Sources and Sinks in WUFI 2D

How to express the source strength of thermal or hygric source as a fraction of the respective boundary condition

The whole source rate $S$ [W/m] or [kg/ms] which will be evenly distributed over the red marked area is determined as:

$$S = fraction \cdot BC \cdot L.$$  

Where $BC$ is the incident solar radiation or driving rain and $fraction$ is a user defined value. The whole area over which the source rate will be distributed is determined as:

$$A = \sum_{i=elementIndex} A_i.$$  

In the above example $A = A_1 + A_2 + A_3 + A_4.$

The whole source rate is then distributed over the grid elements within the source area in proportion to the individual element areas.

The source rate $S_i$ of element $i$ is determined as:

$$S_i = \frac{A_i}{A} \cdot S.$$  

The WUFI®-Team