

Overview of the AIVC activities

Peter Wouters – Operating Agent AIVC

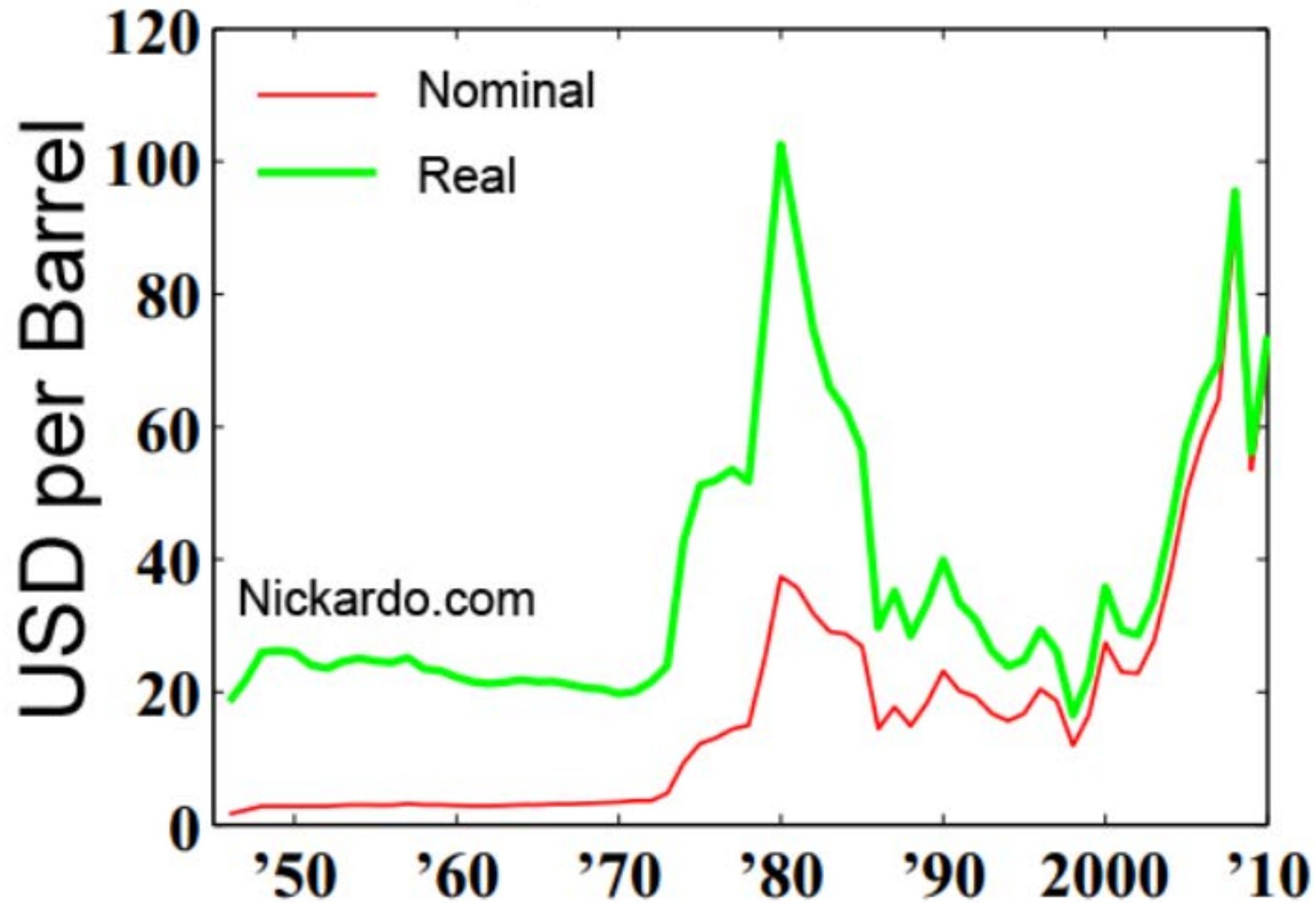
Wellington - 19 March 2018





4 November 1973 - First oil crisis

Price of Oil



...1975...

- Start of IEA implementing agreement **ECBCS**:
 “Energy conservation in Buildings and Community Systems”
- Most countries: limited interest and almost no knowledge on ventilation, air infiltration and indoor air quality
- Few countries were ahead: Sweden, Canada, Netherlands, ...

...1980...

- ECBCS **AIC** (Air Infiltration Centre – Annex 5) running
 - Annex 1 had indicated that many questions existed regarding air infiltration
- Policy in several countries: Built tight! (no concern about IAQ)
- Airtightness was research topic in some countries
- IEA annex 8 Occupants' behaviour
- IEA Annex 18 Demand Controlled Ventilation
- In research and in some countries growing interest for health and comfort



INTERNATIONAL ENERGY AGENCY
energy conservation in buildings and
community systems programme

Technical Note AIC **10**

**Techniques and instrumentation
for the measurement of
air infiltration in buildings
– a brief review and
annotated bibliography**

May 1983



Air Infiltration Centre
Old Bracknell Lane West, Bracknell,
Berkshire, Great Britain, RG12 4AH

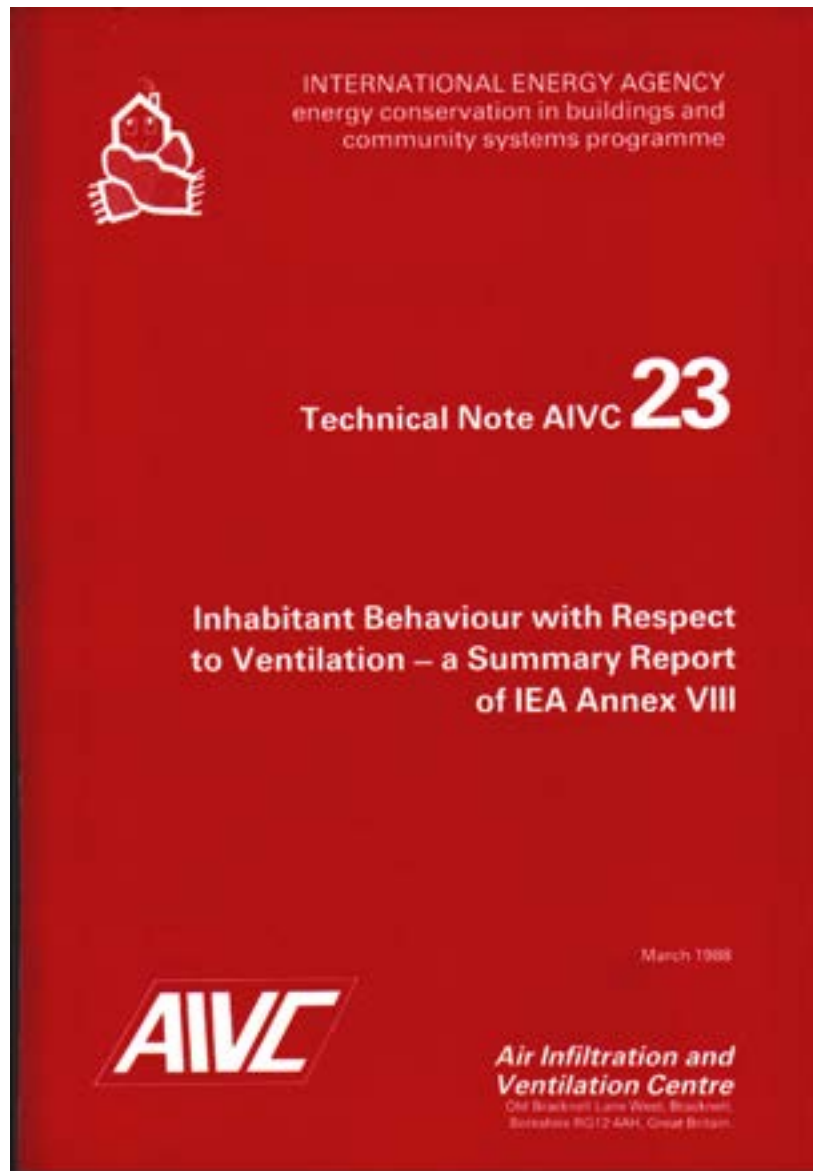
1986

AIC became AIVC

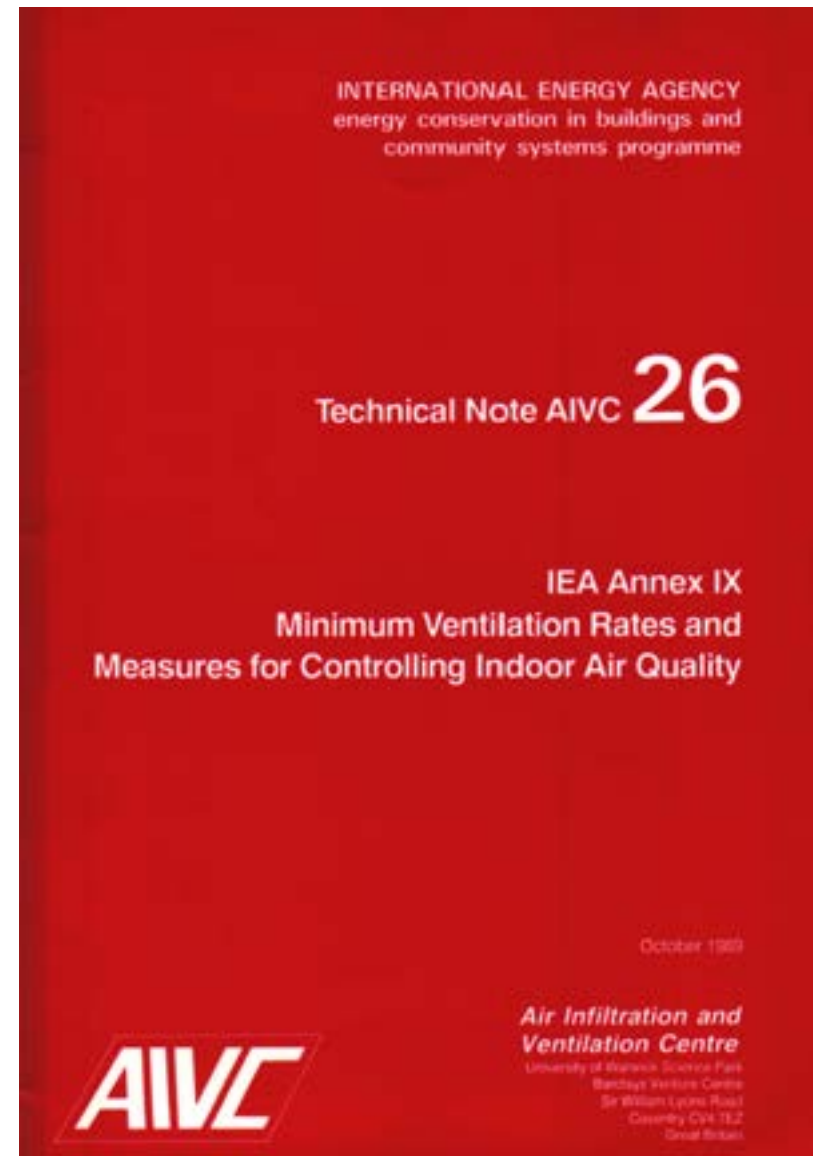
The 'Air Infiltration and Ventilation Centre'



Annex 8

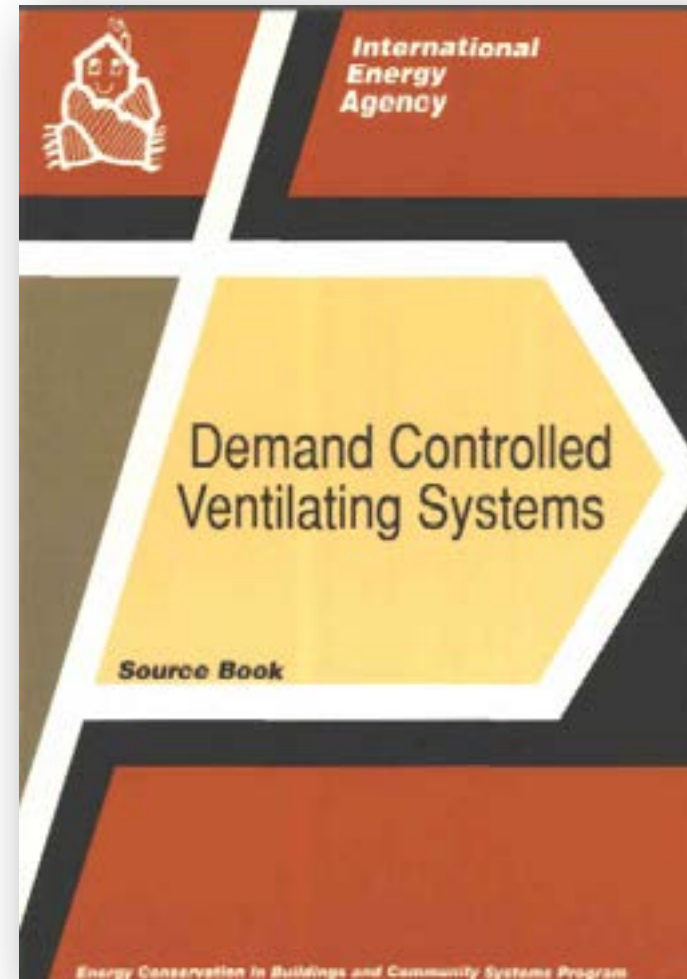
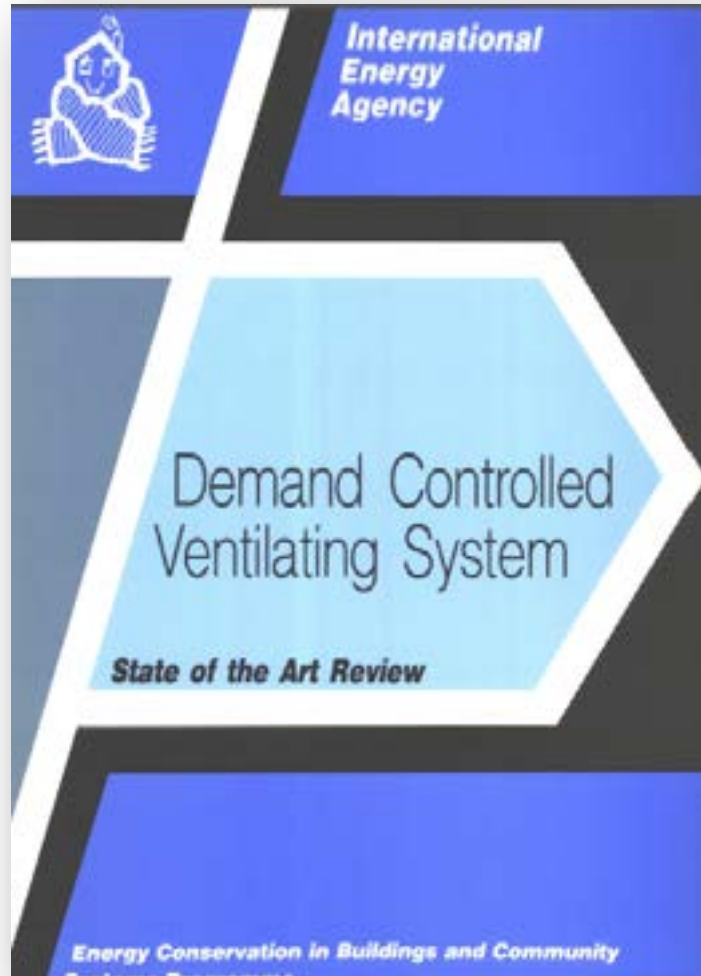


Annex 9



IEA EBC Annex 18

Demand Controlled Ventilation Systems (1987-1992)



Today (...2018...)

- Towards nearly-zero energy buildings
- Millions of airtightness measurements
- Concerns about quality of ventilation systems and workmanship

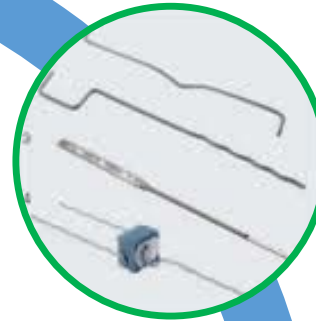


INNOVATION

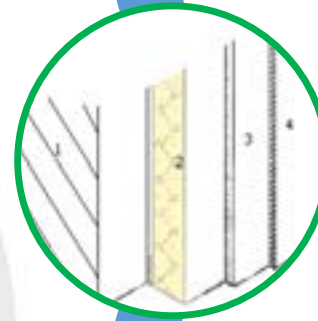




**Focus
on
Quality**



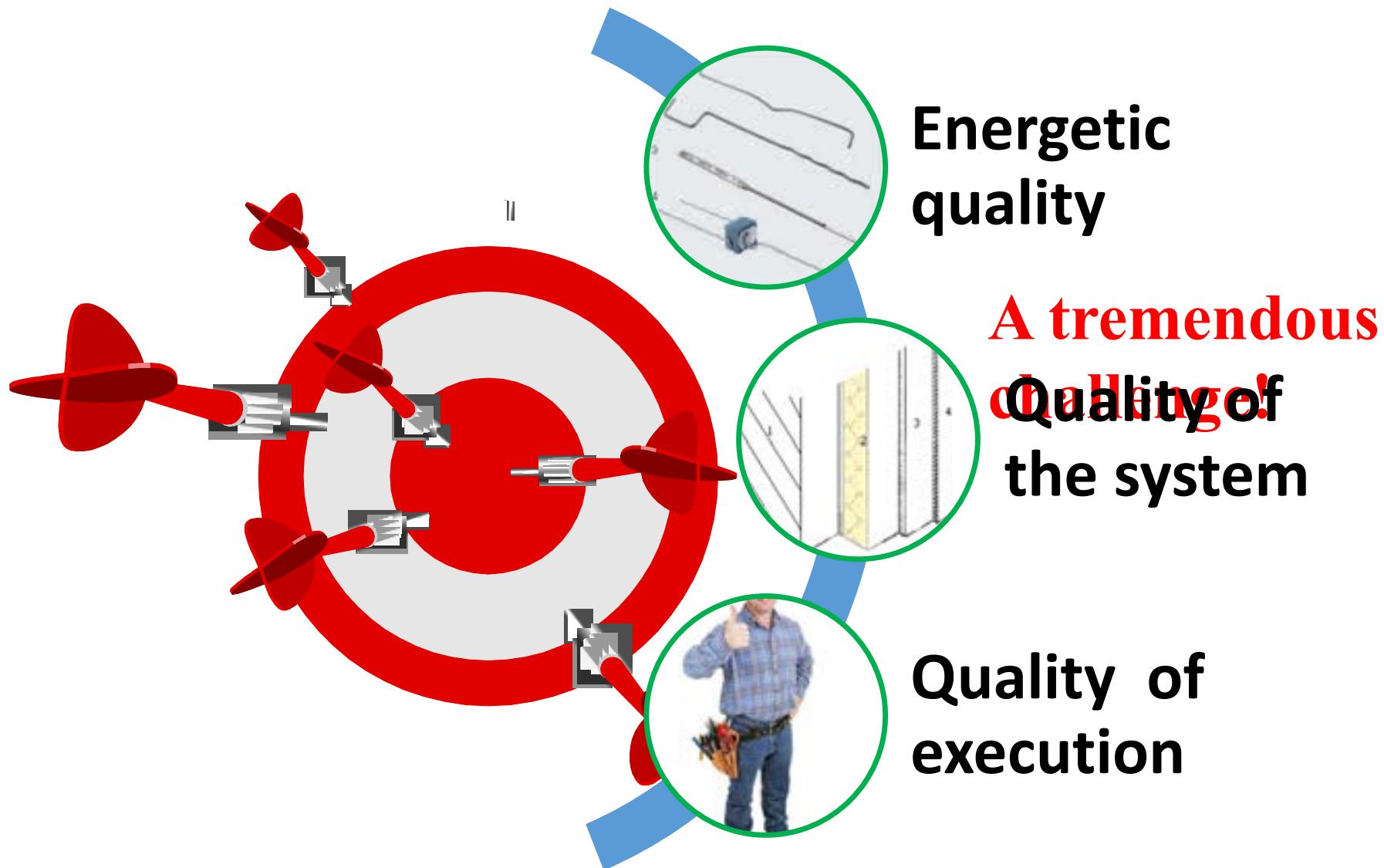
**Energetic
quality**



**Quality of
the system**



**Quality of
execution**

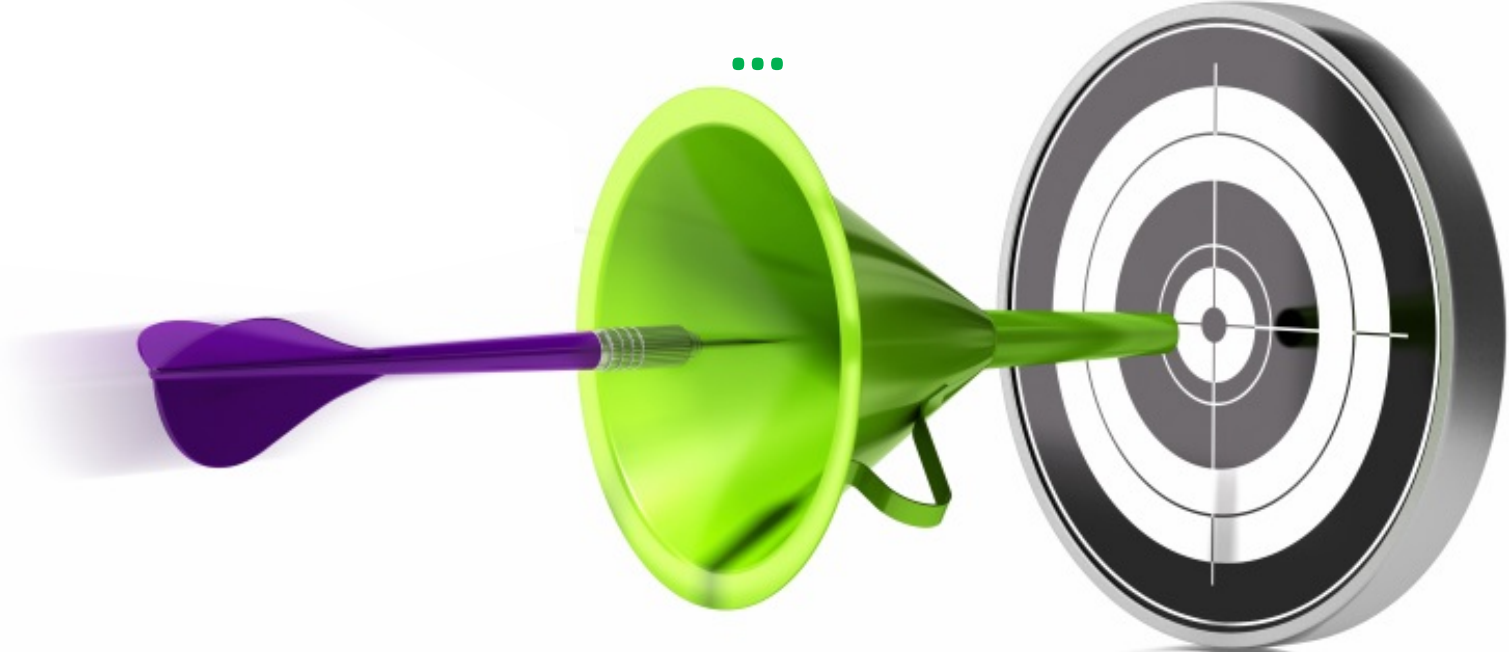


Energetic quality

A tremendous Quality of the system!

Quality of execution

International collaboration
International events



LESSONS LEARNED

recognize mistakes

observe what works

document them

share them

EBC



Energy in Buildings and Communities Programme



Air Infiltration and Ventilation Centre

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Recent News

Highlighted News



AIVC 2018 Conference - Abstract submission...

New deadline is 20 March, 2018

> 02 March 2018

MORE ▶



Register now for the AIVC webinar on smart...

6-March-2018, 15:00-16:30 (CET)

> 01 February 2018

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23 Mar-18 - AIVC Workshop "Ventilation for..."

Sydney, Australia

> 15 January 2018

MORE ▶

AIRBASE

Click here for searching in a database of 22279 publications with 15778 pdf documents



Top events



6 March 2018, Webinar – IAQ sensors for smart ventilation of buildings

AIVC defines smart ventilation as a process to continually adjust the ventilation system of a building in order to provide the desired Indoor Air Quality (IAQ) benefits while minimizing energy consumption, u

MORE ▶



19-20 March 2018, Workshop, Wellington (NZ) - Towards higher-performing buildings: The role of airtightness...

The objective of this AIVC workshop is to discuss and identify ways to improve the quality of our homes with respect to airtightness and ventilation, as well as discussing the impact suboptimal performance h

MORE ▶



18-19 September 2018, Conference, Juan-les-Pins, 39th AIVC conference

The 39th AIVC conference: "Smart ventilation for buildings" will be held on 18 and 19 September 2018 in Juan-les-Pins, France.



Did you know?

What is Ventilation Efficiency?

LEARN MORE ▶



Key Publications



VIP 37: Impact of Energy Policies on...

This Ventilation Information Paper analyses both the policy instruments used (...)

> Valérie Leprince, Maria Kapsalaki, Rémi Carrié, EU

MORE ▶



VIP 36: Metrics of Health Risks from...

In a recent review of 31 green building certification schemes used around the...



AIVC Member countries

- Belgium
- China
- Denmark
- France
- Italy
- Japan
- Korea
- Netherlands
- **New Zealand**
- Norway
- Spain
- Sweden
- United Kingdom
- United States

→ Interest from several other countries



More focusing on knowledge generation aspects

More focusing on market implementation



More focusing on market implementation



IEQ Global Alliance

For better indoor environment quality



Mission of the IEQ Global Alliance

The mission of IEQ-GA is to provide an acceptable indoor environmental quality (thermal environment-indoor air quality-lighting-acoustic) to occupants in buildings and places of work around the world and to make sure the knowledge from research on IEQ get to be implemented in practice. >> [Read more...](#)

Keynote speakers at the 38th AIVC – 4th venticool – 6th TightVent joint conference



The keynote speakers for the 38th AIVC – 6th TightVent – 4th venticool conference: "Ventilating healthy low-energy buildings" have been announced. The joint conference, co-organized by the International Network on Ventilation and Energy Performance (INIVE), on behalf of the Air ...

[Continue reading →](#)

User's Manual for 2016 IAQ Standard Published by ASHRAE



ATLANTA – A manual to help users navigate the changes in ASHRAE's 2016 ventilation standard is now available. The User's Manual for ANSI/ASHRAE Standard 62.1-2016, Ventilation for Acceptable Indoor Air Quality, provides information on the requirements of the standard and ...

[Continue reading →](#)

REHVA Journal issue 6 / December 2016



The REHVA Journal December issue on **EPB Standards Published for Formal Vote & Energy Efficient Renovations** is now available online @ www.rehva.eu

Workshop details



14-15 March 2017, Workshop, Brussels - Is ventilation the answer to indoor air quality control in buildings? Do we need performance-based approaches?

Brussels, Belgium 03/14/2017 - 09:15

Indoor exposure to contaminants should be minimized to avoid adverse health and comfort effects. Experience shows that this qualitative statement is difficult to translate into measurable terms, such as performance indicators or metrics, which can be used as a basis for defining and assessing requirements in regulations and standards while holistically reflecting indoor air quality. The simplest and most commonly used approaches rely on ventilation airflow rates determined by experts or codes. These approaches have fundamental shortcomings in practice for systems that do not have steady contaminant sources or do not provide a constant airflow rate, such as natural, hybrid, or demand-controlled ventilation. More sophisticated approaches can be based on health damage, pollutant exposures, or perceived air quality but they generally entail a number of assumptions about the pollutants of concern and occupant scenarios. Such methods could lead to useful metrics. However, as of today, there is no clear set of metrics that can be used to assess the overall ventilation performance of a building with regard to its indoor air quality, or used in standards or regulations.

This workshop aims to identify the pros and cons of performance-based approaches and metrics that can be considered to assess the IAQ performance of ventilation systems, as well as to draft guidelines for their use in standards and regulations.

AIVC 2017

38th AIVC - 6th TightVent & 4th venticool Conference, 2017

Ventilating healthy low-energy buildings

13-14 September 2017, University Of Nottingham, Nottingham, UK

95 14 45 22
DAYS HOURS MINUTES SECONDS



The University of
Nottingham

UNITED KINGDOM · CHINA · MALAYSIA

Ventilating healthy low-energy buildings

DEADLINE FOR ABSTRACTS: MARCH 20

AIVC 2018

39th AIVC - 7th TightVent & 5th venticool Conference
Smart ventilation for buildings
18-19 September 2018, Antibes Juan-Les-Pins Conference Centre,
Antibes Juan-Les-Pins, France

195 17 36 34
DAYS HOURS MINUTES SECONDS

Smart ventilation for buildings

Ventilation
Information
Paper
n° 38

March 2018

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and Management
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B-1060 Brussels – Belgium
inive@bbri.be - www.inive.org

International Energy Agency
Energy Conservation in Buildings
and Community Systems Programme



Air Infiltration and Ventilation Centre

What is smart ventilation?

François Durier, CETIAT, France
Rémi Carrié, ICEE, France
Max Sherman, LBNL, USA

Topical sessions at 2018 conference ...

1. IAQ metrics
2. Smart ventilation control
3. Sensors for smart ventilation
4. Rationale behind ventilation requirements and regulations
5. Utilization of heat recovery
6. Integrating uncertainties due to wind and stack effect in declared airtightness results
7. Ductwork airtightness
8. Residential cooker hoods
9. French initiatives for indoor air quality
10. Demand controlled ventilation in French buildings – 35 years of wide scale experience
11. Commissioning of ventilation systems – Improving quality of installed ventilation systems
12. Measurement Accuracy of air flow and pressure difference
13. Air cleaning as supplement for ventilation
14. New annex on resilient cooling
15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Workshops in Wellington and Sydney



19-20 March 2018, Workshop, Wellington (NZ) – Towards higher-performing buildings: The role of airtightness and ventilation

Wellington, New Zealand 03/19/2018 - 08:00



23 March 2018 Workshop Sydney (Australia) – Ventilation for IAQ and cooling

Topical sessions at 2018 conference ...

1. IAQ metrics

2.

Max Sherman:

3.

4. **Why do we care about IAQ Metrics?**

5. Utilization of heat recovery

6. Integrating uncertainties due to wind and stack effect in declared airtightness results

7. Ductwork airtightness

8. Residential cooker hoods

9. French initiatives for indoor air quality

10. Demand controlled ventilation in French buildings – 35 years of wide scale experience

11. Commissioning of ventilation systems – Improving quality of installed ventilation systems

12. Measurement Accuracy of air flow and pressure difference

13. Air cleaning as supplement for ventilation

14. New annex on resilient cooling

15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

1. IAQ metrics

2. Smart ventilation control
3. Sensors for smart ventilation

Jelle Laverge:

Annex 68 presentation: Design and Operational Strategies for High IAQ in Low Energy Buildings

9. French initiatives for indoor air quality
10. Demand controlled ventilation in French buildings – 35 years of wide scale experience
11. Commissioning of ventilation systems – Improving quality of installed ventilation systems
12. Measurement Accuracy of air flow and pressure difference
13. Air cleaning as supplement for ventilation
14. New annex on resilient cooling
15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

1. IAQ metrics
2. Smart ventilation control
3. Sensors for smart ventilation

Wouter Borsboom:

Measuring airtightness of dwelling with a domestic ventilation system

7. Ductwork **airtightness**

Iain Walker: Air Tightness Requirements for High Performance Homes in Mild Climates

11. Commissioning of ventilation systems – Improving quality of installed ventilation systems

George Zhang: Ventilation and airtightness – different relationship for different quality of buildings

14. New annex on resilient cooling
15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

1. IAQ metrics
2. Smart ventilation control
3. Sensors for smart ventilation
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5. Utilization of heat recovery
6. Integrating uncertainties due to wind and stack effect in declared airtightness results
7. Ductwork airtightness
- 8. Residential cooker hoods**

Willem De Gids:

**Methodology to assess the exposure to cooking emissions
in combination with the efficiency of range hoods**

14. New annex on resilient cooling
15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

1. IAQ metrics
2. Smart ventilation control
3. Sensors for smart ventilation
4. Rationale behind ventilation requirements and regulations
5. Utilization of heat recovery
6. Integrating uncertainties due to wind and stack effect in declared airtightness results
7. Ductwork airtightness
8. Residential cooker hoods
9. French initiatives for indoor air quality
- 10. Demand controlled ventilation in French buildings – 35 years of wide scale experience**

Arnold Janssens:

Demand controlled ventilation:

Design guidelines and performance characterisation in Belgium

15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

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2. Smart ventilation control
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7. Ductwork airtightness
8. Residential cooker hoods
9. French initiatives for indoor air quality
10. Demand controlled ventilation in French buildings – 35 years of wide scale experience

Mat Santamouris:

Future Cooling Needs of Buildings and the role of ventilation

14. New annex on resilient cooling

15. BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

Topical sessions at 2018 conference ...

1. IAQ metrics
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8. Residential cooker hoods
9. French initiatives for indoor air quality
10. Demand controlled ventilation in French buildings – 35 years of wide scale experience
- 11. Commissioning of ventilation systems – Improving quality of installed ventilation**

Peter Wouters:

Quality and compliance of ventilation systems:

On-going developments, lessons learnt, future challenges

2018 BIM and construction: the opportunities in relation to ventilation and airtightness

AIVC Newsletter



Foreword

The major roles of the Air Infiltration and Ventilation Centre (AIVC) are to disseminate information and to provide international co-ordination of projects in the field of ventilation and air quality. Several projects have just been approved for the 2017-2021 operating period in our last board meeting. AQ metrics, assessment requirements, air tightness testing, and performance criteria, residential cooker hoods, and heat recovery are key issues addressed in these projects.

This newsletter gives you an overview of our latest achievements and in progress. We encourage you to visit our website and to follow us on Twitter and LinkedIn to find out more and of course to mark your agenda for the upcoming 38th AIVC Conference on 13-14 September 2017, in Nottingham UK. We wish you a pleasant reading and look forward to seeing you in our future events!

Feder Weisheit, Operating Agent AIVC



no 11
March 2017

13-14 September 2017 - 38th AIVC conference in Nottingham, UK

The 38th AIVC, 13th TightVent & 4th Vertical conference "Ventilating healthy low-energy buildings" will be held on 13 and 14 September 2017 in Nottingham, UK. The event will place its focus on:

- thermal comfort and ventilation cooling (the application of ventilation to cool indoor spaces and reduce overheating risk in buildings);
- air infiltration through cracks in the building envelope and ductwork;
- the relationship between ventilation, indoor air quality and health.

The conference will consist of 3 parallel tracks largely devoted to air tightness issues, ventilative cooling, ventilation in relation to AQ and how they will consist of a mixture of topical sessions, presentations on ventilation and presenters selected from the call for papers (more than 150 abstracts were submitted).

The conference is organised by

- the International Network on Ventilation and Energy Performance (INVE) or the Institute for Air Infiltration and Ventilation Centre (AIVC), TightVent Europe (the Building and Ductwork Air Tightness Forum), and Vertical (the international platform for ventilation cooling); and
 - Brunel University London
 - The University of Nottingham
 - The Chartered Institution of Building Services Engineers (CIBSE)
- Visit the conference website <http://aivc2017conference.org> for further information.

Alexandria 2016 conference focused on AQ

The 37th AIVC Annual Conference was held in Alexandria, UK, USA, in collaboration with ASHRAE's IAQ services conference. The previous two conferences attended the conference. This conference had a special focus on indoor air quality, and confirmed the relevance of future research topics identified by the AIVC including IAQ metrics, air cleaning, cooker hoods, and measurement methods.

In this issue

Foreword
13-14 September 2017 - 38th AIVC & 13th TightVent conference in Nottingham, UK
A summary of the conference focused on AQ
AIVC publishes new series on 'Air Tightness' in 'Energy Efficient Buildings' magazine
Hugo Hertz captures efficiency Standard Status Update
News from ISA EBC Area 88 Indoor Air Quality Design and Control in Low Energy Buildings
News and focus on AQ research
News from Energy Efficient Buildings
IAQ Metrics
Summer course... about 25 15th of May 2017
AQVEC 2016 Conference on Healthy & Green Buildings
List of AIVC board members

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Energy Efficiency and Indoor Climate in Buildings

... with specific information on AIVC, IEQ-GA and the platforms QUALICheck, Dynastee, venticool and TightVent

HEADLINES

EU NEWS

AIVC

VENTICOOL

TIGHTVENT

ALL ARTICLES

Friday, Mar. 02, 2018 | Archives | < | Q

AIVC 2018 Conference - Abstract submission deadline extended

Shared by
INIVE eeig



aivc.org - The abstract submission deadline for the 39th AIVC - 7th TightVent - 5th venticool joint conference "Smart ventilation for buildings" to be held on 18 and 19 September 2018 in Antibes Juan-Les-Pins, ...

SAVE THE DATE for our upcoming webinar on ventilative cooling – 25 April 2018, 10:30-12:00 (CET)

Shared by
venticool



venticool.eu - The FREEVENT project and venticool are organising the webinar: "Ventilative cooling and summer comfort: Freeevent project in France" to be held on Wednesday 25 April at 10:30 AM (CET). The programme i...

AIVC Workshop on airtightness & ventilation, 19-20 March 2018, Wellington, NZ

Shared by
INIVE eeig



tightvent.eu - New Zealand homes and apartments have become more and more airtight and have reached a level of airtightness that requires dedicated ventilation. Despite the fact that there is no airtightness requir...

23 Mar-18 - AIVC Workshop "Ventilation for IAQ and cooling"

Shared by
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aivc.org - The AIVC (Air Infiltration and Ventilation Centre) and the Cooperative Research Centre (CRC) for Low Carbon Living warmly invite you to participate in a free, one-day workshop Ventilation for Indoor ...

AIVC Workshop on airtightness & ventilation, 19-20 March 2018, Wellington, NZ

Shared by
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tightvent.eu - New Zealand homes and apartments have become more and more airtight and have reached a level of airtightness that requires dedicated ventilation. Despite the fact that there is no airtightness requir...

China joins the AIVC

Shared by
INIVE eeig



aivc.org - The AIVC is very pleased to welcome China as new participating country! China will be represented in the AIVC board by Guoqiang Zhang, Dean of Institute of Sustainable

News.inive.org

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INIVE eeig

INIVE EEIG – International Network for Information on Ventilation and Energy Performance



Editor's note

Dear Reader,

We wish you a healthy 2018!
With this monthly information paper on energy efficiency and indoor climate, we hope to keep you informed about new interesting information on the internet.

In addition, it provides information related to several specific areas of interest:
- Activities with a link to the **Air Infiltration and**

Monthly newsletter



AIVC (Air Infiltration and Ventilation Centre) is the IEA (International Energy Agency) information centre on energy-efficient ventilation.

In recognition of the significant impact of ventilation on energy use, combined with concerns over indoor air quality, the IEA inaugurated the AIVC in 1979. New Zealand is one of the AIVC member countries. The AIVC offers industry and research organisations technical support aimed at optimising ventilation technology. We offer a range of services and facilities, including a comprehensive database on literature standards and ventilation data.

We also produce a series of guides and technical notes. AIVC holds annual conferences and workshops.



ASHRAE, founded in 1894, is a global society advancing human wellbeing through sustainable technology for the built environment. ASHRAE and its members focus on building systems, energy efficiency, indoor air quality, refrigeration and sustainability within the industry. Through research, standards writing, publishing and continuing education, ASHRAE shapes tomorrow's built environment today.



BRANZ

BRANZ - Inspiring industry to provide better buildings for New Zealanders.

BRANZ is the independent and impartial research, testing and consulting organisation focused on the building industry, funded through the Building Research Levy.

BRANZ works to identify and solve industry challenges and provide insightful research, practical knowledge and guidance that is accessible to all parts of the building and construction industry.

www.branz.nz

