

Gent, 29/09/2015
Kumpen nv
Mr. Marc Vermaut

Regarding : Airtightness measurement at Fleurus - Energy efficient office building - Kumpen nv.

Dear,

Attached to this letter you can find the report of the airtightness measurement at Fleurus.

Subject

The airtightness of the building envelope and its transitions were inspected for durability. Points of attention were addressed on site. The tested building is an energy efficient office building.

Time and location details

The measurement was conducted Tuesday 19-09-2015 by Bruno Bailleul - BCB bvba. Mr. Marc Vermaut of the company Kumpen nv was present during the test at Fleurus - Rue du Rabiseau 3.

Attachments

- PDF document "2015-09-19 Luchtlekopspringing @-50Pa";
- PDF document "2015-09-19 Controle vloer- wandaansluiting";

Airtightness measurement of 12-12-2013

The airtightness measurement conducted by Boomer bvba on 12-12-2013 demonstrated an air change rate / n50-value of 0.33 per hour.

Airtightness measurement of 19-09-2015

The door to the warehouse was chosen for the installation of the test equipment. The ventilation unit was sealed using ducttap as it was not possible to close the mechanical valves. All exterior doors and windows were closed.

Using thermographic imaging the building envelope was inspected for any air infiltration. In particular, air permeability of walls and their transitions were tested. Additionally, smoke generators were used to visualise air leakage at -50Pa.

Noticed air infiltrations

Following leakages were already observed during the airtightness measurement of 12-12-2013;

- Major leakage above the ceiling of the server room;
- Minor air entry at supporting I-profiles above ceiling : floor +1;

The main entry door shows air leakage. Due to its weight and its frequent usage the hinging- and bottomside shows air entry.

Via the ventilation system and its ducting a small airflow was noticed. The unit was sealed using tape.

Air infiltrations were described in the thermography report @-50Pa.

Results

First of all BCB bvba measured an air change rate value of 0.38 per hour, as compared to the air change rate of 0.33 per hour, measured by Boomer bvba. This minor difference is most likely due to following items:

- Additional air infiltration at main entry door;
- Minor leakages owing to usage (e.g. cabling perforations at +1floor) of the building;

Secondly, wall constructions and their transitions were inspected on any air infiltration. No significant air leakages were observed. The airtightness of the building envelop shows no sign of aging.

Conclusions

The airtightness has not significantly changed compared to the previous measurement. The building is still very airtight and energy efficient. Transitions and airtight products are still functioning.

I hope to have provided you with all necessary information.

Do not hesitate to contact us.

Yours sincerely,

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