Overview of competent tester schemes for building airtightness testers

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Context

• Today, several hundreds of thousands of building airtightness tests every year in Europe
• This number continues to grow because of:
  – Regulatory requirements gradually enforced
  – Energy penalties for poor building airtightness in EPCs
Context

- Lessons learnt from a survey conducted within TAAC - TightVent Airtightness Associations Committee (11 countries, not exhaustive)
  - Most countries account for building airtightness in their EP regulations
  - Several countries have minimum requirements either for specific programmes or regulations
  - Mandatory testing applies in several countries (e.g. UK, DK, FR, IE)

Airtightness testing and compliance

- Significant risk of mistake or fraud
- Compliance may be affected due to:
  - Test not performed although required
  - Test wrongly performed and/or reported
  - Test results are such that the EPC does not meet the regulatory requirements
Competent tester schemes

• These schemes have been developed for one or several of the following reasons:
  – Ensure that the testers are competent to perform a test
  – Give a quality seal to airtightness testing
  – Bring trust to the market
  – Avoid the pitfall experienced with EPC experts
  – Follow-up the testers’ service
  – ...

8 EUROPEAN COUNTRIES

Competent tester schemes

Number of qualified testers in 6 European countries in January 2014 (the Swedish scheme started in 2014, Belgian scheme in 2015)
Competent tester schemes

- Key components
  - Tester knowledge (regulatory context, fundamentals of ventilation, infiltration and airtightness measurement)
  - Pre-requisites on tools (equipment, analysis and reporting tools)
  - Minimum standard for the know-how of the tester
    - To use the equipment
    - To use analysis tools
    - To use reporting tools
- These key components are supported by technical documents, training programs and evaluation procedures

Competent tester schemes

- The details of each component varies significantly between countries
  - e.g. training validation

![Diagram showing training validations include: A theoretical examination, An examination of test report(s), On site evaluation of the tester's skills]
Specific reporting in a database

• Required in some schemes, e.g.:
  – DK, DE, CZ, FR

• It becomes possible to:
  – Analyze large samples and extract meaningful trends (see presentation of CEREMA tomorrow)
  – Track suspicious results... but to our knowledge, this is not operational yet in any of the schemes
  – Check consistency between the test results and the data used in the EPC

Is it worth it?

• Over 200 persons at the annual meeting organized by QUALIBAT
Is it worth it?

- Feedback from the French competent scheme holder:
  - Less than 1/3 of applicants get the qualification at the 1st review
  - Over 10% fail after 3 reviews
  - Over 50% fail the follow-up checks (1st review)

=> Confirms the relevance to check competence
Is it worth it?

• Insurance companies require qualification to insure testers

Summary

• Competent tester schemes have been developed in several countries
• Today, they mostly help:
  – Bring confidence that testers are able to perform tests correctly
  – Avoid wrong reporting due to lack of competence
• With adequate IT developments, they could be used:
  – To track suspicious behaviour and results
  – To check consistency between testers results and the values reported in the EPC
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QUALICHeCK
Towards better quality and compliance
TightVent Airtightness Associations Committee

- Set up and hosted within TightVent since 2012
  - At present, the participants are from
    * Belgium, Czech Republic, Denmark, France, Germany, Ireland, Poland, Sweden, and the UK
    * Contacts with Estonia, Norway, Netherlands, Latvia

- The scope includes various aspects:
  - airtightness requirements in the countries involved
  - competent tester schemes in the countries involved
  - applicable standards and guidelines for testing
  - collection of relevant guidance and training documents