International Energy Agency

Building & Ductwork Airtightness

AIVC Literature List 35

2020 edition

Energy in Buildings and Communities Programme

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Editors

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Preface

The International Energy Agency

The International Energy Agency (IEA) was established in 1974 within the framework of the Organisation for Economic Co-operation and Development (OECD) to implement an international energy programme. A basic aim of the IEA is to foster international co-operation among the 29 IEA participating countries and to increase energy security through energy research, development and demonstration in the fields of technologies for energy efficiency and renewable energy sources.

The IEA Energy in Buildings and Communities Programme

The IEA co-ordinates international energy research and development (R&D) activities through a comprehensive portfolio of Technology Collaboration Programmes. The mission of the Energy in Buildings and Communities (EBC) Programme is to develop and facilitate the integration of technologies and processes for energy efficiency and conservation into healthy, low emission, and sustainable buildings and communities, through innovation and research. (Until March 2013, the IEA-EBC Programme was known as the Energy in Buildings and Community Systems Programme, ECBCS.)

The research and development strategies of the IEA-EBC Programme are derived from research drivers, national programmes within IEA countries, and the IEA Future Buildings Forum Think Tank Workshops. The research and development (R&D) strategies of IEA-EBC aim to exploit technological opportunities to save energy in the buildings sector, and to remove technical obstacles to market penetration of new energy efficient technologies. The R&D strategies apply to residential, commercial, office buildings and community systems, and will impact the building industry in five focus areas for R&D activities:

- Integrated planning and building design
- Building energy systems
- Building envelope
- Community scale methods
- Real building energy use

The Executive Committee

Overall control of the IEA-EBC Programme is maintained by an Executive Committee, which not only monitors existing projects, but also identifies new strategic areas in which collaborative efforts may be beneficial. As the Programme is based on a contract with the IEA, the projects are legally established as Annexes to the IEA-EBC Implementing Agreement. At the present time, the following projects have been initiated by the IEA-EBC Executive Committee, with completed projects identified by (*):

Annex 1: Load Energy Determination of Buildings (*)
Annex 2: Ekistics and Advanced Community Energy Systems (*)
Annex 3: Energy Conservation in Residential Buildings (*)
Annex 4: Glasgow Commercial Building Monitoring (*)
Annex 5: Air Infiltration and Ventilation Centre
Annex 6: Energy Systems and Design of Communities (*)
Annex 7: Local Government Energy Planning (*)
Annex 8: Inhabitants Behaviour with Regard to Ventilation (*)
Annex 9: Minimum Ventilation Rates (*)
Annex 10: Building HVAC System Simulation (*)
Annex 11: Energy Auditing (*)
Annex 12: Windows and Fenestration (*)
Annex 13: Energy Management in Hospitals (*)
Annex 14: Condensation and Energy (*)
Annex 15: Energy Efficiency in Schools (*)

Annex 16: BEMS 1- User Interfaces and System Integration (*)
Annex 17: BEMS 2- Evaluation and Emulation Techniques (*)
Annex 18: Demand Controlled Ventilation Systems (*)
Annex 19: Low Slope Roof Systems (*)
Annex 20: Air Flow Patterns within Buildings (*)
Annex 21: Thermal Modelling (*)
Annex 22: Energy Efficient Communities (*)
Annex 23: Multi Zone Air Flow Modelling (COMIS) (*)
Annex 24: Heat, Air and Moisture Transfer in Envelopes (*)
Annex 25: Real time HVAC Simulation (*)
Annex 26: Energy Efficient Ventilation of Large Enclosures (*)
Annex 27: Evaluation and Demonstration of Domestic Ventilation Systems (*)
Annex 28: Low Energy Cooling Systems (*)
Annex 29: Daylight in Buildings (*)
Annex 30: Bringing Simulation to Application (*)
Annex 31: Energy-Related Environmental Impact of Buildings (*)
Annex 32: Integral Building Envelope Performance Assessment (*)
Annex 33: Advanced Local Energy Planning (*)
Annex 34: Computer-Aided Evaluation of HVAC System Performance (*)
Annex 35: Design of Energy Efficient Hybrid Ventilation (HYBVENT) (*)
Annex 36: Retrofitting of Educational Buildings (*)
Annex 37: Low Exergy Systems for Heating and Cooling of Buildings (LowEx) (*)
Annex 38: Solar Sustainable Housing (*)
Annex 39: High Performance Insulation Systems (*)
Annex 40: Building Commissioning to Improve Energy Performance (*)
Annex 41: Whole Building Heat, Air and Moisture Response (MOIST-ENG) (*)
Annex 42: The Simulation of Building-Integrated Fuel Cell and Other Cogeneration Systems (FC+COGEN-SIM) (*)
Annex 43: Testing and Validation of Building Energy Simulation Tools (*)
Annex 44: Integrating Environmentally Responsive Elements in Buildings (*)
Annex 45: Energy Efficient Electric Lighting for Buildings (*)
Annex 46: Holistic Assessment Tool-kit on Energy Efficient Retrofit Measures for Government Buildings (EnERGo) (*)
Annex 47: Cost-Effective Commissioning for Existing and Low Energy Buildings (*)
Annex 48: Heat Pumping and Reversible Air Conditioning (*)
Annex 49: Low Exergy Systems for High Performance Buildings and Communities (*)
Annex 50: Prefabricated Systems for Low Energy Renovation of Residential Buildings (*)
Annex 51: Energy Efficient Communities (*)
Annex 52: Towards Net Zero Energy Solar Buildings (*)
Annex 53: Total Energy Use in Buildings: Analysis & Evaluation Methods (*)
Annex 54: Integration of Micro-Generation & Related Energy Technologies in Buildings (*)
Annex 55: Reliability of Energy Efficient Building Retrofitting - Probability Assessment of Performance & Cost (RAP-RETRO) (*)
Annex 56: Cost Effective Energy & CO2 Emissions Optimization in Building Renovation
Annex 57: Evaluation of Embodied Energy & CO2 Equivalent Emissions for Building Construction
Annex 58: Reliable Building Energy Performance Characterisation Based on Full Scale Dynamic Measurements (*)
Annex 59: High Temperature Cooling & Low Temperature Heating in Buildings (*)
Annex 60: New Generation Computational Tools for Building & Community Energy Systems (*)
Annex 61: Business and Technical Concepts for Deep Energy Retrofit of Public Buildings (*)
Annex 62: Ventilative Cooling (*)
Annex 63: Implementation of Energy Strategies in Communities (*)
Annex 64: LowEx Communities - Optimised Performance of Energy Supply Systems with Exergy Principles (*)
Annex 65: Long-Term Performance of Super-Insulating Materials in Building Components and Systems (*)
Annex 66: Definition and Simulation of Occupant Behavior in Buildings (*)
Annex 67: Energy Flexible Buildings
Annex 68: Indoor Air Quality Design and Control in Low Energy Residential Buildings

Annex 69: Strategy and Practice of Adaptive Thermal Comfort in Low Energy Buildings
Annex 70: Energy Epidemiology: Analysis of Real Building Energy Use at Scale
Annex 71: Building Energy Performance Assessment Based on In-situ Measurements
Annex 72: Assessing Life Cycle Related Environmental Impacts Caused by Buildings
Annex 73: Towards Net Zero Energy Public Resilient Communities
Annex 74: Competition and Living Lab Platform
Annex 75: Cost-effective Building Renovation at District Level Combining Energy Efficiency & Renewables
Annex 76: EBC Annex 76 / SHC Task 59 Deep Renovation of Historic Buildings Towards Lowest Possible Energy Demand and CO2 Emissions
Annex 77: EBC Annex 77 / SHC Task 61 Integrated Solutions for Daylight and Electric Lighting
Annex 78: Supplementing Ventilation with Gas-phase Air Cleaning, Implementation and Energy Implications
Annex 79: Occupant-Centric Building Design and Operation
Annex 80: Resilient Cooling
Annex 81: Data-Driven Smart Buildings
Annex 82: Energy Flexible Buildings Towards Resilient Low Carbon Energy Systems
Annex 83: Positive Energy Districts

Working Group - Energy Efficiency in Educational Buildings (*)
Working Group - Indicators of Energy Efficiency in Cold Climate Buildings (*)
Working Group - Annex 36 Extension: The Energy Concept Adviser (*)
Working Group - Survey on HVAC Energy Calculation Methodologies for Non-residential Buildings
Working Group - Building Energy Codes
Working Group - HVAC Energy Calculation Methodologies for Non-residential Buildings
Working Group - Cities and Communities

Context

General Context

AIVC Literature List 35 is linked to the topics of “building & ductwork airtightness”. The document is split into 3 main chapters including:

1. papers & slides presented at AIVC & TightVent Europe annual conferences and publications produced in collaboration with AIVC & TightVent Europe,
2. slides presented at workshops organized with the collaboration of AIVC, TightVent Europe & the QUALICHeCK platform, and
3. recordings from webinars organized with the collaboration AIVC, TightVent Europe & the QUALICHeCK platform.

Interaction with the TightVent platform

The TightVent Europe “Building and Ductwork Airtightness Platform” (www.tightvent.eu) was launched in January 2011. It aims at facilitating exchanges and progress on building and ductwork airtightness issues, including the production and dissemination of policy-oriented reference documents and the organization of conferences, workshops, webinars, etc. The target audience of the TightVent Europe activities ranges from the research community over designers, practitioners, supply industry to European, national and regional government policy makers. It includes policy makers, training centres, designers, engineers and builders, air leakage testers, local and national airtightness associations, research and technical centres.

Since 2011, TightVent Europe holds a joint annual conference together with the Air Infiltration and Ventilation Centre in September/October in one of the AIVC participating countries, with a track devoted to building and ductwork airtightness. Besides the publications and conferences TightVent Europe key activities include the organization of workshops and webinars. Some of the webinars are targeted at a specific region, some at the specific topic (e.g., sharing national experience on air leakage databases), some at training and some at industry.

Interaction with the QUALICHeCK platform

The challenges to implement Nearly Zero-Energy Buildings and achieving minimum shares of Renewable Energy are tremendous. There are various indications raising concerns regarding the **reliability of Energy Performance Certificates** and the **quality of the works**. Achieving a significant improvement requires strong commitment from authorities and other major players, as well as sufficiently broad societal support.

The QUALICHeCK Project responded to these challenges by:

- identifying issues in respect to existing procedures;
- highlighting best practices for easy access to reliable EPC input data, delivery of improved quality of the works, as well as more **effective compliance frameworks** (“lead people to do what they declare”);
- raising awareness and engaging relevant stakeholders.

9 countries were involved in the study: Austria, Belgium, Cyprus, Estonia, France, Greece, Romania, Spain and Sweden

There was a focus on 4 technology areas, of which Ventilation and airtightness was one.

For further information, see www.qualicheck-platform.eu.

Table of Contents

Papers & reports

This chapter includes a table (Table 1) listing titles and hyperlinks to 184 papers presented at AIVC - TightVent annual conferences and publications produced by the AIVC & TightVent. Where available, a link to the PowerPoint (PPT) presentation is provided.

Note: Hyperlinks in column "PowerPoint" of Table 1, redirect to the full pdf of the slides presented at the AIVC & TightVent joint conferences since 2012 (listed below with abbreviations); page numbers mentioned within Table 1 helps you locate each presentation within the specific documents:

- **33AIVC** | Slides of the 33rd AIVC – 2nd TightVent Conference "Optimising Ventilative Cooling and Airtightness for [Nearly] Zero-Energy Buildings, IAQ and Comfort", 10-11 October 2012, Copenhagen, Denmark
- **34AIVCa**, **34AIVCb** | Slides of the 34th AIVC – 3rd TightVent – 2nd Cool Roofs' – 1st venticool Conference "Energy conservation technologies for mitigation and adaptation in the built environment: the role of ventilation strategies and smart materials", 25-26 September 2013, Athens, Greece
- **35AIVC** | Slides of the 35th AIVC – 4th TightVent – 2nd venticool Conference "Ventilation and airtightness in transforming the building stock to high performance", 24-25 September 2014, Poznań, Poland
- **36AIVC** | Slides of the 36th AIVC – 5th TightVent – 3rd venticool Conference "Effective ventilation in high performance buildings", 23-24 September 2015, Madrid, Spain
- **38AIVC** | Slides of the 38th AIVC – 6th TightVent – 4th venticool Conference "Ventilating healthy low-energy buildings", 13-14 September 2017, Nottingham, UK
- **39AIVC** | Slides of the 39th AIVC – 7th TightVent – 5th venticool Conference "Smart Ventilation for Buildings", 18-19 September 2018, Antibes Juan-Les-Pins, France
- **40AIVC** | Slides of the 40th AIVC – 8th TightVent – 6th venticool Conference "From energy crisis to sustainable indoor climate - 40 years of AIVC", 15-16 October 2019, Ghent, Belgium

Table 1

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
1.	Applicability of a simple and new airtightness measuring method and further comparisons with blower door measurements	Timothy Lanooy, Niek-Jan Bink, Wim Kornaat, Wouter Borsboom	p.154- 160 **40AIVC**	2019
2.	Refined assessment and comparison of airtightness measurement of indoor chambers using the blower door and Pulse methods	Xiaofeng Zheng, Luke Smith, Adam Moring, Christopher J Wood	p.161- 169 **40AIVC**	2019
3.	Evaluation of indoor pressure distributions in a detached house using the Pulse airtightness measurement technique	Yun-Sheng Hsu, Xiaofeng Zheng, Edward Cooper, Mark Gillott, Shin-Ku Lee, Christopher J Wood	p.170- 179 **40AIVC**	2019
4.	Insights into the impact of wind on the Pulse airtightness test in a UK dwelling	Yun-Sheng Hsu, Xiaofeng Zheng, Dimitrios Kraniotis, Mark Gillott, Shin-Ku Lee, Christopher J Wood	p.180- 189 **40AIVC**	2019
5.	Estimation of Air Leakage Sizes in Building Envelope using High-Frequency Acoustic Impulse Response Technique	Benedikt Kölsch, Björn Schiricke, Jacob Estevam Schmiedt, Bernhard Hoffschmidt	p.190- 198 **40AIVC**	2019
6.	Deviation of blower-door fans over years through the analysis of fan calibration certificates	Valérie Leprince, Christophe Delmotte, Isabelle Caré	p.199- 209 **40AIVC**	2019
7.	Impact of ductwork leakage on the fan energy use and sound production of central mechanical ventilation units in houses	Valérie Leprince, Marcus Lightfoot, Jelmer de Jong	p.403- 408 **40AIVC**	2019
8.	Airtightness and energy impact of air infiltration in residential buildings in Spain	Irene Poza-Casado, Alberto Meiss, Miguel Ángel Padilla-Marcos, Jesús Feijó-Muñoz	p.538- 540 **40AIVC**	2019
9.	Exist'air: airtightness measurement campaign and ventilation evaluation in 117 pre-2005 French dwellings	Sylvain Berthault, Lucille Labat, Cédric Delahais, Elodie Héberlé, Sabrina Talon	p.541- 543 **40AIVC**	2019
10.	New findings on measurements of very airtight buildings and apartments	Stefanie Rolfsmeier	p.544- 548 **40AIVC**	2019

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
11.	Comparison between infiltration rate predictions using the divide-by-20 rule of thumb and real measurements	Alan Vega Pasos, Xiaofeng Zheng, Mark Gillott, Christopher J. Wood	p.549- 555 **40AIVC**	2019
12.	On the experimental validation of the infiltration model DOMVENT3D	Alan Vega Pasos, Xiaofeng Zheng, Benjamin Jones, Mark Gillott, Christopher J. Wood	p.556- 561 **40AIVC**	2019
13.	How Accurate is our Leakage Extrapolation? Modeling Building Leakage Using the Darcy-Weisbach Equation	Steven Rogers	p.562- 563 **40AIVC**	2019
14.	Airtightness and non-uniformity of ventilation rates in a naturally ventilated building with trickle vents	Jessica Few, David Allinson, Clifford Elwell	p.589- 591 **40AIVC**	2019
15.	Influence of the external pressure tap position on the airtightness test result	Jiří Novák	p.708- 717 **40AIVC**	2019
16.	Airtightness of buildings – Considerations regarding place and nature of pressure taps	Christophe Delmotte	p.718- 726 **40AIVC**	2019
17.	Quantification of uncertainty in zero-flow pressure approximation	Martin Prignon, Arnaud Dawans, Geoffrey van Moeseke	p.727- 733 **40AIVC**	2019
18.	Designing a model-scale experiment to evaluate the impact of steady wind on building air leakage measurements	Adeline Bailly Mélois, Anh Dung Tran, Mohamed El Mankibi, François Rémi Carrié, Bassam Moujalled,Gaëlle Guyot	p.734- 743 **40AIVC**	2019
19.	CFD modelling of fan pressurization method in buildings – The impact of dynamic wind on airtightness tests	Dimitrios Kraniotis, Arnab Chaudhuri	p.744- 755 **40AIVC**	2019
20.	Assessment of long-term and mid-term building airtightness durability: field study of 61 French low energy single-family dwellings	Bassam Moujalled, Sylvain Berthault, Andrés Litvak, Valérie Leprince, Gilles Frances	p.832- 844 **40AIVC**	2019
21.	Assessment of the durability of airtightness products in laboratory controlled conditions: development and presentation of the experimental protocol.	Andrés Litvak, Fabien Allègre, Bassam Moujalled, Valérie Leprince	p.845- 856 **40AIVC**	2019
22.	Moisture impact on dimensional changes and air leakage in wooden buildings	Paula Wahlgren, Fredrik Domhagen	p.857- 864 **40AIVC**	2019

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
23.	Techniques to Estimate Commercial Building Infiltration Rates	Andrew Persily, Lisa Ng, W. Stuart Dols, Steven Emmerich	p.952- 955 **40AIVC**	2019
24.	Reliability of ductwork airtightness measurement: impact of pressure drop and leakage repartition on the test result	Sylvain Berthault, Valérie Leprince	p.944- 951 **40AIVC**	2019
25.	Influence of multizone airleakage on IAQ performance in residential buildings	Gaëlle Guyot, Hugo Geoffroy, Michel Ondarts, Evelyne Gonze, Monika Woloszyn	p.903- 910 **39AIVC**	2018
26.	Experimental study on the measurement of Building Infiltration and Air Leakage rates (at 4 and 50 Pa) by means of Tracer Gas methods, Blower Door and the novel Pulse technique in a Detached UK Home	Alan Vega Pasos, Xiaofeng Zheng, Vasileios Sougkakis, Mark Gillott, Johann Meulemans, Olivier Samin, Florent Alzetto, Luke Smith, Stephen Jackson, Christopher J Wood	p.880- 885 **39AIVC**	2018
27.	Comparison of experimental methodologies to estimate the air infiltration rate in a residential case study for calibration purposes	Paolo Taddeo, Joana Ortiz, Jaume Salom, Eva Lucas Segarra, Vicente Gutiérrez González, German Ramos Ruiz, Carlos Fernández Bandera	p.877- 879 **39AIVC**	2018
28.	A new method to measure building airtightness	Timothy Lanooy, Wim Kornaat, Niek-Jan Bink, Wouter Borsboom	p.874- 876 **39AIVC**	2018
29.	Airtightness measurement of large buildings by using multi-zonal techniques: a case study	Lucille Labat, Sylvain Berthault	p.871- 873 **39AIVC**	2018
30.	An extended pressure range comparison of the blower door and novel pulse method for measuring the airtightness of two outdoor chambers with different levels of airtightness	Christopher Wood, Xiaofeng Zheng, Alan Vega Pasos, Yun-Sheng Hsu, Luke Smith	p.852- 859 **39AIVC**	2018
31.	Individual unit and guard-zone air tightness tests of apartment buildings	Angela Rohr, Andreas Kaschuba-Holtgrave, Stefanie Rolfsmeier, Oliver Solcher	p.841- 851 **39AIVC**	2018
32.	Ductwork noise calculations: main outputs of AcouReVe project	François Bessac, Catherine Guigou-Carter, Simon Bailhache, Camille Lefebvre	p.480- 482 **39AIVC**	2018

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
33.	Ductwork design flaws and poor airtightness: a case study about a ventilation system reconditioning in a sealed building	Fabrice Richieri, Bassam Moujalled, Sandrine Charrier, Adeline Mollard, François Araque	p.477- 479 **39AIVC**	2018
34.	Noise Radiated by Circular Ventilation Ducts	François Bessac	p.454- 463 **39AIVC**	2018
35.	Numerical and experimental identification of factors influencing the pressure homogeneity during an airtightness test in a large building	Loubna Qabbal, Lucille Labat, Hassane Naji, Zohir Younsi, Sabrina Talon	p.395- 397 **39AIVC**	2018
36.	Uncertainties in airtightness measurements: regression methods and pressure sequences	Martin Prignon, Arnaud Dawans, Geoffrey van Moeseke	p.390- 394 **39AIVC**	2018
37.	Experimental Investigation of the Impact of Environmental Conditions on the Measurement of Building Infiltration, and its correlation with Airtightness	Alan Vega Pasos, Xiaofeng Zheng, Vasileios Sougkakis, Mark Gillott, Johann Meulemans, Olivier Samin, Florent Alzetto, Luke Smith, Stephen Jackson, Christopher J Wood	p.376- 389 **39AIVC**	2018
38.	Experimental study of enclosure airtightness of an outdoor chamber using the pulse technique and blower door method under various leakage and wind conditions	Xiaofeng Zheng, Joe Mazzon, Ian Wallis, Christopher J Wood	p.366- 375 **39AIVC**	2018
39.	Wind speed in building airtightness test protocols: a review	Adeline Bailly Mélois, François Rémi Carrié, Mohamed El Mankibi, Bassam Moujalled	p.359- 365 **39AIVC**	2018
40.	The new air tightness class in ductwork - Aeroseal technology to seal leakages in new/retrofit ductwork and duct components - the foundation for highest energy efficiency in ventilation systems	Jörg Mez	p.245- 256 **39AIVC**	2018
41.	Ventilation Ductwork Systems Certification for a Better Air Tightness	Marie-Clémence Briffaud	p.237- 244 **39AIVC**	2018
42.	Statistical analysis of about 1,300 ductwork airtightness measurements in new French buildings: impacts of the type of ducts and ventilation systems	Bassam Moujalled, Valerie Leprince, Adeline Mélois	p.229- 236 **39AIVC**	2018

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
43.	Ductwork Airtightness in the UK: Requirements and Assessment of Installed Performance	Marcus Lightfoot	p.224- 228 **39AIVC**	2018
44.	Duct leakage testing in Portugal, a consulting engineer view and experience	Carlos Pires Eurico Lisboa	p.216- 223 **39AIVC**	2018
45.	In-situ and laboratory airtightness tests of structural insulated panels (SIPs) assemblies	Vitor E.M. Cardoso, Nuno M.M. Ramos, Ricardo M.S.F. Almeida, Pedro F. Pereira, Manuela Almeida, Rui Sousa	p.130- 132 **39AIVC**	2018
46.	Onsite evaluation of building airtightness durability: Long- term and mid-term field measurement study of 61 French low energy single family dwellings	Bassam Moujalled, Sylvain Berthault, Andrés Litvak, Valerie Leprince, Damien Louet, Gilles Frances, Julien Chèdru	p.121- 129 **39AIVC**	2018
47.	Assessment of durability of airtightness by means of repeated testing of 4 passive houses	Jiří Novák	p.111- 120 **39AIVC**	2018
48.	Preliminary analysis results of Spanish residential air leakage database	Irene Poza-Casado, Alberto Meiss, Miguel Ángel Padilla-Marcos, Jesús Feijó-Muñoz	p.104- 110 **39AIVC**	2018
49.	French database of building airtightness, statistical analyses of about 215,000 measurements: impacts of buildings characteristics and seasonal variations	Bassam Moujalled, Valerie Leprince, Adeline Bailly Mélois	p.96- 103 **39AIVC**	2018
50.	Quality framework for airtightness testing in the Flemish Region of Belgium – feedback after three years of experience	Maarten De Strycker, Liesje Van Gelder, Valérie Leprince	p.87- 95 **39AIVC**	2018
51.	On the contribution of steady wind to uncertainties in building pressurisation tests	Valérie Leprince, François Rémi Carrié	p.626- 636 **38AIVC**	2017
52.	Airtightness of Buildings – Considerations regarding the Zero-Flow Pressure and the Weighted Line of Organic Correlation	Christophe Delmotte	p.653- 665 **38AIVC**	2017
53.	Impact of airtightness on the heat demand of passive houses in central European climate	Aleš Vlk, Jiří Novák	p.436- 438 **38AIVC**	2017

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
54.	A comparison study of the blower door and novel pulse technique on measuring enclosure airtightness in a controlled environment	Xiaofeng Zheng, Edward Cooper, Joe Mazzon, Ian Wallis, Christopher J Wood	p.226- 232 **38AIVC**	2017
55.	The effect of refurbishment and trickle vents on airtightness: the case of a 1930s semi-detached house	Ben Roberts, David Allinson, Kevin Lomas, Stephen Porritt	p.433- 435 **38AIVC**	2017
56.	Air leakage variations due to changes in moisture content in wooden construction - magnitudes and consequences	Fredrik Domhagen, Paula Wahlgren	p.207- 214 **38AIVC**	2017
57.	Component leakage: potential improvement graphs and classification of airpaths	Martin Prignon, Felipe Ossio, Manon Brancart, Arnaud Dawans, Geoffrey van Moeseke	p.430- 432 **38AIVC**	2017
58.	About 1,000 ductwork airtightness measurements performed in new French buildings: database creation and first analyses	Adeline Bailly Mélois, Bassam Moujalled	p.387- 393 **38AIVC**	2017
59.	Air leakage of defects in the vapour barrier of compact roofs	Lars Gullbrekken, Petra Rüther, Tore Kvande	p.202- 206 **38AIVC**	2017
60.	On the design and testing of Airtightness Modifier dedicated to the TIPEE IEQ House	Maxime Paquet, Marcelli Martin, Aline Bachelet, Ekaterina Obukhova, Emma Calamote, Florian Lae, Jérôme Nicolle, Marc Abadie	p.428- 432 **38AIVC**	2017
61.	Building and ductwork airtightness requirements in Europe – Comparison of 10 European countries	Valérie Leprince, François Rémi Carrié, Maria Kapsalaki	p.242- 256 **38AIVC**	2017
62.	Impact of ductwork airtightness on fan energy use: calculation model and test case	Valérie Leprince, François Rémi Carrié	p.394- 406 **38AIVC**	2017
63.	Methodology for the characterization of the envelope airtightness of the existing housing stock in Spain	Irene Poza-Casado, Alberto Meiss, Miguel Ángel Padilla-Marcos, Jesús Feijó-Muñoz	p.425- 427 **38AIVC**	2017
64.	Long-time durability of passive house building airtightness	Søren Peper, Oliver Kah, Wolfgang Feist	p.78- 84 **38AIVC**	2017
65.	Durability of building airtightness, review and analysis of existing studies	Valerie Leprince, Bassam Moujalled, Andrés Litvak	p.61- 77 **38AIVC**	2017

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
66.	Statistics, analysis and conclusions from 250,000 blower door tests, including ventilation types	Barry Cope	p.215- 225 **38AIVC**	2017
67.	Reducing Uncertainty in Air Tightness Measurements	Iain Walker	p.617- 625 **38AIVC**	2017
68.	The industries vision and activities for better buildings in the future	Lars-Åke Mattsson, Kirk Bracey	p.377- 386 **38AIVC**	2017
69.	The impact of wind gusts on air infiltration in buildings	Dimitrios Kraniotis	p.637- 652 **38AIVC**	2017
70.	Assessment of the durability of the airtightness of building elements via laboratory tests	Benoît Michaux, Clarisse Mees, Evelyne Nguyen, Xavier Loncour	p.85- 92 **38AIVC**	2017
71.	Natural Pressure Differential – Infiltration Through Wind. Results of a Long-Term Measurement	Oliver Solcher, Stefanie Rolfsmeier, Paul Simons	p.233- 241 **38AIVC**	2017
72.	Optimization of the airtightness and the flow rate of air in nearly zero energy buildings	Patrick Ampe, Anthony Tetaert, Leo Van Cauter, Hilde Witters		2015
73.	Airtight duct systems [a simple way of improving a building's energy efficiency without increased investment]	Toni Nicolas Salame, Rodrigo Sanz, Santiago Pascual	p.420-428 **36AIVC**	2015
74.	Numerical evaluation of the airtightness impact on airflow pattern in mechanically ventilated dwellings in France	F. Richieri, B. Moujalled, T. Salem, F.R. Carrié	p.686-693 **36AIVC**	2015
75.	Infiltration and Ventilation in a Very Tight, High Performance Home	Lisa Ng, Andrew Persily, Steven Emmerich	p.671-676 **36AIVC**	2015
76.	Characterization of sealants and expanding foams	Filip Van Mieghem	p.550-568 **36AIVC**	2015
77.	Building airtightness in Germany -what are the driving forces	Oliver Solcher	p.153-158 **36AIVC**	2015
78.	Laboratory investigation on the durability of taped joints in exterior air barrier applications	Jelle Langmans, Tadiwos Zerihun Desta, Lieven Alderweireldt, Staf Roels	p.569-579 **36AIVC**	2015
79.	Impact of air infiltration rates on moisture buffering effect of wooden surfaces	Dimitrios Kraniotis, Tormod Aurlien, Christoph Brückner, Kristine Nore	p.677-685 **36AIVC**	2015
80.	Airtightness Data and Characteristics of 752 Residential Units of Reinforced Concrete Buildings in Korea	Jae Hun Jo, Hyun kook Shin, Kyung Hwan Ji, Myoung Souk Yeo	p.168-180 **36AIVC**	2015

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
81.	Multivariant measurements of airtightness of multi-family building	Andrzej Górka, Radosław Górzeński, Michał Szymański, Karol Bandurski	p.823-836 **36AIVC**	2015
82.	rCloud - Capturing the moment, a new era in automated testing	Colin Genge	p.388-396 **36AIVC**	2015
83.	Uncertainty in airflow rate estimation of daytime ventilation associated with atmospheric stability	Jongyeon Lim, Ryozo Ooka, Hideki Kikumoto	p.397-409 **36AIVC**	2015
84.	Estimating the average air change rate for the heating season	László Fülöp, György Polics	p.429-431 **36AIVC**	2015
85.	Airtightness and indoor air quality in subsidised housing in Spain	Jessica Fernández-Agüera, Juan José Sendra, Rafael Suárez, Samuel Domínguez-Amarillo, Ignacio Oteiza	p.181-185 **36AIVC**	2015
86.	Analysis of results from ATTMA lodgement –what are the realistic air permeability characteristics of UK housing	Barry Cope	p.146-152 **36AIVC**	2015
87.	Field trialling of a new airtightness tester in a range of UK homes	Edward Cooper, Xiaofeng Zheng, Christopher Wood, Mark Gillot, David Tetlow, Saffa Riffat, Lia De Simon1	p.805-811 **36AIVC**	2015
88.	Calibrating measurement gauges – expense and findings	Paul Simons, Stefanie Rolfsmeier	p.812-822 **36AIVC**	2015
89.	Airtightness Quality Management Approaches in France: end and birth of a scheme. Previous and new schemes overview and analysis	Sandrine Charrier, Jocelyne Ponthieux	p.410-412 **36AIVC**	2015
90.	The zero pressure paradox	N.J. Bink, Peter Lok, W.V. Struik	p.417-419 **36AIVC**	2015
91.	Detailed numerical modelling of moist air flow through a complex airtightness defect	Clément Belleudy, Monika Woloszyn, Matthieu Cosnier	p.540-549 **36AIVC**	2015
92.	6 years of envelope airtightness measurements performed by French certified operators: analyses of about 65,000 tests	Adeline Bailly, Gaëlle Guyot, Valérie Leprince	p.159-167 **36AIVC**	2015
93.	Thermal envelope quality versus nZEB parameters and long-term economics: the Eco-Silver House case in Ljubljana	Miha Tomšič, Andraž Rakušček, Miha Mirtič, Luka Zupančič, Marjana Šijanec Zavrl	p.413-416 **36AIVC**	2015

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
94.	Tips for Improving Repeatability of Air Leakage Tests to EN and ISO Standards	Colin Genge	p.785-793 **35AIVC**	2014
95.	Model error due to steady wind in building pressurization tests	François Rémi Carrié, Valérie Leprince	p.147-156 **35AIVC**	2014
96.	Temperature and pressure corrections for power-law coefficients of airflow through ventilation system components and leaks	François Rémi Carrié	p.473-479 **35AIVC**	2014
97.	ACH and airtightness test results in the Croatian and Hungarian border region	László Fülöp, György Polics	p.354-359 **35AIVC**	2014
98.	Strategies for the planning and implementation of airtightness on existing sloped roofs	Wilfried Walther	p.584-603 **35AIVC**	2014
99.	Seasonal variation in airtightness	Paula Wahlgren	p.288-299 **35AIVC**	2014
100.	Predicting the optimum air permeability of a stock of detached English dwellings	Benjamin Jones, Robert Lowe	p.755-765 **35AIVC**	2014
101.	Measurement of infiltration rates from daily cycle of ambient CO2	João Dias Carrilho, Mário Mateus, Stuart Batterman, Manuel Gameiro da Silva	p.766-772 **35AIVC**	2014
102.	The impact of airtightness in the retrofitting practice of low temperature heating	Qian Wang, Sture Holmberg	p.773-779 **35AIVC**	2014
103.	Comparison of building preparation rules for airtightness testing in 11 European countries	Valérie Leprince, François-Rémi Carrié	p.117-129 **35AIVC**	2014
104.	Airtightness of building penetrations: air sealing solutions, durability effects and measurement uncertainty	Wolf Bracke, Nathan Van Den Bossche, Arnold Janssens	p.274-287 **35AIVC**	2014
105.	Ductwork airtightness: reliability of measurements and impact on ventilation flowrate and fan energy consumption	Sylvain Berthault, Florent Boithias, Valérie Leprince	p.711-720 **35AIVC**	2014
106.	Experiences in the airtightness of renovated tertiary exemplary buildings in the Brussels capital region	Bram De Meester, Thibaut Hermans, Hendrik-Jan Steeman	p.570-583 **35AIVC**	2014
107.	Assessment of the durability of the airtightness of building elements via laboratory tests	Benoît Michaux, Clarisse Mees, Evelyne Nguyen, Xavier Loncour	p.260-273 **35AIVC**	2014

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
108.	Belgian framework for reliable fan pressurization tests for buildings	Xavier Loncour, Christophe Delmotte, Clarisse Mees, Maarten De Strycker	p.130-136 **35AIVC**	2014
109.	The 10 steps to conceive and build airtight buildings	Clarisse Mees, Christophe Delmotte, Xavier Loncour, Yves Martin	p.351-353 **35AIVC**	2014
110.	Air leakages in a retrofitted building from 1930: measurements and numerical simulations	Pär Johansson, Angela Sasic Kalagasidis	p.553-565 **35AIVC**	2014
111.	Testing for building components contribution to airtightness assessment	Pedro F. Pereira, Ricardo M. S. F. Almeida, Nuno M. M. Ramos, Rui Sousa	p.480-492 **35AIVC**	2014
112.	Large buildings airtightness measurements using ventilation systems	Szymański Michał, Górka Andrzej, Górzeński Radosław	p.137-146 **35AIVC**	2014
113.	Durability of airtightness solutions for buildings	Peter Ylmén, Magnus Hansén and Jörgen Romild	p.252-259 **35AIVC**	2014
114.	A nozzle pulse pressurisation technique for measurement of building leakage at low pressure	Edward Cooper, Xiaofeng Zheng, Mark Gillot, Saffa Riffat, Yingqing Zu	p.780-784 **35AIVC**	2014
115.	PROMEVENT: Improvement of protocols measurements used to characterize ventilation systems performance	Adeline Bailly, Cedric Lentillon	p.387-392 **35AIVC**	2014
116.	Airtightness improvement of structures to improve indoor air quality	Katariina Laine	p.566-569 **35AIVC**	2014
117.	The energy impact of envelope leakage. The Chilean case	Ariel Bobadilla, Felipe Ossio, Rodrigo Figueroa, Alex González , Muriel Díaz, Roberto Arriagada		2014
118.	Durable airtightness in single-family dwellings: field measurements and analysis	Wanyu Rengie Chan, Max H. Sherman	p.244-251 **35AIVC**	2014
119.	Quality of Methods for Measuring Ventilation and Air Infiltration in Buildings	INIVE		2014
120.	Securing the quality of ventilation systems in residential buildings - Existing approaches in various countries.	A. Janssens , F.R. Carrié and F. Durier		2014

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
121.	Building and ductwork airtightness: Building and ductwork airtightness: A selection of papers from the proceedings of the 33rd AIVC – 2nd TightVent Conference, October 2012 Copenhagen	TightVent Europe		2013
122.	Building and ductwork airtightness: Selected papers from the REHVA special journal issue on 'airtightness'	TightVent Europe		2013
123.	Design, Implementation, Control and Durability: Feedback from Practice and Perspectives	AIVC-TightVent		2013
124.	Impact on IAQ of building material emitted pollutants through building leaks: State of the art and sample testing methodology	S. Juricic, C. Hung, F. Boithias	p.473-475 **34AIVCa**	2013
125.	Airtightness and ventilation of social housing in Ireland – A review of field measurements and occupant perspectives pre- and post-retrofit	D. Sinnott and M. Dyer	p.187-193 **34AIVCa**	2013
126.	Comparison of different airtightness and air exchange rate measurements in very small test building	S. Gendelis, A. Jakovičs, A. Nitijevskis and J. Ratnieks	p.483-487 **34AIVCa**	2013
127.	Airtightness of very large volume buildings: measuring Method and first results	F. Boithias, S. Berthault and S. Juricic	p.481-482 **34AIVCa**	2013
128.	Application of blower door measurements IN the evaluation of workmanship influence in airtightness	N. Ramos, V. P. de Freitas, P. F. Pereira, A. Curado and A. Machado	p.476-478 **34AIVCa**	2013
129.	Durability and measurement uncertainty of airtightness in extremely airtight dwellings	W. Bracke, J. Laverge, N. Van Den Boss and A. Janssens	p.457-464 **34AIVCa**	2013
130.	Airtightness of buildings - Calculation of combined standard uncertainty	C. Delmotte	p.465-472 **34AIVCa**	2013
131.	A stochastic approach to predict the relationship between dwelling permeability and infiltration in English appartments	B. Jones, Z. Chalabi, P. Das, M. Davies, I. Hamilton, R. Lowe, A. Mavrogianni, D. Robinson, C. Shrubsole and J. Taylor	p.200-212 **34AIVCa**	2013
132.	Preliminary analysis of French buildings airtightness database	A. Bailly, Y. Jiang, G. Guyot and F. Desfougères	p.194-199 **34AIVCa**	2013

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
133.	Control of airtightness quality management scheme in France: Results, lessons and future developments	S. Charrier, A. Huet and J. Biaunier	p.479-480 **34AIVCa**	2013
134.	Airtightness Quality Management scheme in France: Assessment after 5 years operation	S. Charrier, J. Ponthieux and A. Huet	p.187-193 **34AIVCa**	2013
135.	Achieving relevant and durable airtightness levels: status, options and progress needed	AIVC, TightVent		2012
136.	The relationship between permeability and infiltration in conjoined dwellings	Benjamin Jones, Payel Das, Zaid Chalabi, Michael Davies, Ian Hamilton, Robert Lowe, James Milner, Ian Ridley, Clive Shrubsole, and Paul Wilkinson	p.155-167 **33AIVC**	2012
137.	Effect of measurement location of air air-tightness performance on apartment units in Korea	Cheol-Woong Shin, Yun-Gyu Lee		2012
138.	Blower door tests of a group of identical flats in a new student accommodation in the arctic	Martin Kotol,Carsten Rode, Jan Vahala	p.145-154 **33AIVC**	2012
139.	A numerical study on the role of leakage distribution and internal leakages under unsteady wind conditions	Dimitrios Kraniotis, Tormod Aurlien, Thomas Kringlebotn Thiis	p.725-733 **33AIVC**	2012
140.	Update of the spanish regulation regarding ventilation and infiltration: analysis, comparisons and repercussions	Salmerón Lissén José Manuel, Sánchez de la Flor Francisco José, Álvarez Domínguez Servando, Molina Félix Jose Luis, and Macias Olga	p.241-244 **33AIVC**	2012
141.	Lessons learnt from the regulatory quality management scheme in France	Sarah Juricic, Sandrine Charrier, Florent Boithias and Joris Biaunier	p.437-441 **33AIVC**	2012
142.	Postulate for airtightness limits in large buildings	Paul Simons and Stefanie Rolfsmeier	p.453-456 **33AIVC**	2012
143.	Air leakage characteristics of dwellings in high-rise residential buildings in Korea	Yun Jeong Choe, Hyun Kook Shin, and Jan Hun Jo	p.443-444 **33AIVC**	2012
144.	Proposal for updating French regulation concerning airtightness measuring equipments' calibration	Florent Boithias, Sarah Juricic, Sylvain Berthault	p.359-369 **33AIVC**	2012

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
145.	Numerical evaluation of airtightness measurement protocols	Adeline Bailly, Valérie Leprince, Gaëlle Guyot, François Rémi Carrié, Mohamed El Mankibi	p.711-716 **33AIVC**	2012
146.	A survey of airtightness and ventilation rates in post 1994 NZ homes	S. McNeil, L. Quaglia, M. Bassett, G. Overton, M. Plagmann	p.699-710 **33AIVC**	2012
147.	Assessment of the airtightness and air exchange in polish dwellings – measurement experiences and problems met	Joanna Ferdyn-Grygierek, Andrzej Baranowski	p.445-446 **33AIVC**	2012
148.	Airtightness of office and educational buildings in Sweden – Measurements and analyses	Åke Blomsterberg, Stephen Burke	p.717-723 **33AIVC**	2012
149.	Influence of improvement of air-tightness on energy retrofit of social housing, a case study in a Mediterranean climate	Jesica Fernández-Agüera, Rafael Suárez, Per Heiselberg	p.139-143 **33AIVC**	2012
150.	French policy for shelter-in-place: Airtightness measurements on indoor rooms	Gaëlle Guyot, Daniel Limoges, François-Rémi Carrié	p.425-430 **33AIVC**	2012
151.	Lessons learned on ventilation systems from the IAQ calculations on tight energy performant buildings	Xavier Boulanger, Laure Mouradian, Charles Pele, Pierre Yves Pamart, Anne-Marie Bernard	p.129-138 **33AIVC**	2012
152.	Air leakage of US homes: Regression analysis and improvements from retrofit	Wanyu R. Chan, Jeffrey Joh, and Max H. Sherman	p.119-127 **33AIVC**	2012
153.	Airtightness and ventilation of new Estonian apartments constructed 2001-2010	Leena Paap, Alo Mikola, Teet-Andrus Kõiv, Targo Kalamees	p.533-540 **33AIVC**	2012
154.	Swedish experience with air tight testing: Overall scheme, test protocol and practical examples	Johnny Andersson	p.265-275 **33AIVC**	2012
155.	CR 14: Methods and techniques for airtight buildings	Carrié F.R., Jobert R., Leprince V.		2012
156.	TN 67: Building airtightness: a critical review of testing, reporting and quality schemes in 10 countries	Carrié F.R, Wouters P.		2012
157.	TN 66: Building air leakage databases in energy conservation policies: analysis of selected initiatives in 4 European countries and the USA	Chan W.R., Carrié F.R, Novák J., Litvak A., Richieri F., Solcher O., Pan W., Emmerich S.		2012
158.	Critical steps for a wide scale implementation of building and ductwork airtightness	TightVent Europe		2011

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
159.	Impacts of airtightening retrofits of ventilation and energy in a manufactured home	Andrew Persily, Steven Nabinger, and W. Stuart Dols		2011
160.	The influence of air permeability and type of underlay on the hygrothermal performance of an inclined roof	Paul Steskens, Filip Dobbels, Xavier Loncour, Gilles Flamant		2011
161.	Investigations on the effects of airtight performance improvement and energy consumption of insulation retrofit in detached houses	Hiroshi Yoshino, Kenichi Hasegawa, Shinichi Matsumoto, Hayato Hosobuchi, Akiharu Uchida, Takuya Ino		2011
162.	State of the Art of Non-Residential Buildings Air-tightness and Impact on the Energy Consumption	Valerie Leprince, Adeline Bailly, Rémi Carrié and Myriam Olivier		2011
163.	Shelter in place strategy: CONFINE, an airtightness level calculation tool to protect people against accidental toxic releases	Gaëlle Guyot, Olivier Gentilhomme, Rémi Carrié		2011
164.	Improvement of air tightness of communities	Markku Hienonen, Timo Kauppinen, Erkki Vähäsöyrinki		2011
165.	Evaluation of selection criteria of an air tightness measurement method for multifamily buildings	Bassam Moujalled, Fabrice Richieri, Rémi Carrié, and Andrés Litvak		2011
166.	Modernizing ISO, EN and ASTM air leakage standards	Colin Genge		2011
167.	Optimal air tightness levels of buildings	Willem de Gids		2011
168.	Performances of DAHT connected to building airtightness and indoor hygrothermal climate	Masy Gabrielle, Lebrun Jean, Gendebien Samuel, Nicolas Hansen, Marc Lengele, and Luc Prieels		2011
169.	Pressure distribution in large buildings during airtightness tests	Stefanie Rolfsmeier, Paul Simons		2011
170.	Interlaboratory tests for the determination of repeatability and reproducibility of buildings airtightness measurements	Christophe Delmotte, Jelle Laverge		2011
171.	The quality framework for Air-tightness measurers in France: assessment after 3 years of operation	Valerie Leprince, Rémi Carrié and Myriam Olivier		2011
172.	Quality system for airtightness measurement of buildings	Oliver Solcher		2011

#	Title (including hyperlink to the paper)	Authors	PowerPoint	Year
173.	Shelter in place effectiveness in the event of toxic gas releases: French and Catalan assessment approach	M.I. Montoya, G. Guyot, E. Planas		2011
174.	U.S commercial building airtightness requirements and measurements	Steven J Emmerich, Andrew K Persily		2011
175.	Preliminary analysis of U.S residential air leakage database v.2011	Wanyu R. Chan and Max H. Sherman		2011
176.	Quality Management Approach to Improve Buildings Airtightness Requirements and Verification	Valerie Leprince, Joris Biaunier, Rémi Carrié and Myriam Olivier		2011
177.	Class C air-tightness: Proven roi in black and white	Peter Stroo		2011
178.	Application of airtightness to healthcare buildings	William Booth, Tom Jones, Blanca Beato Arribas		2011
179.	The use of a sampling method for airtightness measurement of multifamily residential buildings - An example	Jiri Novak		2011
180.	The use of building own ventilation system in measuring airtightness	Timo Kauppinen, Sami Siikanen, Erkki Vähäsöyrinki, Markku Seppänen		2011
181.	Behavior of leakages exposed to dynamic wind loads. A numerical study using CDF on a single zone model	Dimitrios Kraniotis, Thomas Kringlebotn Thiis, Tormod Aurlien		2011
182.	Case study: Effect of excessive duct leakage in a large pharmaceutical plant	David F. Dyer		2011
183.	Feasibility study of ventilation system air-tightness	Jeroen Soenens and Pedro Pattijn		2011
184.	Ductwork airtightness requirements in Portugal	Eduardo Maldonado and Fernando Brito		2011

Workshop presentations

This chapter includes a table (Table 2) listing titles and hyperlinks to 148 PowerPoint presentations presented at workshops organized in collaboration with AIVC, TightVent Europe & QUALICHeCK.

Table 2

#	Title	Presenters	Year
Towards Higher Performing Homes: The Role of Ventilation and Airtightness, 19-20 March 2018, Wellington, New Zealand			
1	The involvement of New Zealand in IEA Energy in Buildings and Communities projects	Michael Donn, IEA EBC Executive Member, New Zealand	2018
2	Overview of the Air Infiltration and Ventilation Centre (AIVC) and TightVent	Peter Wouters, AIVC Operating Agent, Belgium	2018
3	Activities of ASHRAE related to ventilation and airtightness	Bjarne Olesen, ASHRAE/DTU, Denmark	2018
4	Overall situation in New Zealand regarding energy performance (policy, standards, regulations, …)	Christian Hoerning, EECA, New Zealand	2018
5	Why do we care about IAQ Metrics?	Max Sherman, LBNL, USA	2018
6	Indoor Environmental Quality: Comfort-Health-Productivity	Bjarne Olesen, ASHRAE, Denmark	2018
7	The health effects of sub-standard housing on children	Nevil Pierse, He Kainga Oranga, New Zealand	2018
8	Annex 68 presentation (Design and Operational Strategies for High IAQ in Low Energy Buildings)	Jelle Laverge, Ghent University, Belgum	2018
9	Future Cooling Needs of Buildings and the role of ventilation	Mat Santamouris, University of New South Wales, Australia	2018
10	Indoor climate and ventilation in school buildings	Roby Phipps, Massey University, New Zealand	2018
11	New Indoor Air Quality and Thermal Comfort (IAQ&TC) guidelines for school buildings	Bernie Cruise, Ministry of Education, New Zealand	2018
12	Methodology to assess the exposure to cooking emissions in combination with the efficiency of range hoods	Willem De Gids, VentGuide, Netherlands	2018
13	Demand controlled ventilation: design guidelines and performance characterisation in Belgium	Arnold Janssens, Ghent University, Belgium	2018
14	Expected temperature distribution in NZ homes using MVHR	Peter McDowall, BRANZ, New Zealand	2018

#	Title	Presenters	Year
15	Measuring airtightness of dwelling with a domestic ventilation system	Wouter Borsboom, TNO, Netherlands	2018
16	Airtightness in New Zealand homes and apartments	Steve McNeil, BRANZ, New Zealand	2018
17	Lessons in air tightness and air quality from the Japanese sick house experience	Andy Russell, Proctor group, Australia	2018
18	Air Tightness Requirements in For High Performance Homes in Mild Climates	Iain Walker, LBNL, USA	2018
19	Quality and compliance of ventilation systems : on-going developments, lessons learnt, future challenges	Peter Wouters, AIVC Operating Agent, Belgium	2018
20	Ventilation, moisture and mould in old and new homes in NZ	Manfred Plagmann, BRANZ, New Zealand	2018
21	Ventilation and Airtightness, different relationship for different quality of buildings	George Zhang, Center for Sustainable Built Environment, Hunan University, China	2018
Voluntary and Regulatory Frameworks to Improve Quality and Compliance, 16-17 March 2015, Lund, Sweden			
22	Welcome on behalf of QUALICHeCK – Objectives of this workshop – QUALICHeCK's approach to quality and compliance	Peter Wouters, BBRI, Belgium	2015
23	Welcome on behalf of Boverket	Anders Sjelvgren and Wanda Rydholm, Boverket, Sweden	2015
24	BUILD UP Skills: European collaboration on improving the competence of the building workforce – Ventilation and airtightness aspects	Horia Petran, URBAN-INCERC, Romania	2015
25	Addressing compliance and quality in CEN and ISO standards	Jaap Hogeling, Chair of CEN TC 371, ISSO, Netherlands	2015
26	Approaches to improve compliance and accessibility of energy performance certificate input data	François Durier, CETIAT, France	2015
27	Overview of selected approaches to improve the quality of the works	Heike Erhorn-Kluttig, IBP Fraunhofer, Germany	2015
28	The role certification can play to improve the reliability of input data. Eurovent certification example	Sylvain Courtey, Eurovent Certita Certification, France	2015
29	Opportunities and challenges for natural ventilation systems and ventilative cooling solutions in compliance frameworks	Karsten Duer, Velux, Denmark	2015

#	Title	Presenters	Year
30	Assessment of demand-controlled ventilation in various countries and compliance frameworks: practical experience and difficulties encountered by a manufacturer	Yves Lambert, Renson, Belgium	2015
31	Market drivers for the ventilation industry in Sweden: the role of AMA and OVK procedures, standardisation, and certification	Lars-Åke Mattsson, Lindab, Sweden	2015
32	Quality and compliance on building ventilation and airtightness in the Dutch context	Wouter Borsboom, TNO, The Netherlands	2015
33	Air-Permeability Testing of New Dwellings & Buildings in the UK: Challenges to Maintaining Standards	Barry Cope, ATTMA, UK	2015
34	Overview of competent tester schemes for building airtightness testers	François Rémi Carrié, INIVE, Belgium	2015
35	BUILD UP Skills Sweden: Quality assurance of the works and training activities	Per-Johan Wik, Lund University, Sweden	2015
36	Background on Swedish regulation BBR – Ventilation and airtightness	Wanda Rydholm, Boverket, Sweden	2015
37	OVK Compliance (regulatory) and energy efficiency measures, as well as guidance to municipal supervisors on the Board's Web (Boverkets), OVK experience and supervision	Wanda Rydholm, Boverket, Sweden	2015
38	The Swedish National energy declaration record	Anders Sjelvgren, Boverket, Sweden	2015
39	Certification of persons issuing OVK and energy performance certificates	Magnus Jerlmark, Kiwa, Sweden	2015
40	Qualification of airtightness testers	Paula Wahlgren, Chalmers, Sweden and Magnus Hansén, SP, Sweden	2015
41	The AMA framework: ductwork according, practical implementation and presentation of digital training for ventilation installers	Johnny Andersson, Ramboll, Sweden	2015
42	Step-by-step demonstration of the inspection of ventilation systems (OVK procedure)[PDF1, PDF2]	Wanda Rydholm, Boverket, Sweden and Olle Nevenius, FunkiS, Sweden	2015
43	Energy Performance of buildings regulations in Belgium – The key puzzle pieces for an effective regulation	Xavier Loncour, BBRI, Belgium	2015
44	Building airtightness: Towards improved and reliable declared performances	Clarisse Mees, BBRI, Belgium	2015

#	Title	Presenters	Year
45	Ventilation: steps towards framework for reliable EPC input data and improved quality/compliance	Samuel Caillou, BBRI, Belgium	2015
46	Lessons learnt from regulatory compliance checks on ventilation and airtightness: regulatory context, control procedures, results	Sandrine Charrier and Adeline Bailly, CEREMA, France.	2015
47	Building regulations can foster quality management : the French example on building airtightness	Sandrine Charrier, CEREMA, France	2015
48	French voluntary scheme for homogeneous announcement of ventilation product performance	François Durier, CETIAT, France	2015
49	Legal issues when developing compliance frameworks	Eric Winnepenninckx, UBAtc, Belgium	2015
50	Structured discussion on sources of problems regarding input data, quality of the works, and innovation		2015
51	Summary of country presentations	Arnold Janssens, University of Ghent, Belgium	2015
52	Perspectives for effective compliance checks, including feedback from interactive sessions	Xavier Loncour, BBRI, Belgium	2015
53	Future steps for QUALICHeCK	Peter Wouters, BBRI, Belgium	2015
Quality of Methods for Measuring Ventilation and Air Infiltration in Buildings, 18-19 March 2014, Brussels, Belgium			
54	The role of measurements in quality and compliance schemes	Peter Wouters, INIVE EEIG, Belgium	2014
55	Why is it important to address measurement quality issues in standards? How Standards can contribute?	Jaap Hogeling, ISSO, Netherlands	2014
56	Including measurement uncertainty in building energy performance calculation methods	Staf Roels, KU Leuven, Belgium	2014
57	Definition and assessment of indoor air quality classes: sources of uncertainties and rating implications	Pawel Wargocki, DTU, Denmark	2014
58	Field measurements in low-energy houses	Wouter Borsboom, TNO, Netherlands	2014
59	Experience with measurements, ventilation and infiltration in the Active House concept. Quality issues and implications for compliance	Peter Foldbjerg, Active House, Denmark	2014
60	Ventilation and infiltration measurements in the Effinergie label. Approach to quality issues and implications for compliance	Valérie Leprince, PLEIAQ, France	2014

#	Title	Presenters	Year
61	Planning and ordering measurements in "Passive House" buildings: lessons learned from practical experience and approach to quality concerns	Christophe Debrabander, Bostoen, Belgium	2014
62	Overview of tracer gas measurement techniques	Max Sherman, Lawrence Berkeley National Laboratory, USA	2014
63	Uncertainties in air exchange using continuous-injection, long-term sampling tracer gas methods	Max Sherman, Lawrence Berkeley National Laboratory, USA	2014
64	prEN16211 draft standard - Measurement of air flow rates on site	Carl Welinder, Swema, Sweden	2014
65	Measurement of airflow rates in ducts by velocity measurements: an overview	Isabelle Caré,CETIAT, France	2014
66	Comparative Analysis of the Methods for Measuring the Air Velocity and Flow in Mechanical Ventilation Systems	Mariusz A. Skwarczynski, Lublin University of Technology, Poland	2014
67	Measurement of airflow rates at air terminal devices: an overview	Samuel Caillou, BBRI, Belgium	2014
68	PROMEVENT: Improvement of measurement protocols used to characterize ventilation systems performance	Adeline Bailly, CEREMA, France	2014
69	Presentations of measurement solutions by ACIN	ACIN	2014
70	Presentations of measurement solutions by BlowerDoor GmbH	BlowerDoor GmbH	2014
71	Presentations of measurement solutions by Lindab	Lindab	2014
72	Presentations of measurement solutions by RETROTEC	Retrotec	2014
73	Presentations of measurement solutions by Swema	Swema	2014
74	General approach to the evaluation of measurement uncertainties	Benoît Savanier, CETIAT, France	2014
75	Measuring ventilation and air infiltration in buildings	Johnny Andersson, Ramboll, Sweden	2014
76	Reasons behind and lessons learnt with the development of airtightness testers schemes in 11 European countries	Valérie Leprince, PLEIAQ, France	2014
77	Challenges and solutions for air speed and airflow rate calibration	Isabelle Caré, CETIAT, France	2014
78	Uncertainties and quality issues in CEN ductwork standards. Focus on ductwork pressurization tests	Lars-Ake Mattsson, convenor of CEN TC 156 WG 3, Sweden	2014

#	Title	Presenters	Year
79	Durability and measurement uncertainty of airtightness in extremely airtight dwellings	Wolf Bracke - Arnold Janssens, University of Ghent, Belgium	2014
80	Airtightness test at different wind conditions in a high building	Stefanie Rolfsmeier - Paul Simons, BlowerDoor GmbH, Germany	2014
81	On the use of infrared thermography to assess air infiltration in building envelopes	Sven Van De Vijver - Marijke Steeman, University of Ghent, Belgium	2014
82	Field measurement testing of air tightness - example from a hospital project in Sweden	Erik Olofsson Augustsson, Sweco, Sweden	2014
83	Air change rate test results in the Croatian and Hungarian border region	László Fülöp and György Polics, University of Pécs, Hungary	2014
84	Open discussion and perspectives		2014
Design, Implementation, Control and Durability: Feedback from Practice and Perspectives, 18-19 April 2013, Washington DC, USA			
85	Welcome by AIVC (INIVE)	Peter Wouters, INIVE EEIG	2013
86	U.S. DOE Perspective On Building Energy and Performance	Eric Werling, Department of Energy, USA	2013
87	ASHRAE's work on Air Tightness in the Built Environment – an update	Tom Phoenix, ASHRAE, USA	2013
88	The changing requirements on airtightness in the US	Wagdy Anis, WJE Associates, USA	2013
89	Efforts for providing quality control regarding airtightness	Laverne Dalgleish, ABAA, USA	2013
90	Interactions of airtightness with ventilation systems and implications on energy use	Willem de Gids, the Netherlands	2013
91	New and retrofitted army buildings	Alexander Zhivov, USACE, USA	2013
92	Airtightness of the window-wall interface in masonry brick walls	Nathan Van den Bossche and Arnold Janssens, Belgium	2013
93	Evaluation of an Interior Air Barrier System with Dynamic Water Vapour Control in North American Climates	Stanley D. Gatland II, CertainTeed, USA	2013
94	Airtight Curtain Wall/Window Connection Best Practice	Joerg Birkelbach, Tremco illbruck, USA	2013
95	Service Life Prediction on Sealant Materials	Joannie Chin, NIST, USA	2013
96	The Science of Fluid-Applied Flashing Systems	Paul Grahovac, Prosoco, USA	2013
97	Effects of deviations from air tightness in the design on the total energy consumption of dwellings	Wouter Borsboom, TNO, Netherlands	2013
98	Innovative Sealant Technology Provides Design Flexibility for Air Tight Joints	Andrea Wagner, Dow Corning, USA	2013

#	Title	Presenters	Year
99	Building Enclosure Commissioning – BECx -The Plan - Why, What, How, Where, Who?	William R. Nash , P.E. USA	2013
100	Performance of Duct Leakage Test Methods – When to Use Which and Why	Paul Francisco, University of Illinois, USA	2013
101	Energy Impacts of Envelope Tightening and Mechanical Ventilation for the U.S. Residential Sector	Jennifer Logue, LBNL, USA	2013
102	Impact of Sheathing Installation Practices on Air Barriers	Brett T. Fagan, USA	2013
103	Consideration of Envelope Airtightness in Modelling Commercial Building Energy Consumption	Lisa Chen Ng, NIST, USA	2013
104	Leakage Reductions for Large Building Air Sealing and HVAC System Pressure Effects	David Bohac, Center for Energy and Environment, USA	2013
105	Achieving Tight Buildings through Building Envelope Commissioning	John Runkle, Architectural Testing, USA	2013
106	Commissioning of exterior building envelopes of large buildings for air leakage and thermal anomalies using infrared thermography and other diagnostic tools	Mario D. Gonçalves, Patenaude-Trempe Inc, Canada	2013
107	Thought Experiments for Evaluating Building Air Leakage Test Procedures	David Saum, Infiltec, USA	2013
108	Optimizing Outside Pressure Taps To Reduce Wind Induced Pressure Errors	David Saum, Infiltec, USA	2013
109	How Leaky is your Building? Case Studies of Two Whole-Building Air Leakage Tests	Jason S. Der Ananian, Simpson Gumpertz & Heger, USA	2013
110	Measuring the Air Tightness of Mid and High Rise Non-Residential Buildings	Wagdy Anis, WJE, USA	2013
111	Large Building Air Leakage Measurement – What Has Been Done and What Is Possible	Denali Jones, Retrotec, USA	2013
112	Estimates of Uncertainty in multi-zone air leakage measurements	Erin Hult, LBNL, USA	2013
113	Air tightness of buildings in Poland	Michal Szymanski, Poznan University of Technology, Poland	2013
114	Large public buildings air tightness in Poland	Radoslaw Gorzenski, Poznan University of Technology, Poland	2013
115	Repeatability of Whole-Building Airtightness Measurements: Midrise Residential Case Study	Collin Olson, The Energy Conservatory, USA	2013
116	Stack Effect and Mechanical Exhaust System Impacts on Building Pressures and Envelope Air Leakage	Sean M. O'Brien, Simpson Gumpertz & Heger, USA	2013

#	Title	Presenters	Year
117	Field Experience with Sealing Large-Building Duct Leakage with an Aerosol-Based Sealing Process	Mark Modera, UC Davis, USA	2013
118	Analysis of the NIST Commercial and Institutional Building Envelope Leakage Database	Steven Emmerich, NIST, USA	2013
119	Practical experience with training and performing airtightness tests in large buildings	Karl Grimnes, Termografi og Maaleteknikk as, Norway	2013
120	Improving Building envelope and duct airtightness of US dwellings – the current status of energy retrofits	Wanyu R. Chang, LBNL, USA	2013
121	Achieving and Certifying Building Envelope Air Tightness with an Aerosol-Based Automated Sealing Process	Mark Modera, UC Davis, USA	2013
122	Workshop Summary	Andy Persily, NIST, USA	2013
Securing the Quality of Ventilation Systems in Residential Buildings: Status and perspectives, 18-19 March 2013, Brussels, Belgium			
123	General context	Peter Wouters, INIVE, Belgium	2013
124	Why the Industry Cares About the Quality of Ventilation Systems	Stefan Wiesendanger, EVIA, Belgium	2013
125	Why we ventilate?	Max Sherman, LNBL, USA	2013
126	The role of standards to improve the quality of ventilation systems	Marc Jardinier, CEN TC 156 WG2, France	2013
127	Quality assurance of ventilation systems in residential buildings; is certification and/or (Retro-) Commissioning the answer?	Jaap Hogeling, CEN/TC 371 Program Committee on EPBD, ISSO, Netherlands	2013
128	Detailed analysis of regulatory compliance checks of the ventilation systems of 1287 dwellings	Romuald Jobert and Gaëlle Guyot, CETE de Lyon, France	2013
129	Quality of ventilation systems in residential buildings- Status and perspectives in the Netherlands	Kees de Schipper, VLA, the Netherlands	2013
130	Quality of ventilation systems in residential buildings: Status and perspectives in the UK	Alan Gilbert, BSRIA, UK	2013
131	Quality of ventilation systems in residential buildings- Status and perspectives in Belgium	Paul Van den Bossche, BBRI, Belgium	2013
132	Quality of ventilation systems in residential buildings in France	Laure Mouradian, CETIAT, France and Emmanuelle Brière, Uniclima, France	2013
133	Quality of domestic ventilation systems in Sweden	Johnny Andersson, Ramböll, Sweden	2013
134	Quality of ventilation systems in residential buildings: status and perspectives in Estonia	Targo Kalamees, Tallinn University of Technology, Estonia	2013

#	Title	Presenters	Year
135	Quality of ventilation systems in residential buildings - Status and perspectives in Finland	Pertti Pasanen, University of Kuopia, Finland	2013
136	Quality of ventilation systems in Norwegian residential buildings	Peter G. Schild, Sintef, Norway	2013
137	Quality of ventilation systems in residential buildings: Status and perspectives in Germany	Claus Händel, Technischer Referent Fachiverband Gebäude-Klima e.V, Germany	2013
138	Securing the quality of ventilation systems in residential buildings: Status and perspectives in Poland	Tomasz Trusewicz, Polish Ventilation Association, Poland	2013
139	Quality of ventilation systems in residential buildings: Status and perspectives in Romania	Ioan Silviu Dobosi, Dosetimpex, Romania	2013
140	US ventilation systems - Status & Commissioning	Max Sherman, LBNL, USA	2013
141	Residential Mechanical Ventilation Systems in Canada	Ian MacDonald, NRC, Canada	2013
142	Outcomes of a field study in the Netherlands	Atze Boerstra, BBA Binnenmilieu BV, Netherlands	2013
143	Technical guidelines for ventilation systems (based on HealthVent project)	Nejc Brelih, Studiebureau Boydens on behalf of REHVA, Poland	2013
144	Architects & quality of ventilation systems	Sara Van Rompaey, ACE WG Environment and Sustainable Architecture & Urban Issues, Belgium	2013
145	Securing the quality of ventilation systems in residential buildings. A manufacturers' point of view	Renson, Belgium	2013
146	Ventilation Innovation. BRINK Climate Systems	Jelmer de Jong, Brink Climate Systems, Netherlands	2013
147	Quality of ventilation systems | aldes	Aldes	2013
148	Securing the quality of ventilation systems in residential buildings: status and perspectives | Workshop Conclusions	Arnold Janssens, University of Ghent, Belgium	2013

Webinar recordings & slides

This chapter includes a table (Table 3) listing titles and hyperlinks to 66 recorded presentations and recordings of webinars organized in collaboration with AIVC, TightVent Europe & QUALICHeCK..

Table 3

#	Title	Presenters	Year
Webinar "Durability of building airtightness: Assessment through laboratory testing", 21 February 2020 (Flyer, Slides)			
1	Laboratory testing of the durability of airtightness products - Review and analysis of existing studies	Valérie Leprince, INIVE, France	2020
2	Assessment of the durability of airtightness products in laboratory controlled conditions: Development and presentation of the experimental protocol	Andrés Litvak, Cerema, France	2020
3	Determination of durability of adhesive tapes and adhesive masses for the establishment of airtight layers - New standardisation project	Sabastian Treml, FIW – Munich, Germany	2020
Webinar "Durability of building airtightness: Assessment through field measurements", 30 January 2020 (Flyer, Slides)			
4	Field measurement of the durability of building airtightness- Review and analysis of existing studies	Valérie Leprince, INIVE, France	2020
5	Durability and measurement uncertainty of airtightness in extremely airtight dwellings	Wolf Bracke, Ugent, Belgium	2020
6	Assessment of long-term and mid-term building airtightness durability: Field study of 61 French low energy single-family dwellings	Bassam Moujalled, Cerema, France	2020
Recorded presentations from the 2019 AIVC- TightVent-venticool joint Conference "From energy crisis to sustainable indoor climate – 40 years of AIVC"			
7	Airtightness and energy impact of air infiltration in residential buildings in Spain	Irene Poza-Casado, Universidad de Valladolid, Spain	2019
8	Assessment of long-term and mid-term building airtightness durability: field study of 61 French low energy single-family dwellings	Bassam Moujalled, CEREMA, France	2019
9	New findings on airtightness measurements of very airtight buildings and apartments	Stefanie Rolfsmeier, BlowerDoor GmbH, Germany	2019

#	Title	Presenters	Year
10	Deviation of blower-door fans over years through the analysis of fan calibration certificates	Valérie Leprince, INIVE, France	2019
Webinar "Ductwork airtightness measurements: Protocols", 25 April 2019 (Flyer, Slides)			
11	On site ductwork airtightness measurements in standardization (Revision of EN 12599)	Frank Bitter, CEN/TC156 WG8, WSPLab, Germany	2019
12	Ductwork airtightness in French regulation and FD E51-767	Laurent Bonnière, Air-efficience, France	2019
13	Ductwork airtightness tests in the UK: THE DW 143	Peter Rogers, BESA ventilation group technical committee, UK	2019
14	Ductwork airtightness tests in Sweden: AMA VVS & Kyl	Erik Osterlund, National Swedish standardization committee for ventilation, Sweden	2019
Webinar "Ductwork airtightness: Standardisation's on- going work and an overview of status and trends in Sweden, Japan, Spain and Portugal", 25 January 2018 (Flyer, Slides)			
15	Why should we care about ductwork airtightness?	Valérie Leprince, PLEIAQ, France	2018
16	European ductwork airtightness classes, on-going standardization work and status in Sweden	Lars-Åke Mattsson, CEN/TC 156/WG3, Sweden	2018
17	Status of ductwork airtightness in Japan and on-going work at ISO on ductwork airtightness	Masaki Tajima, KUT, Japan	2018
18	Market trends in Spain and Portugal. An industry point of view	Rodrigo Sanz, Gonal Driving Air, Spain	2018
Webinar "Building airtightness and initiatives to improve the quality of the works", 12 January 2016 (Slides)			
19	Introduction	Peter Wouters, INIVE, Belgium	2016
20	Laboratory investigation on the durability of taped joints in exterior air barrier applications	Jelle Langmans, KU Leuven, Belgium	2016
21	Guidelines for designers and workers: the Etanch'air project	Xavier Loncour, BBRI, Belgium	2016
22	Market drivers for the development and use of new building airtightness products	Filip Van Mieghem, Soudal, Belgium	2016
23	System approach and on-site quality control for good building airtightness	Katherine Sauvet, Saint Gobain – ISOVER, France	2016
	Airtightness testing part 3: Status and trends in competent tester schemes in Denmark, Ireland and Sweden, 20 November 2014 (Flyer, Slides)		

#	Title	Presenters	Year
24	Introduction and overview of TightVent Airtightness Associations Committee	François Rémi Carrié, INIVE, France	2014
25	Status in Ireland and NSAI'S certified airtightness tester scheme	Mark A. Shirley, 2evia.ie, Republic of Ireland	2014
26	Klimaskaerm Competent tester scheme in Denmark Status and trends	Walter Sebastian, Klimaskaerm, Denmark	2014
27	Status in Sweden and the new diploma for airtightness testers	Eva Sikander, SP, Sweden	2014
Webinar "Airtightness testing part 2: Status and trends in competent tester schemes in Germany, the Czech Republic and France", 22 November 2013 (Flyer, Slides)			
28	Introduction and context of the webinar	François Rémi Carrié, INIVE, France	2013
29	Airtightness testing: Status and trends in competent tester schemes in Germany	Stefanie Rolfsmeier, FLiB, Germany	2013
30	Status and trends in competent tester schemes – the Czech Republic	Jiří Novák, A.BD.CZ, the Czech Republic	2013
31	Status in France and Syneole activities	Cédric D'Haene, Syneole, France	2013
Webinar "Airtightness testing part 1: Status and trends in competent tester schemes in the UK and Belgium", 14 November 2013 (Flyer, Slides)			
32	Introduction and context of the webinar	François Rémi Carrié, INIVE, France	2013
33	Status in the UK and the Air Tightness Testing & Measurement Association	Rob Coxon, ATTMA, UK	2013
34	Status in Belgium and the inauguration of TightVent Belgium	Clarisse Mees, BBRI, Belgium	2013
Webinar "Building Airtightness Solutions: System approach and characterisation of air barrier and moisture management systems", 8 October 2013 (Flyer, Slides)			
35	Introduction and context of the webinar	François Rémi Carrié, INIVE, France	2013
36	Hygrothermal aspects of building airtightness solutions	Staf Roels, Building Physics Section, KU Leuven, Belgium	2013
37	Evaluation of the long-term durability of adhesive tapes and its substrates: Requirements and testing	Armin Weissmueller and Frédéric Delcuve, Knauf Insulation, Belgium	2013
38	Evaluation of an interior air barrier system with dynamic water vapour control	Guillaume Pandraud, Isover Saint Gobain, France	2013
Webinar "Building Airtightness Solutions: Recent Research and Characterisation of Sealants and Tapes", 4 June 2013 (Flyer, Slides)			

#	Title	Presenters	Year
39	Introduction and context of the webinar	François Rémi Carrié, INIVE, France	2013
40	Airtightness of window-wall interfaces in masonry brick walls and wood-frame construction	Nathan Van den Bossche, Ghent University, Belgium	2013
41	Building airtightness solutions: sealants and PU-foams	Filip Van Mieghem, Soudal, Belgium	2013
42	Impregnated tapes: Applicable standards and properties	Stefan Tenbuss, Tremco illbruck, Germany	2013
Webinar "Building and Ductwork Airtightness: Legislative Drivers, New Concerns and New Approaches", 1 July 2013			
43	Welcome	Pau Garcia-Audi, EACI, and Peter Wouters, BUILD UP	2013
44	Building and ductwork airtightness in the context of the EPBD recast	Rémi Carrié, INIVE, Belgium	2013
45	Status on the ground: Report from Poland	Michal Szymański, Poznan University of Technology, Poland	2013
46	Development of competent testers schemes and airtightness networks	Valérie Leprince, PLEIAQ, France	2013
47	Hot news -- Outcome of last week's conference in Pécs, Hungary	László Fülöp, University of Pécs, Hungary	2013
Webinar "The need for structured air leakage databases in energy conservation in buildings policies", 25 May 2012			
48	Introduction and Context of the Webinar	Peter Wouters and Rémi Carrié, INIVE, Belgium	2012
49	Opportunities And Challenges for Developing a Building Airtightness Database in the UK	Chris Knights and Dave Stephens, BSRIA, UK	2012
50	Reasons Behind the Development of WEB@SET	Andrés Litvak, CDPEA and Fabrice Richieri, CETE, France	2012
51	Experience with the Development of an Air Leakage Database in Germany	Oliver Solcher, FLIB, Germany	2012
52	Experience with the Development of an Air Leakage Database in the Czech Republic	Jiří Novák, Czech Technical University, Czech Republic	2012
53	Building Airtightness in Canada	Anil Parekh, NRC, CA	2012
54	Reasons Behind the LBNL Residential Leakage Database (RESDB)) Update V2011	Rengie Chan, LBNL, USA	2012
55	U.S. Commercial Building Airtightness	Steven Emmerich and Andrew Persily, NIST, USA	2012

#	Title	Presenters	Year
	Interlaboratory tests for the determination of repeatability and reproducibility of airtightness measurements, 11 April 2012		
56	Interlaboratory tests for the determination of repeatability and reproducibility of airtightness measurements	Christophe Delmotte, BBRI, Belgium	2012
	Recorded presentation "Experimental study of supply-only ventilation effectiveness", 16 March 2012 (Slides)		
57	Experimental study of supply-only ventilation effectiveness	Mireille Rahmeh, University of La Rochelle, France	2012
	Recorded presentation "Flow Balancing – Demonstration of "Mini Balance" Spreadsheet", 13 December 2011		
58	Demonstration of the spreadsheet "Mini Balance", for balancing ventilation systems	Peter G. Schild, Sintef, Norway	2011
Webinar "Achieving better envelope in practice - Recent Norwegian training and dissemination schemes", 9 November 2011 (Flyer)			
59	Introduction of the TightVent training webinars	Rémi Carrié and Peter Wouters, INIVE, Belgium	2011
60	The "Hold Tight" campaign	Guro Hauge, Low energy programme, Norway	2011
61	Encouraging early airtightness testing by craftsmen	Tormod Aurlien, UMB, Norway	2011
62	Future steps and new initiatives	Peter Schild, SINTEF, Norway	2011
Webinar "Airtightness and ventilation perspectives in Romania", 21 June 2011 (Slides)			
63	Introduction of the webinar and objectives	Rémi Carrié, INIVE, Belgium	2011
64	Global context of airtightness challenges and the TightVent Europe initiative	Peter Wouters, INIVE, Belgium	2011
65	Airtightness and ventilation in the Romanian regulation	Ioan Dobosi, REHVA, Romania	2011
66	Progress needed on ventilation and airtightness in Romania	Horia Petran, INCD URBAN-INCERC, Romania	2011

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