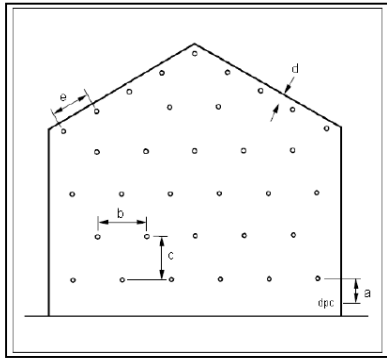


2nd QUALICHeCK Conference

Status on the ground regarding quality of the works



Experiences with quality frameworks for cavity wall insulation of existing walls

Arnold Janssens,

Research Group Building Physics

Faculty of Engineering and Architecture

Ghent University (UGent)

Installing insulation in existing cavity walls

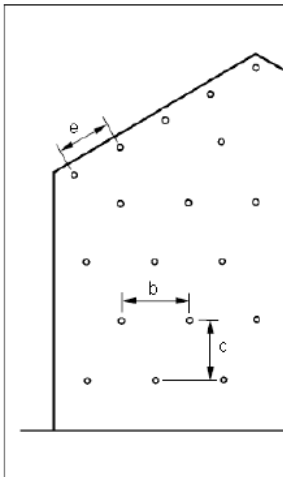
1. Inspection



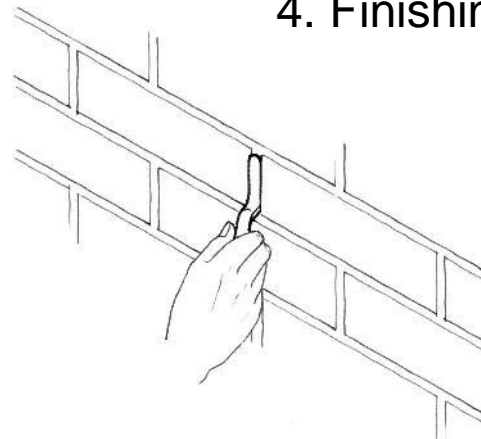
3. Installation



2. Preparation

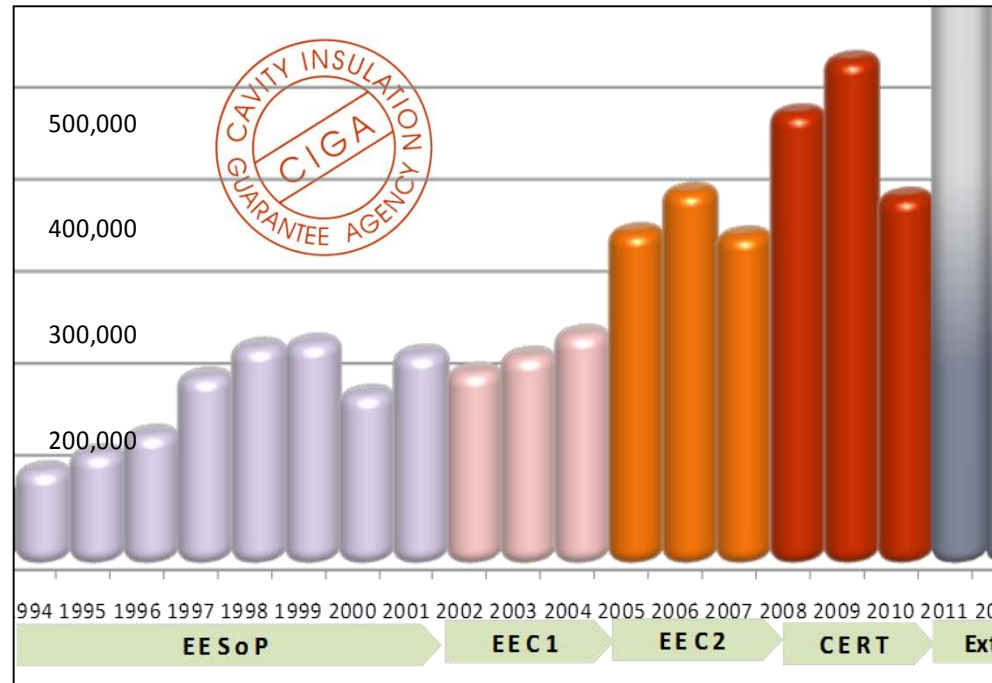


4. Finishing



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
 - 1st, 2nd and 3rd 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



Database



ATG



Certification of resource suppliers

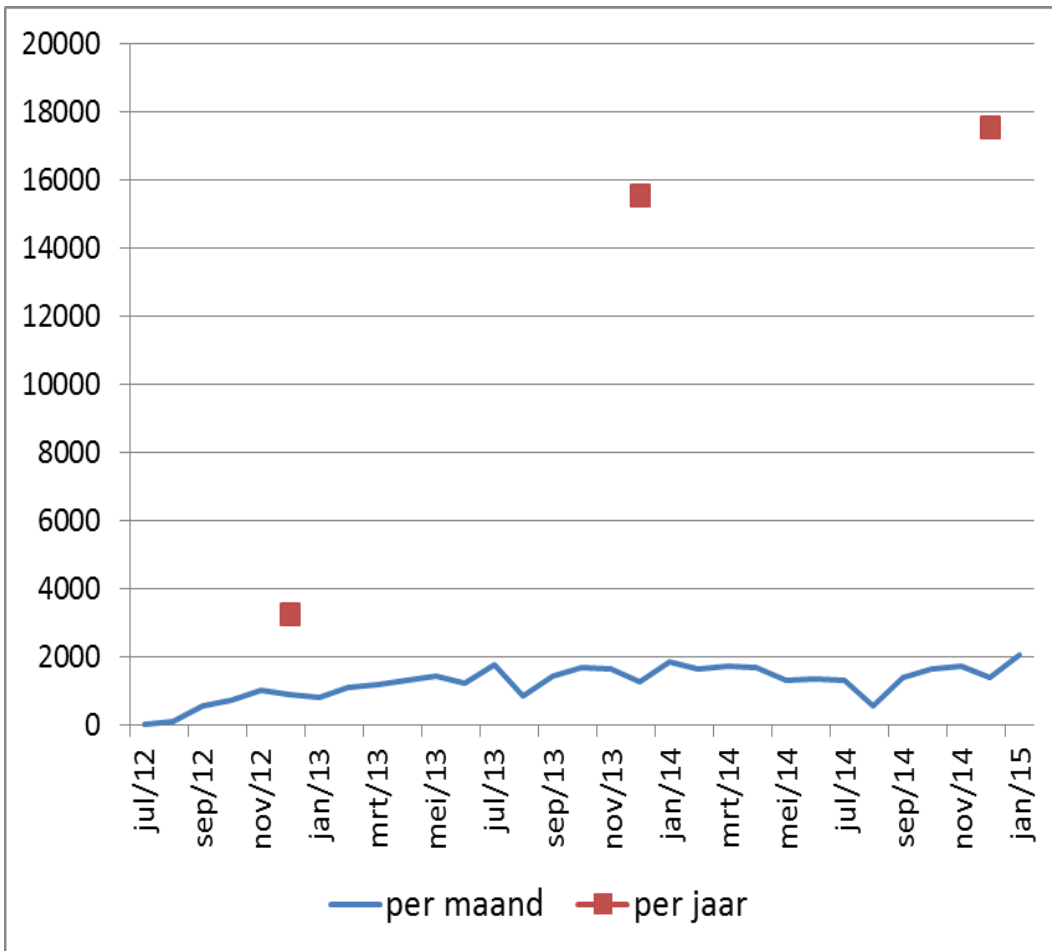


Certification and training of installers

Technical approval products



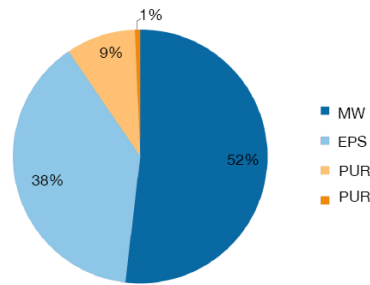
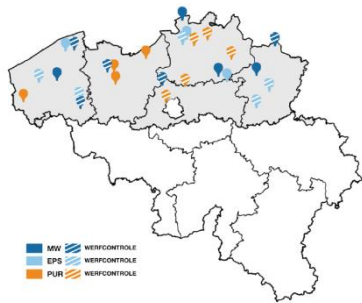
Number of declarations of conformity 2012-2014



- 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

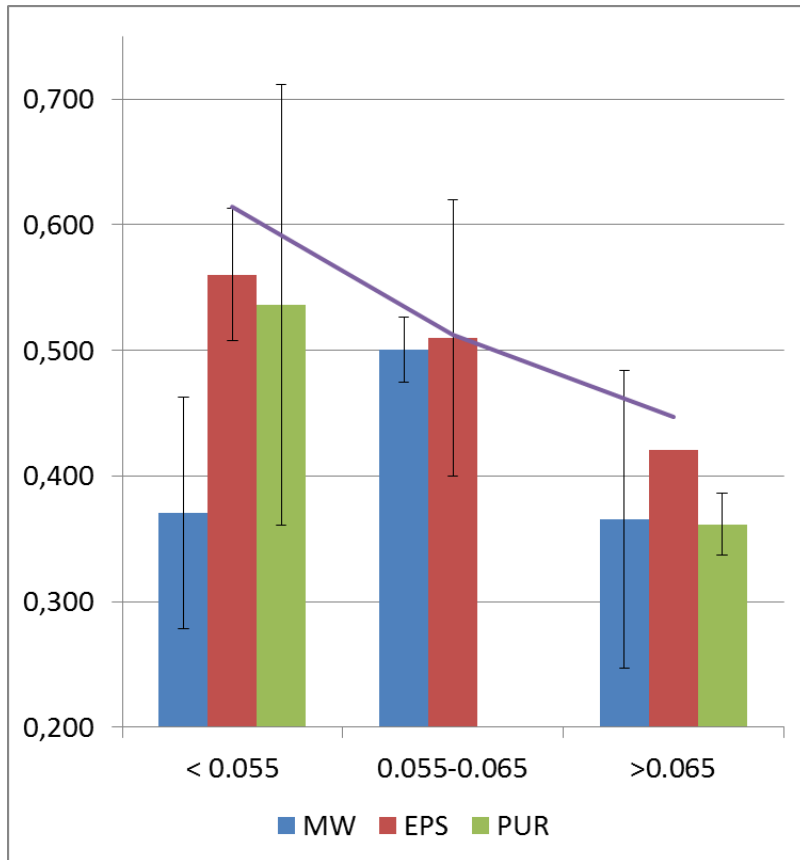
Goal of the study: assess effectiveness of quality control framework for cavity wall insulation



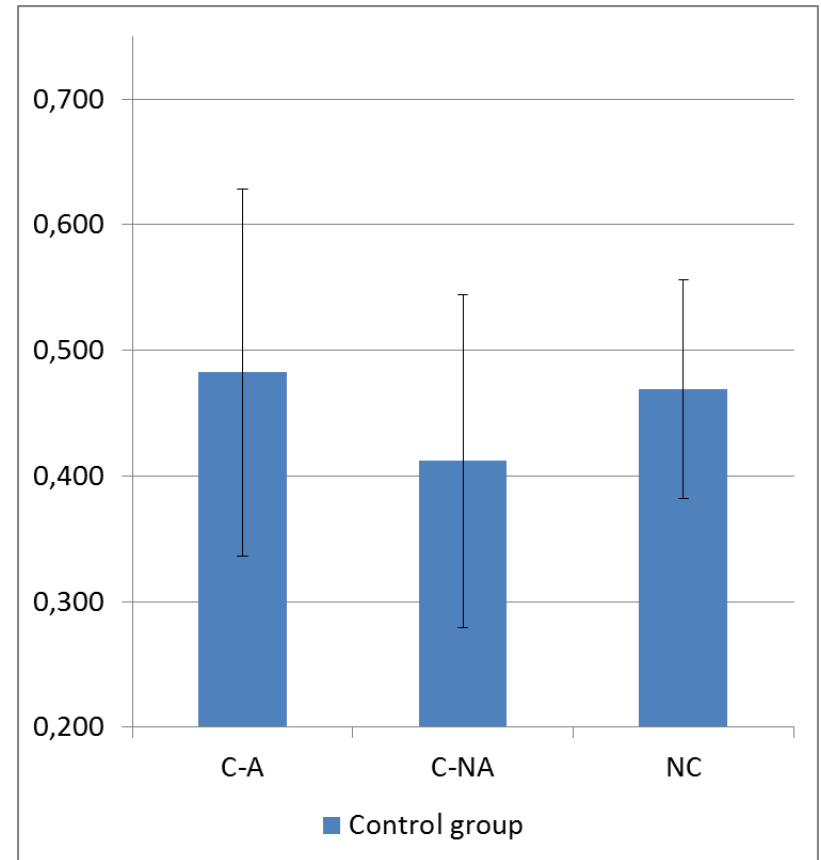
- Product family:
 - Mineral wool (MW)
 - EPS-beads (EPS)
 - PUR
- Conformity
 - Conformity checked on site by certification body
 - Approved (C-A)
 - Not approved (C-NA)
 - Conformity not checked on site by certification body (NC)

Product	C-A	C-NA	NC
MW	3	2	4
EPS	3	2	3
PUR	3	2	4

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



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