




Building airtightness improvements in the Flemish building stock analysis of BCCA database



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AIR TIGHTNESS TESTS IN FLEMISH REGION

- 2 options in EPBD regulation in Flemish region in Belgium:
 - Default value of 12 m³/h per m² heat loss area (v50)
 - Leakage rate measured in quality framework (since 1 january 2015)
- Quality framework organised by BCCA
 - Reference document in Belgium: STS-P 71-3 (referring to european standard)
 - Initial qualification of testers:
 - Optional theoretical course (1 day – building physical background, STS-P 71-3 and operational aspects of quality framework)
 - Theoretical exam (1.5h – 50questions multiple choice)
 - Practical exam (3 h – full test on site and measurement report)
 - Random inspections:
 - 10 % inspections on site to verify correctness and reliability of measurements
 - 10 % inspections of test reports to verify correctness and completeness of test report
- Other regions (Walloon, Brussels): no quality framework (yet), no systematic registration of test results

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DATABASE BCCA

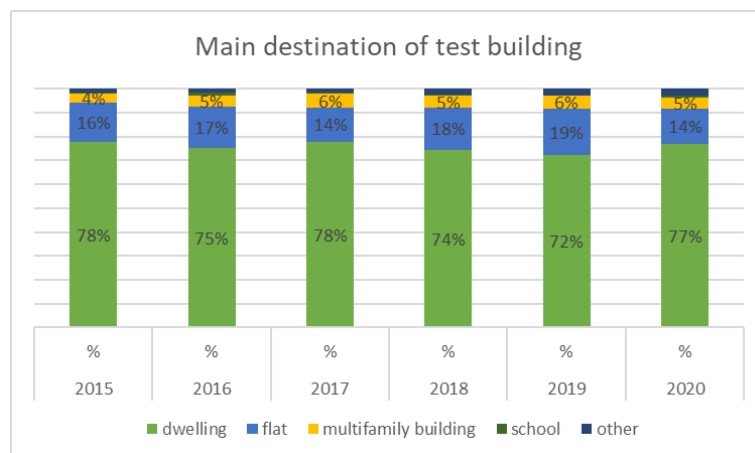
- Information entered in BCCA database by qualified testers:
 - Administrative data (address, ...)
 - Main destination (residential, office building, school, ...)
 - For multifamily buildings: if tested as a whole or as individual units
 - Planning and timing of test
 - Leakage rate (m³/h)
 - Heat loss area (m²) and/or internal volume (m³)
 - Full test report (.pdf, pictures, ...)
- SMS with leakage rate after test to facilitate random inspections
- No details about the sources of leakages
- Yearly statistics available since 2015

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STATISTICS

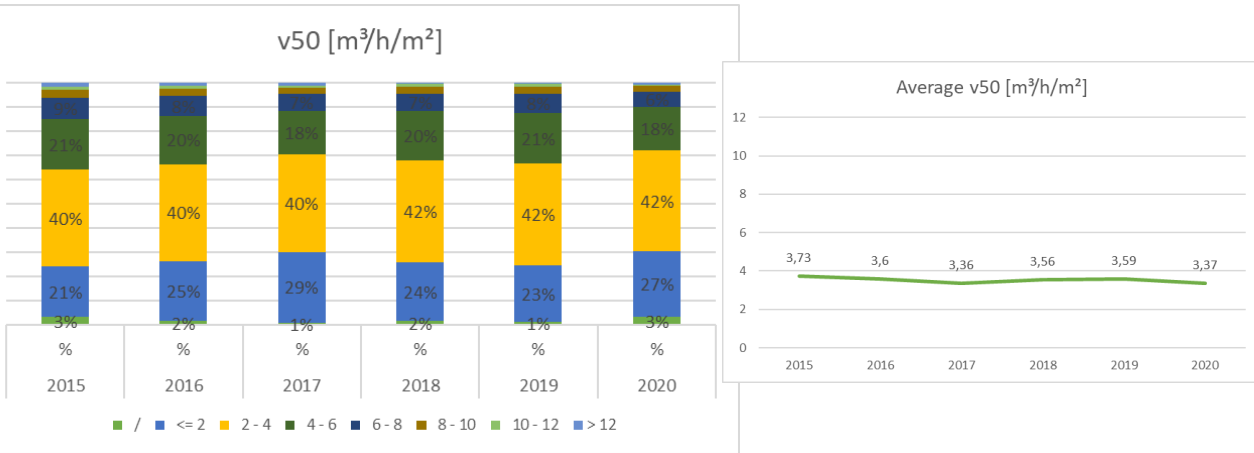


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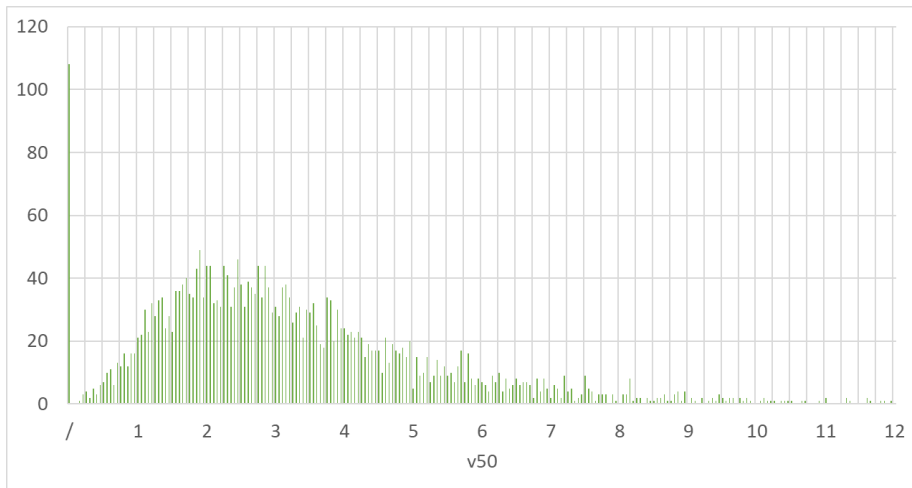
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STATISTICS



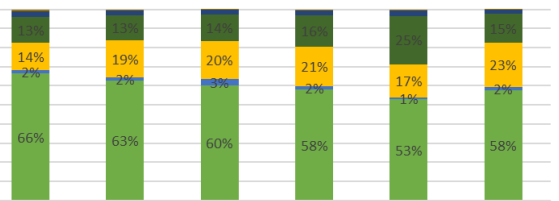
STATISTICS

■ Distribution of v50 for 2020

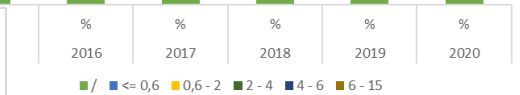
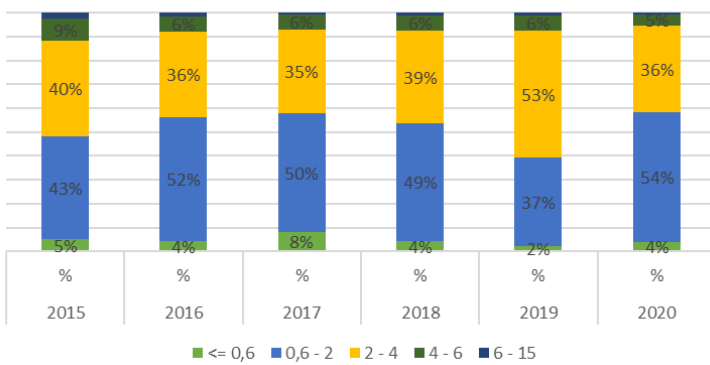


STATISTICS

n50 [1/h] - all data



n50 [1/h] - subset (only known V)



■ / ■ <= 0,6 ■ 0,6 - 2 ■ 2 - 4 ■ 4 - 6 ■ 6 - 15

Average n50 [1/h]



BCCA

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CONCLUSIONS

- Database contains data for mostly residential buildings and mostly individual residential units
- No evolution towards a better airtightness in Flanders over the last 6 years
 - Since 2015 the average v50-value remains more or less the same
- No details about the sources of leakages

QUESTIONS?

- mds@bccca.be
- <http://www.jeconstruisetanchealair.be/newsletters/>

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