

Air Infiltration and Ventilation Centre

EBC ANNEX 5

Adequate ventilation provision is vital in providing acceptable indoor air quality (IAQ), but this also has a high energy cost. Given the challenges faced by many countries to contain the energy losses by ventilation and air infiltration while providing good indoor environmental quality, the EBC Executive Committee approved the continuation of the 'Air Infiltration and Ventilation Centre' (AIVC) for the period 2017 - 2021.

Inaugurated in 1979 with a focus on air infiltration losses, the goal of AIVC is now to provide reference information on ventilation and air infiltration in buildings, including energy and IAQ impacts of all ventilation strategies in new and existing buildings.

Objectives

The objectives of AIVC are to:

- identify emerging issues on ventilation and infiltration in new and renovated buildings;
- help better design, implement, hand-over and maintain ventilation systems;
- provide discussion platforms, including conferences, workshops and webinars.

Deliverables

- Events: Annual Conference, one to two workshops per year on specific topics and one to two webinars per year
- Publications: conference and workshop proceedings, technical notes and contributed reports (one per year), and a six-monthly newsletter

Progress

In 2017, the AIVC focused its work on six projects, the Annual Conference, and support for discussions and dissemination for the EBC R&D projects, 'Annex 62: Ventilative Cooling' (page 42) and 'Annex 68: Design and Operational Strategies for High IAQ in Low Energy Buildings' (page 30).

The six projects are entitled 'Indoor Air Quality Metrics', 'Rationale Behind Ventilation Requirements and Regulations', 'Utilization of Heat Recovery', 'Residential Cooker Hoods', 'Integrating Uncertainties Due to Wind and Stack Effect in Declared Airtightness Results' and 'Competent Tester Schemes for Building Airtightness Testing'.

A workshop was held in March 2017 to specifically address the IAQ Metrics project. The resulting publication, 'VIP 36 Metrics of Health Risks from Indoor Air', gives the key outcomes of discussions during the workshop. The workshop was firmly based on contributions of several experts, as well as on many structured discussions using a voting system with prepared multiple-choice questions to collect feedback from the audience. Regarding the rationale behind ventilation requirements, work has started with the collection of information from among the AIVC Board experts. It is anticipated this will result in a publication in the course of 2018.

The 38th AIVC Annual Conference was held in Nottingham, UK in September 2017. 185 people from 25 countries attended the conference. Several topical sessions related to AIVC projects were organized during this event, relating to:

- assessing how differences in space conditioning controls and set-points between rooms can affect the effectiveness of heat recovery systems;
- discussing challenges regarding cooker hoods, from performance characterization to practical implementation and actual use;
- quantifying how wind and stack effect can affect declared building airtightness indices, and how this could be taken into account in regulations.



The latest project publications published in 2017.
Source: EBC Annex 5

In 2017, AIVC collaborated with EBC Annexes 62 and 68 to co-produce two reports:

- VIP 35: Ventilative Cooling State-of-the-art Review Executive Summary
- CR 17: Indoor Air Quality Design and Control in Low-energy Residential Buildings – EBC Annex 68 Subtask 1: Defining the Metrics

Further, EBC Annexes 62 and 68 convened specific sessions during the Annual Conference to discuss their approach and findings with a wider audience. Regarding the AIVC project “Competent tester schemes for building airtightness testing”, AIVC has pursued its efforts on the quality of building airtightness measurements in collaboration with TightVent, which is an information platform aiming at raising awareness on the building and ductwork airtightness.

Meetings

The AIVC Board met twice in 2017:

- Brussels, Belgium, in March 2017, and
- Nottingham, UK, in September 2017.

AIVC Newsletter

- March 2017
- September 2017

Project duration

1979–2021

Operating Agent

Peter Wouters, INIVE eeig, Belgium

Participating countries

Belgium, Denmark, France, Italy, Japan, R. Korea, the Netherlands, New Zealand, Norway, Spain, Sweden, UK, USA

Further information and reports

www.iea-ebc.org



www.aivc.org