

Validity Check

Internal layer: $(X_1, Y_1), W_1, H_1, t_1$

External layer: $(X_2, Y_2), W_2, H_2, t_2$

External layer: $(X_3, Y_3), W_3, H_3, t_3$

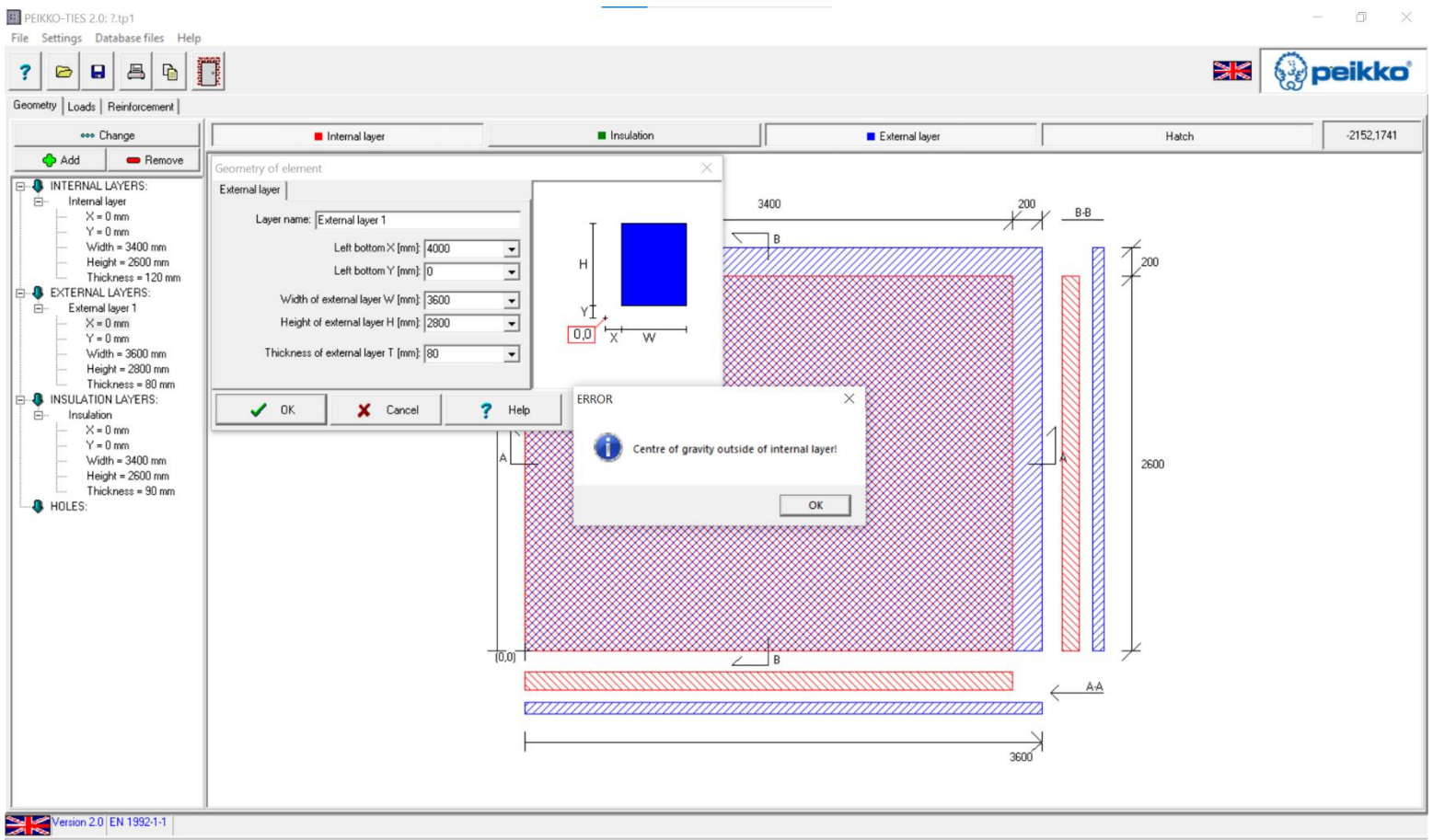
Insulation layer: t_4

Holes: $(X_5, Y_5), W_5, H_5, t_5 = t_1 + t_2 + t_3 + t_4$

: inputs

1- The dimensions of the external layer should be chosen so that the center of gravity is not outside the Internal layer.

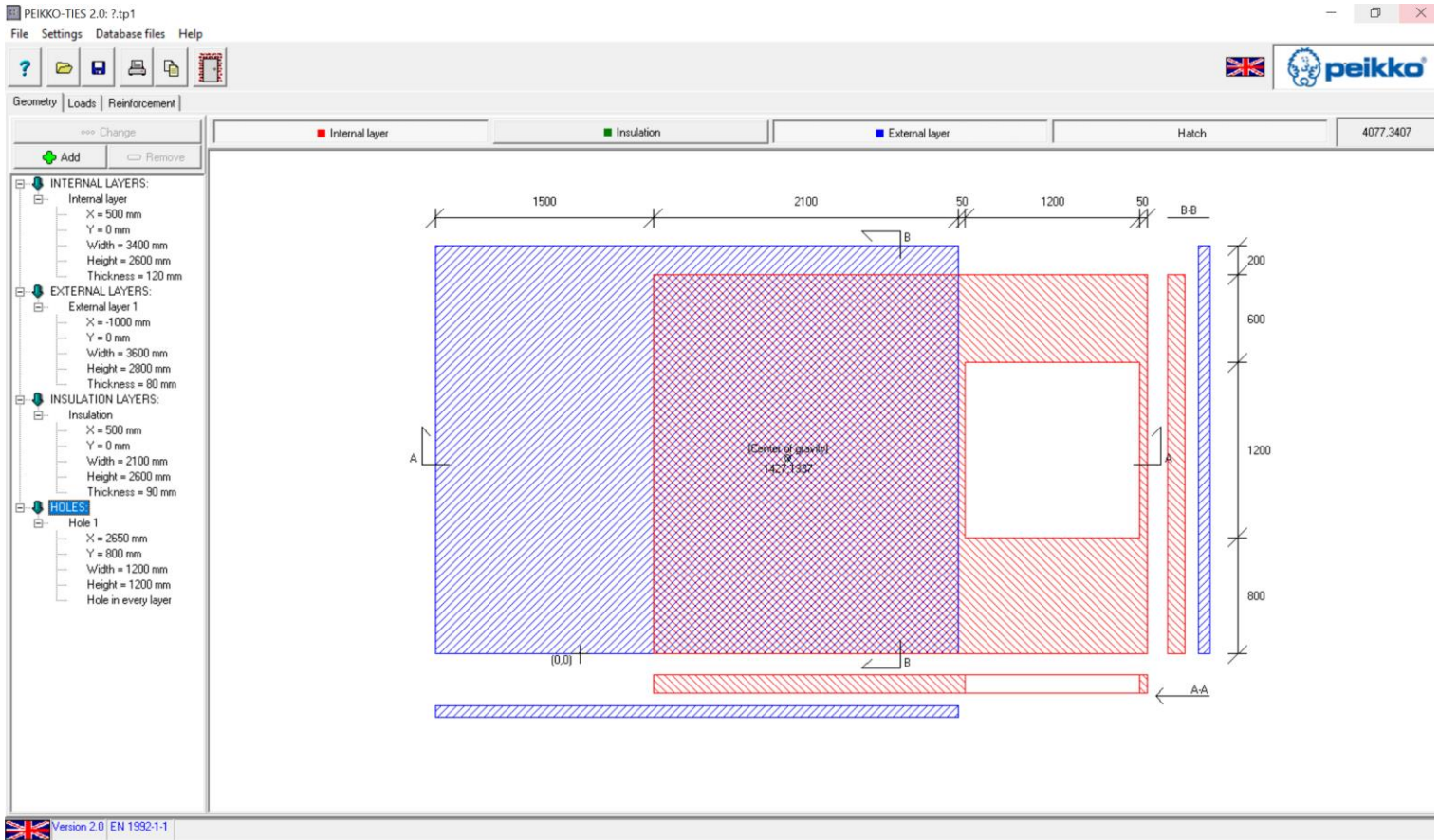
- center of gravity can be found by summing (Σ) the multiplication of the distance by the weight and dividing it by the summation of all weights.



2- The insulation layer is located between the external layer and internal layer and changes with the changes in the dimensions of the external layer or internal layer. We are only able to change the thickness of the insulation layer.

3- The dimensions of the insulated layer are equal to the interface between the outer and inner layers.

4- Holes have to be located in the external layer or internal layer or both.



INTERNAL LAYERS:

Internal layer

- X = 500 mm
- Y = 0 mm
- Width = 3400 mm
- Height = 2600 mm
- Thickness = 120 mm

EXTERNAL LAYERS:

External layer 1

- X = -1000 mm
- Y = 0 mm
- Width = 3600 mm
- Height = 2800 mm
- Thickness = 80 mm

INSULATION LAYERS:

Insulation

X = 500 mm

Y = 0 mm

Width = 2100 mm

Height = 2600 mm

Thickness = 90 mm

HOLES:

Hole 1

X = -800 mm
Y = 800 mm
Width = 1200 mm
Height = 1200 mm
Hole in every layer

