

Natuurlijke berekening van de fens belastingen
aan de Chr Udo Kerk te Dordrecht

vloer a $l = 2.11$ m bel + d. = $200 + 240 + 50 = 490 \text{ kg/m}^2$
 $m = 18 = 245 \text{ kg/m}^2$

$d = 10 \text{ cm}$ $f_g = 1200/29 = 2.7 \text{ km}^2$ $\phi 8 - 18 \text{ cm}$; $r \phi 6 - 33$

vloer b $l = 2.51$ m bel + d. = 490 kg/m^2

$m = 18 = 385 \text{ kg/m}^2$

$d = 10 \text{ cm}$ $f_g = 1200/38 = 4.3 \text{ km}^2$; $\phi 8 - 11 \text{ cm}$; $r \phi 8 - 28$

vloer c $l = 2.51$ m bel + d. = 980 kg/m^2

$m = 18 = 775 \text{ kg/m}^2$

$d = 10 \text{ cm}$ $f_g = 1200/59 = 0.8 \text{ km}^2 = \phi 8 - 11 + 4 \phi 12 \text{ cm}$

vloer d $l = 1.41$ m $d = 8$ $\phi 8 - 16$ $r \phi 6 - 33$

Back 1 $l = 1.20$ m muur + d. $3.4 \times 200 = 680 \text{ kg/m}^2$

$m = 18 = 122 \text{ kg/m}^2$ $11 \times 18 \text{ cm}$ $f_g = 1200/35 = 0.74 \text{ km}^2 = 2.4 \phi 8 \text{ cm}$
als $\phi 6 - 25 \text{ cm}$

Back 2 $l = 2.51$ m bel + d. = 680 kg/m^2

op 1/2 l van 1: $0.6 \times 680 = 340 \text{ kg}$

$m = \frac{680 \times 2.51}{8} + \frac{340 \times 2.51}{4} = 793 \text{ kg/m}^2$

$11 \times 40 \text{ cm}$ $f_g = 1200/38 = 2.4 \text{ km}^2$; $2 \phi 12$ als $\phi 6 - 25$

vloer d. feldvloeren belasting

muur $2.7 \times 3.40 \times 400$ 11.600 kg

top $4.09 \times 1.50 \times 400$ 2.500

feldvloer $2 \times 2.7 \times 2.7 \times 500$ 23.000

$4.38 \times 3.40 \times 200$ 3.000

$4.09 \times 3.40 \times 400$ 5.600

binnen muur $4.5 \times 2.7 \times 200$ 2.450

$0 \times 3.40 \times 200$ 5.450

feldvloeren $4.7 \times 1.1 \times 400$ 2.050

breukdak $15.5 \times 2.2 \times 400$ 4.900

kap $4.66 \times 4.3 \times 200$ 4.150

zolder $4.66 \times 4.3 \times 100$ 2.150

afg. $4.66 \times 4.3 \times 300$ 6.100

Totaal 72.900 kg

over $(4.1 + 0.86) \times (3.81 + 0.86) = 23.1 \text{ m}^2$
druk = 3150 kg/m^2

pleus $4/30 \times 4$ m (0.56) en 0.433

$m_b = \frac{3150 \times 4.2}{0.56} = 2350 \text{ kg/m}^2$

$d = 20 \text{ cm}$ $f_g = 1200/50 = 14.8 \text{ km}^2$ $\phi 12 - 7 \frac{1}{2} \text{ cm}$

$M_f = \frac{3150 \times 4.3 \times 0.433}{4} = 2500 \text{ kg/m}^2$

$d = 20 \text{ cm}$ $f_g = 1200/50 = 13.8 \text{ km}^2$ $\phi 12 - 8 \text{ cm}$

Konijn A $l = 2.12 + 0.22 = 2.34$ m

muur + d. $4 \times 400 = 1600 \text{ kg/m}^2$

1 Stuk dak 1.50×2.50 375

brug $\frac{200}{2.34} = 85.5 \text{ kg/m}^2$

$m = 18 = 1490 \text{ kg/m}^2$ $17 \times 45 \text{ cm}$ $f_g = 1200/37 = 3.35 \text{ km}^2$
 $= 3 \phi 12 \text{ cm}$ als $\phi 6 - 25$

binnen $l = 2.34$ m muur + d. $1.20 \times 200 = 240 \text{ kg/m}^2$

brug $\frac{200}{2.34} = 85.5 \text{ kg/m}^2$

$m = 18 = 300 \text{ kg/m}^2$ $11 \times 25 \text{ cm}$ $f_g = 1200/4 = 1.32 \text{ km}^2$ $2 \phi 10$
als $\phi 6 - 25$

Konijn B $l = 3.34 + 0.22 = 3.56$ m

muur + d. = $0.5 \times 500 = 250 \text{ kg/m}^2$

3 Stuk dak $\frac{100}{3.56} = 28.1 \text{ kg/m}^2$

in het midden van kap $2.89 \times 4.50 \times 225 = 2930 \text{ kg}$

$m = \frac{300 \times 3.56}{8} + \frac{2930 \times 3.56}{4} = 3180 \text{ kg/m}^2$

afg $17 \times 45 \text{ cm}$ $f_g = 1200/6 = 7.55 \text{ km}^2 = 4 \phi 16 \text{ cm}$
Totaal 6.1 kg/m^2 als $\phi 6 - 25$

Konijn C $l = 2.19 + 0.22 = 2.415$ m muur + d. = $0.8 \times 500 = 400 \text{ kg/m}^2$

$m = 18 = 290 \text{ kg/m}^2$ $17 \times 30 \text{ cm}$ $f_g = 1200/24 = 1.9 \text{ km}^2$ $2 \phi 10$
als $\phi 6 - 25$

1 Stuk dak

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