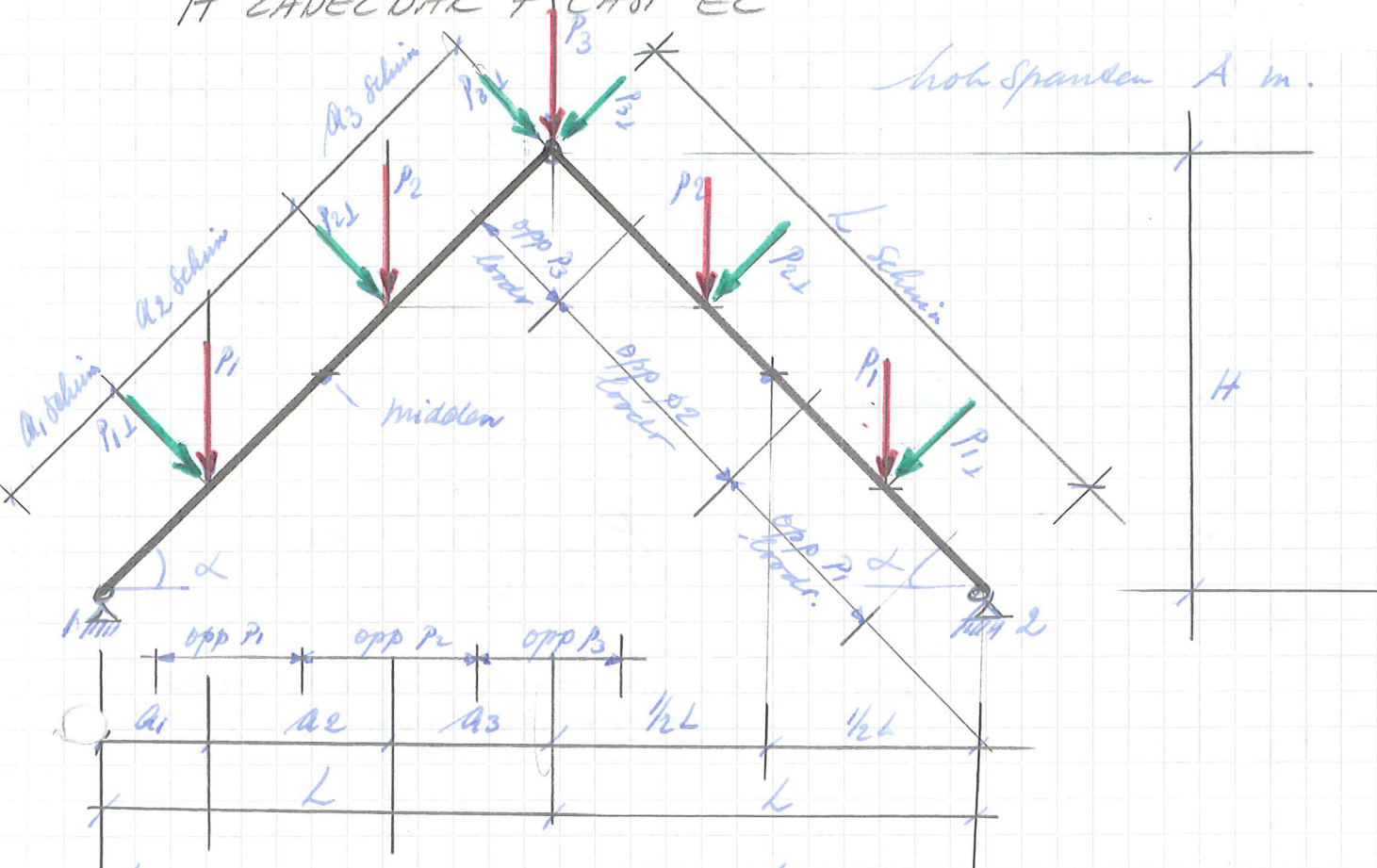


H ZADEL DAK FLAST EC



hoogspannen A m.

Berekening: reacties V_1 en H_1 . ($V_1 = V_2$; $H_1 = H_2$)
 Momenten, en normaal krachten t.p.v. P_1 in 't midden en t.p.v. P_2
 doorbuiging in 't midden tgv p1 en p2

$$\begin{aligned} \text{opp } p_1 &= \frac{a_1 + a_2}{2} \cdot A \quad (\text{vertikaal}) & \text{opp } p_1 &= \frac{a_1 + a_2}{2} \cdot A \cdot \cos \alpha \quad (\text{loodrecht}) \\ p_2 &= \frac{a_2 + a_3}{2} \cdot A & p_2 &= \frac{a_2 + a_3}{2} \cdot A \cdot \cos \alpha \\ p_3 &= a_3 \cdot A & p_3 &= \frac{a_3 \cdot A}{2 \cdot \cos \alpha} \quad (\text{de helft van } p_1 \text{ en } p_2 !!) \end{aligned}$$

eg.; sneeuw

$$V_1 = p_1 + p_2 + \frac{1}{2} \cdot P_3 \quad V_1 = V_2$$

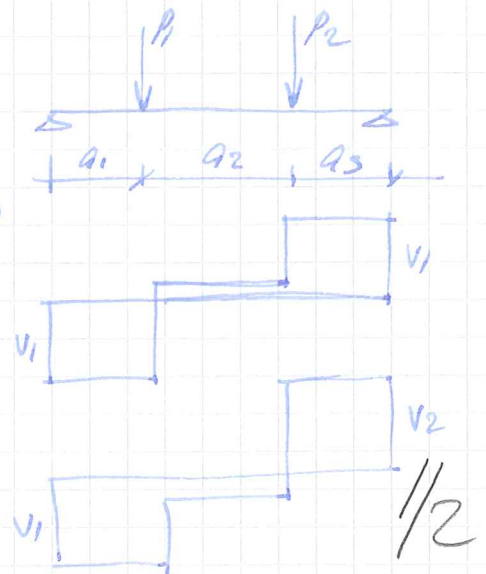
$H_1 =$

$$\begin{aligned} M_{i/p_1} &= H \cos \alpha + \left(\frac{1}{2} P_3 + p_2 + p_1 \right) \cdot \sin \alpha \\ M_{i/mid} &= \text{als } M_{i/p_2} \\ M_{i/p_2} &= H \cos \alpha + \left(\frac{1}{2} P_3 + P_2 \right) \cdot \sin \alpha \end{aligned}$$

Momenten fluiting

$$\begin{aligned} V_1 &= \frac{p_1 + p_2 - V_2}{L} \\ V_2 &= \frac{p_1 \cdot a_1 + p_2 \cdot (a_1 + a_2)}{L} \end{aligned}$$

$$\begin{aligned} M_{i/p_1} &= V_1 \cdot a_1 \\ M_{i/p_2} &= V_2 \cdot a_3 \end{aligned}$$



M middelen

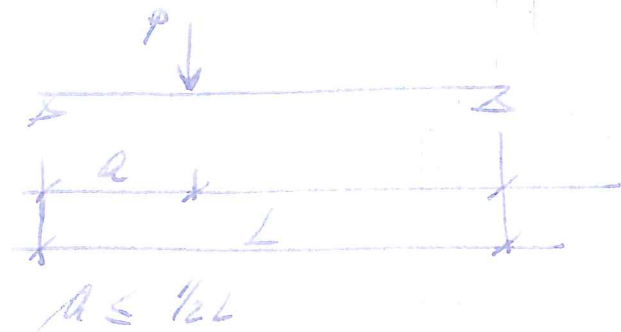
$$\text{als } (a_1 + a_2) < \frac{1}{2}L \quad - (P_2 \cdot (\frac{1}{2}L - a_1 - a_2) + P_1 \cdot (\frac{1}{2}L - a_1) + H \cdot \frac{1}{2}h - V \cdot \frac{1}{2}L)$$

$$\text{als } (a_1 + a_2) \geq \frac{1}{2}L \quad - (P_1 \cdot L - a_1) + H \cdot \frac{1}{2}h - V \cdot \frac{1}{2}L$$

$$\text{als } a_1 \geq \frac{1}{2}L \quad - (H \cdot \frac{1}{2}h - V \cdot \frac{1}{2}L)$$

h = hoogte nok. H = spantkracht etc.

Doorknijping in het midden:



$$\delta = \frac{P \cdot a (3L^2 - 4a^2)}{48 EJ}$$

per puntlast (loodrecht op de ligger) te berekenen en opstellen.

Horizontaalkracht H bij belastingpunt wind.

$$\frac{P_1 \cdot a_{1s} + P_2 \cdot (a_{1s} + a_{2s}) + P_3 \cdot L_s}{\text{hoogte}} - (p_1 + p_2 + p_3) \cdot \sin \alpha$$