ kPa}$
- $C_{pe} = 1.2$
- Assume 10mm thickness to aluminium

Loads

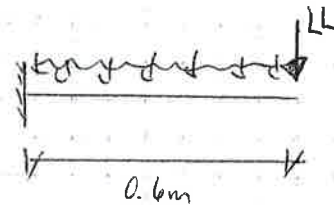
- Hood total weight = $0.6 \times 0.01 \times 4.8 \text{ m} \times 2700 \frac{\text{kg}}{\text{m}^3} \times \frac{9.81}{1000}$
= 0.76 kN
- Allow 1 person hanging off hood \Rightarrow 1.5kN live load
- $u_L = 0.96 \text{ kPa} \times 1.2 = 1.15 \text{ kPa (vit)}$
- self wt/m² = 0.26 kPa

Strength

$$1) w^* = 1.2D + 1.5L = 1.2 \times 0.26 = 0.312 \text{ kN/m}$$

$$P^* = 1.5 \times 1.5 \text{ kN} = 2.25 \text{ kN}$$

$$\Rightarrow M^* = 1.41 \text{ kNm}$$



$$2) w^* = 0.96 + u_L \text{ (vit)}$$

$$= 0.96 + 0.26 = 1.15 \text{ kPa}$$

$$= 0.916 \text{ kPa}$$

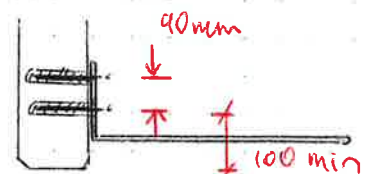
$$\Rightarrow M^* = 0.916 \times 0.6^2 / 2$$

$$= 0.16 \text{ kNm/m}$$

\rightarrow design for live load case.

$$\Rightarrow N^* \epsilon (\text{anchors}) = 1.41 \text{ kNm} / 0.09 \text{ m}$$

$$= 15.67 \text{ kN}$$



Specifying a row of 5 anchors, but assume load is shared between three adjacent anchors

$$N_{rdc} = 12.4 \text{ kN} \times 1.25 \times 1.0 \times 1.0 \times 10$$

40MPa \uparrow \uparrow edge \uparrow spacing dist

$$= 15.5 \text{ kN per anchor}$$

(using HiTi HiT RE500 nominal anchors)
Checked :

Date :/..../..

⇒ 2m8 anchors @600/c (minimum of 10 anchors per leg)
structurally adequate to support hood.
USE Hilti HIT RESO anchors