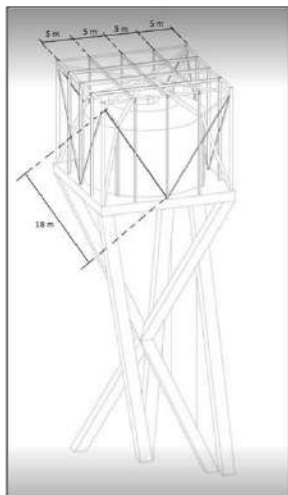## Dimensions and spacing of steel frames
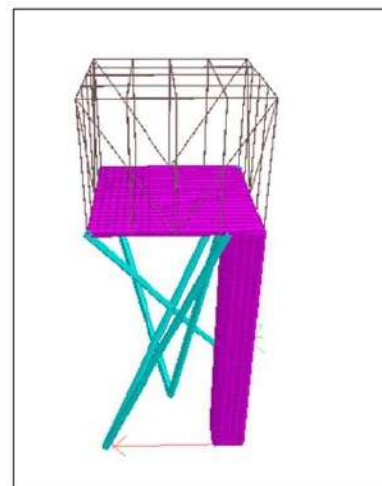

Visualization from V+ Architects

Dimensions of water tank

20 m

10 m

15 m

20 m

35m

15 m

4 m
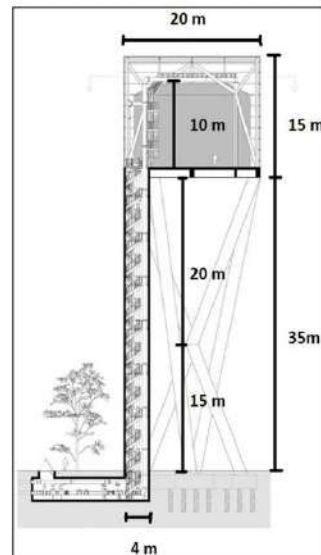
V+ Water Tower
Mons, Belgium

Steel structure

Concrete structure

Concrete structure

Concrete structure

Release` structural elements

Staad.Pro model

Created by: Flavius Vladoiu, Filip Jenik

Axial Loads Diagrams

Plate stress results

Max Absolute N/mm2

<= 0.133
0.552
0.971
1.39
1.81
2.23
2.65
3.06
3.48
3.9
4.32
4.74
5.16
5.58
5.99
6.41
>= 6.83
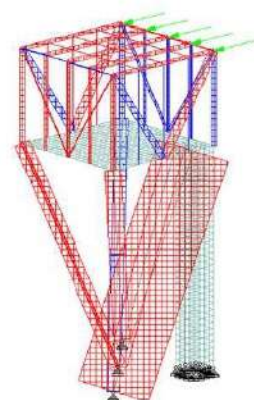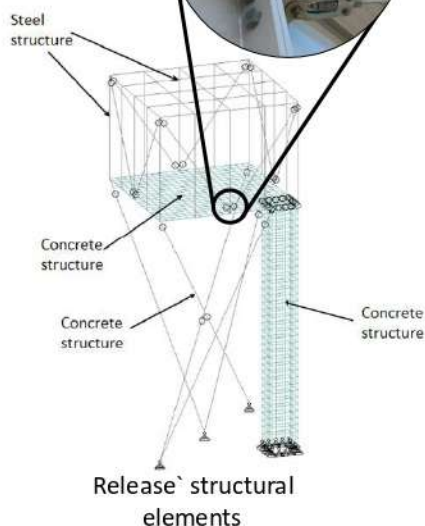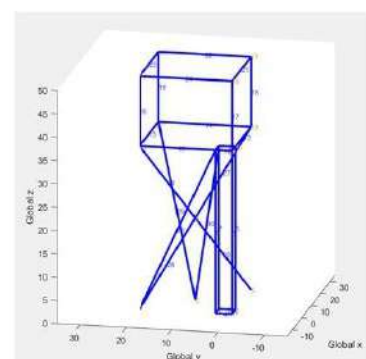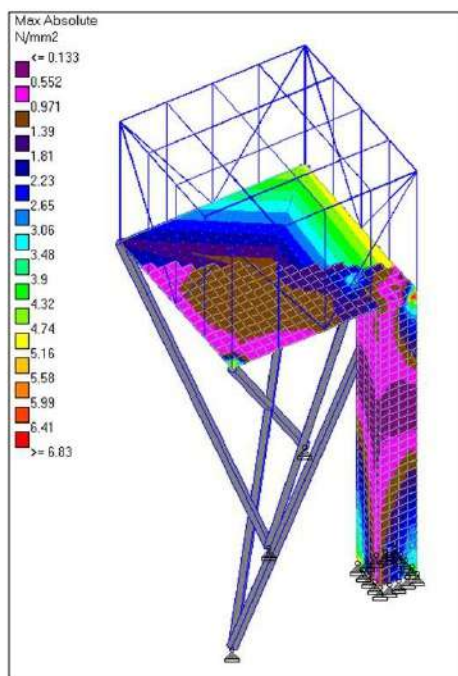
Load resulted from water tank

Water selfweight:
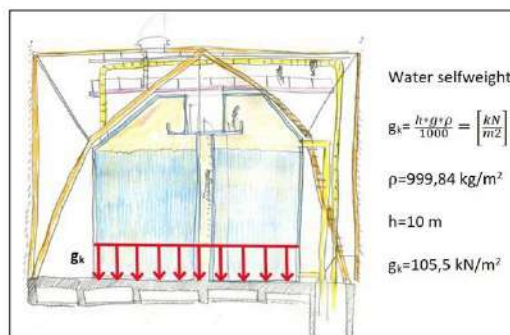
$$g_k = \frac{h*g*\rho}{1000} = \left[\frac{kN}{m^2}\right]$$

$\rho = 999,84$ kg/m^2

h=10 m

$g_k = 105,5$ kN/m^2

g_k

Axial force diagrams
(blue=tension/ red=compression)

Matlab model