

## [OPTIONAL] Assignment for the Moisture Course:

### Aim:

- To show some knowledge about basic moisture theory, moisture transport mechanisms and the understanding of the water vapour diagram.
- To be able to perform a qualified moisture analysis of a building component using a steady state diffusion model. Graphical analysis as well as calculations from an application.

### Practical Conditions:

- Basis for the assignment is
  - Special Course: Moisture
  - *Moisture in buildings*, Steffen Vissing Andersen, 2009
- The assignment is a group assignment and documented in a small project report. Names and study numbers for all participants has to be on the front page of the report.
- The report should not exceed 10 pages not counting output from the application

### The Assignment:

1. Provide at least one example of how the water vapour diagram (or vapour pressure diagram) can be used
2. Describe by example, sketches and explanations how a graphical determination of condensation can be performed
3. Use the application *Moisture Analysis* to perform an analysis of a critical building component from your project. If the building component contains a vapour barrier then it could be an idea to make one calculation without a vapour barrier and one calculation including the vapour barrier in order to compare these.

#### The analysis should include

- Explanation for the selected input data including temperature and relative humidity
- If the calculation shows moisture accumulation then an explanation of which measures could be taken.
- Commented output from the calculations

The application *Moisture Analysis* can be downloaded from this link:

<http://sva.it-engineering.dk/MoistureAnalysis/>

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