AIVC – TIGHTVENT
Inspection of ventilation systems in new regulations in European countries

French Regulation RE2020

30/11/2021

Sandrine CHARRIER - Cerema

FRENCH REGULATION RE2020

New EP regulation:

• Energy and Environnemental Performances Regulation RE 2020 (ex - Thermic Regulation RT2012)

• **Begging**: January, 1st 2022

• Inspection of ventilation system is **mandatory** for a scope of buildings and ventilation systems
FRENCH REGULATION RE2020

Which kind of building or ventilation system is concerned by this requirement?

Buildings and ventilation system concerned by mandatory inspection of ventilation system:

• New residentiel buildings:
  • Single family dwellings
  • Multi family dwellings,

• And with mechanical ventilation system:
  • Either single exhaust ventilation system
  • Or balanced ventilation system.

➢ The majority of new residential buildings are equiped with a mechanical ventilation system

FRENCH REGULATION RE2020

Who is allowed to perform the inspection (1/2)?

A qualified inspector :

• Qualification approved by the Ministry in charge of Building Regulations

• And who is:
  • either independant inspector, independant from client, system designer, installators

  • or the installer who is in the charge of the coordination of the whole building’s ventilation system (air inlet, air transfert, air outlet).

➢ Qualification scheme similar to the airtightness tester scheme.
Who is allowed to perform the inspection (2/2)?

To be **qualified operator:**

- **Train and validate final exam** of the training scheme approved by the ministry
  - theoretical and practical exam
- **Then**, obtain the **qualification** approved by the Ministry

---

**FRENCH REGULATION RE2020**

**Type of control (1/5 )**

- Mandatorily diagnostic and measurements introduced by the energy and environmental performances regulation (RE2020 Ventilation Protocol)

- 3 parts in the control:
  - **Pre-inspection**: analysis of documents and preparation of the in situ audit
  - **Ventilation diagnostic (in situ)**: diagnostic in situ
  - **Ventilation measurements (in situ)**: Flow rates and/or air pressures (for humidity DCV systems (demand-control ventilation))
Type of control (2/5)

- **Pre-inspection**: analysis of documents and preparation of the in situ audit
  - Availability of studies documentation (design, calculations, …)
  - Ventilation system installed consistent with ventilation system used in the regulatory study (used in the Energy Performance calculation of the building)
  - Completeness of the ventilation system

Type of control (3/5)

- **Ventilation in situ diagnostic**: verification of about 60 checkpoints on:
  - General
  - Ventilation unit
  - Ductworks
  - Air transfert
  - Air inlet
  - Air exhaust

  - Completeness of the ventilation system
  - General state of the ventilation system in regards with regulations
  - Verification if each part of the system is:
    - Installed
    - Well installed (according to regulations) (accessibility for instance)
    - Works (mechanical systems)
FRENCH REGULATION RE2020

Type of control (4/5)

- Ventilation measurements:
  - Flow rates and/or air pressures (for humidity DCV systems (demand-control ventilation))
    - On every air outlet
    - Calibration is indicated in the regulatory protocol
    - Sampling
      - Of the ventilation units in the case of several buildings,
      - Of dwellings for ventilation units that serve more than 5 dwellings.
  - Ductwork airtightness only if the value introduced in the EP regulation is better than the default value.

Type of control (5/5)

- Mandatory checkpoints: around 60
- Optional checkpoints: around 50 (could be used for a label for instance)

Periodicity of the control
- Once, at the end of the construction
Non-conformity

- Non-conformity is written in the final document attesting the compliance with EP regulation (declaration)

Database

- Inspection and measures results are centralized and analysed in an online database (Ventilation National Observatory):
  - Secure login for inspectors, qualification organisations, Cerema
  - Public global statistics online

➤ In process. A first available version should be online in the summer 2022.

Thank you!

sandrine-j.charrier@cerema.fr