2nd QUALICHeCK Conference
Status on the ground regarding quality of the works

Experiences with quality frameworks for cavity wall insulation of existing walls

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Installing insulation in existing cavity walls

1. Inspection

2. Preparation

3. Installation

4. Finishing
Key factors to successful roll-out of mass market Cavity Wall Insulation:

• Active support of industry
• Robust Consumer Protection Arrangements
  – Tested certified Systems
  – Enforcement of technical guidance
  – 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd} party surveillance of work
  – Guarantee to create confidence in the technology
• Government policies to create demand and provide correct signals

(G. Miller 2012)
Belgian quality control framework since 2012

- National specifications and Guidelines
- Certification body
  - Certification of resource suppliers
  - Technical approval products
  - Certification and training of installers
- Declaration of conformity
- Database
Number of declarations of conformity 2012-2014

- Function of declaration of conformity
  - Confirms confidence in process quality
  - May be used by builder to retrieve utility subsidies
  - Product and project data may be used as input data in EPC
QUALICHeCK field study 26 houses

Goal of the study: assess effectiveness of quality control framework for cavity wall insulation

- **Product family:**
  - Mineral wool (MW)
  - EPS-beads (EPS)
  - PUR

- **Conformity**
  - Conformity checked on site by certification body
    - Approved (C-A)
    - Not approved (C-NA)
  - Conformity not checked on site by certification body (NC)
Measured thermal performance

- Measured U-values better than calculated U-values in 20/24 cases
- No significant difference between measured U-values in 3 control groups
Main conclusions regarding quality of the works and thermal performance

• Belgian quality control framework for cavity wall insulation with central role for certification body
• Declaration of conformity as a key instrument to manage quality
• Study showed effectiveness of quality control framework for thermal performance:
  – Measured U-values better than calculated U-values in 20/24 cases (83%)
  – No significant difference between measured U-values in 3 control groups, so correct installation is maintained also in projects without conformity check, or in projects with non-conformities
    • Non-conformities mainly related to procedural matters