Experimental testing of the Closed Cavity Façade for a hot desert climate

Summary

This research is about the experimental testing of a new type of façade. The façade is a variant on a Double Skin Façade. This new type of façade is called the Closed Cavity Façade. The Closed Cavity Façade is a Double Skin Façade which is not ventilated. The Closed Cavity Façade is currently used in Western Europe, but it is expected to be a Double Skin Façade which is suitable for a hot desert climate. To find out if this façade is suitable for this kind of climate this research is done.

A dynamic energy performance calculation for a whole building is made to compare the energy performance of the Closed Cavity Façade to other types of façades used. The Closed Cavity Façade is a viable option in comparison to other Double Skin Façades for a hot desert climate.

An experimental test is done in Dubai, whereby prototypes of this façade are tested in a hot desert climate. Another test, which is an accelerated ageing test for solar blinds, is done in the Netherlands. In the end is looked at the prospect for a year of the Closed Cavity Façade.

The conclusions on this thesis are deleted because of confidentiality.