

Integrated Thermal Bridge Window Glade

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INTRODUCTION

In the year of 2035, the building mass in Denmark has to be CO₂ neutral, which puts demands on energy consumption/loss in buildings - new as old. That calls for an innovation of energy optimizations. Due to the strict requirements in new buildings and energy renovation of buildings, it is very obvious to develop alternative methods to optimize energy consumption.

PURPOSE

- To minimize the linear thermal transmittance between the building shell and a window or a door.
- Removes the possibility by thermal bridges and by that removes the conditions of energy loss, condensation, mold and rot, in the construction (joints) between the window or door and the surrounding construction (material).
- To make the workflow easier and thereby reducing the construction costs in renovation and new buildings.
- The long term idea is to establish standard dimensions and enable recycling of windows and doors.
- Fast interim closing of buildings and by that minimizing the construction time.

VISUALIZATION/THE PROJECT

"Mock-up" model and presentation of the solution.

CHALLENGES/ASSUMPTIONS

- There will be manufactured molds, but then there is no greater challenge because the work process is made easier.
- Reinforcement of the material. Already exist, can be improved.
- The construction of the final mock-up, requires providing of material, cooperation with the producer or our own production.
- Calculation of the final U-value and strength. It requires that the material is procured or production ready.
- Investment for development. Very limited, cooperation agreement or funding for molding mock-up.
- The production investment is limited, but requires a slight change in the production and logistic.