venticool
the international platform for ventilative cooling

Newsletter

No 4 ● JUNE 2014

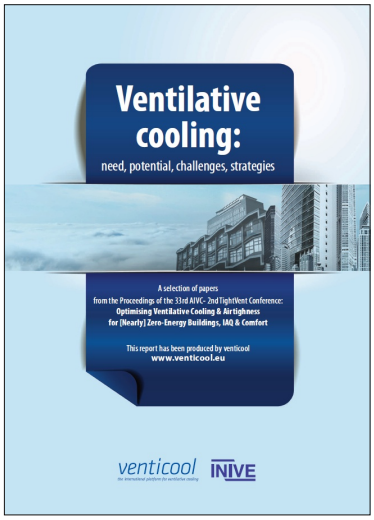
Foreword

With the increasing weight of energy performance regulations on market uptake in the building sector, bridging the gap between scientific and regulatory approaches on ventilative cooling is crucial. As you will learn through this newsletter, venticool works on several initiatives to build this bridge. In particular, with its foreseen plenary presentations and topical sessions as well as the abstracts collected through the call, the programme of the 35th AIVC and 2nd venticool conference to be held in Poznan, Poland 24-25 September 2014 already sounds very promising. It will be a great dissemination channel for IEA Annex 62, now in operational phase, as well as a central place to discuss other initiatives including legislations and possible synergies. Also, during the 1st IEA Annex 62 Expert Meeting in Lausanne, Switzerland on April 23-24, venticool and the Annex 62 participants have agreed on a short/medium-term activities including webinars, workshops, publications, etc. some of which are detailed below. Together with its involvement in the QUALICHeCK project that addresses compliance and control issues in several areas including summer comfort, venticool is pleased to fully embrace its role of facilitator. We hope this newsletter will give you a good overview of our achievements and future work.

Peter Wouters, Manager of INIVE EEIG

venticool 1st publication

Because there is a growing interest in ventilative cooling to reduce the cooling energy demand and improve thermal comfort in summer and shoulder seasons, one purpose of the 33rd AIVC-2nd TightVent Conference: “Optimising Ventilative Cooling & Airtighness for [Nearly] Zero-Energy Buildings, IAQ & Comfort”, held in Copenhagen, October, 2012, was to discuss the potential, challenges and perspectives of this technique in a track of specific sessions. This conference also inaugurated venticool, the international platform on ventilative cooling, whose aim is to accelerate the uptake of ventilative cooling by raising awareness, sharing experience and steering research and development efforts in the field of ventilative cooling.
Thereupon and after realizing the valuable experience and knowledge shared during this conference which should be of interest to many professionals, policy makers, and researchers beyond the conference attendance, venticool decided to produce a book gathering 16 publications presented during the conference.
This report: “Ventilative cooling: need, potential, challenges, strategies”, has now been finalized and available on the venticool website: venticool.eu/venticool-publications/reports



In this issue

35th AIVC & 2nd venticool conference: September 24-25, 2014 in Poznan, Poland

The 35th AIVC conference 'Ventilation and airtightness in transforming the building stock to high performance' will be held in Poznan, Poland, 24-25 September, 2014 in conjunction with the 2nd venticool conference and the 4th TightVent conference. Best papers will be considered for publication in a special issue of the “International Journal of Ventilation”.
The provisional programme includes presentations of invited world-renowned and key experts as well as 110 abstracts which have been selected from the call for abstracts for long- and short-oral presentations among which 17 are dedicated to ventilative cooling, with a focus on the following topics: potential for ventilative cooling strategies, ventilative cooling in energy performance regulations, design approaches for ventilative cooling and case studies — Integrated design, thermal comfort and ventilation and active facades.

Important dates:

- Submission of papers: 30 June 2014

Confirmed plenary session’s speakers and presentations include:

- **Carl-Eric Hagentoft**, Chalmers University of Technology, Sweden, Outcome of IEA EBC Annex 55 *"Reliability of Energy Efficient Building Retrofitting - Probability Assessment of Performance & Cost (RAP-RETRO)"*
- **Per Heiselberg**, AAU - Aalborg University, Denmark, *Ventilative Cooling – Status and perspectives*
- **Séverine Kirchner**, CSTB - Centre Scientifique et Technique du Bâtiment, France, *The Indoor Air Quality Observatory - Outcomes of a decade of research and perspectives*
- **Tomasz Lodygowski**, PUT - Poznań University of Technology, Poland, *Welcome Presentation*
- **Tomasz Mroz**, PUT - Poznań University of Technology, Poland, Title of presentation to be confirmed
- **Bjarne Olesen**, DTU - Technical University of Denmark, Denmark, Title of presentation to be confirmed
- **Pawel Wargocki**, DTU - Technical University of Denmark & ISIAQ - International Society of Indoor Air Quality and Climate, Denmark, *Recent advances on factors influencing human responses and performance in buildings and potential impacts on ventilation requirements*

Visit the conference website www.aivc2014conference.org for further information.

BUILD UP webinar on ventilative cooling!

Ventilative cooling is the use of natural or mechanical ventilation strategies to cool indoor spaces. It can significantly reduce the cooling energy demand in summer or mid-season conditions. Therefore, ventilative cooling is increasingly common in NZEBs.
This BUILD UP Web Seminar “Ventilative cooling: Keep cool and lower peak energy demand”, which took place on 6 June, addressed the following:

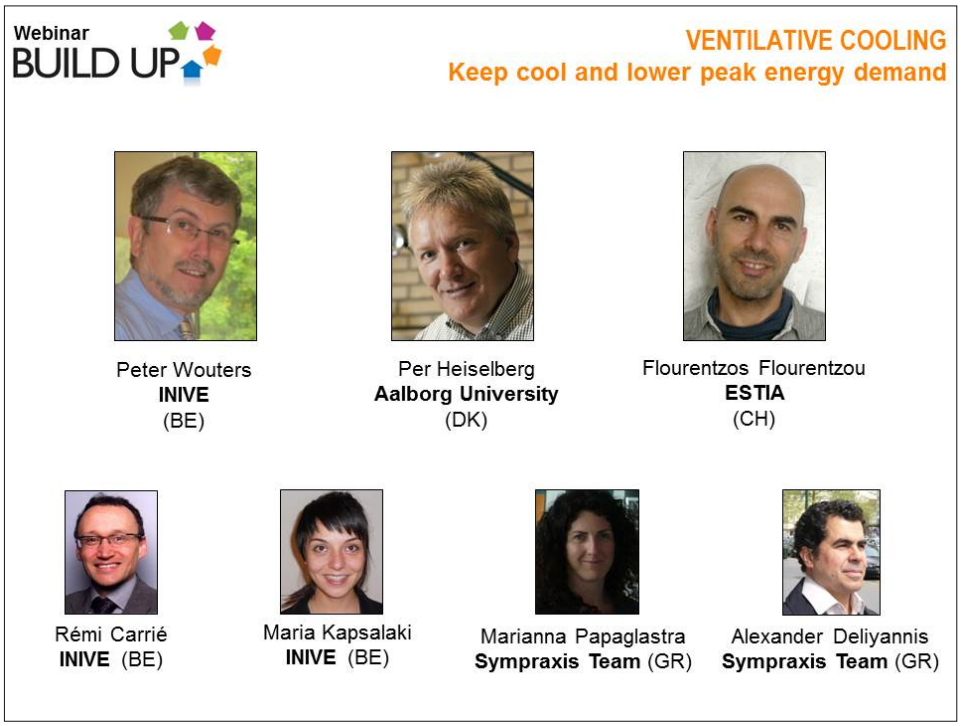
- *Challenges for ventilative cooling in the context of NZEB - the venticool platform;*
- *Potential energy savings and the new IEA EBC Annex 62 on ventilative cooling;* and
- *Case studies - demonstrated high level summer comfort in real buildings.*

Speakers:

- **Peter Wouters**, International Network for Information on Ventilation and Energy Performance (INIVE eeig)
- **Per Heiselberg**, Aalborg University (Denmark)
- **Flourentzos Flourentzou**, ESTIA (Switzerland)

The webinar has been recorded and is now available along with PDFs of the presentations at www.buildup.eu/news/41466

Recordings of all webinars hosted by BUILD UP are now available at www.buildup.eu/webinars



NEW! European QUALICHeCK project

The new European QUALICHeCK project has started in March 2014 and will run till February 2017. This project is funded by the European Commission under the Intelligent Energy Europe Programme. It aims primarily at determining best cases and tackling bottlenecks to increase the reliability of EPC input data, to influence quality of construction and to support compliance with building Energy Efficiency and Renewable Energy regulations, as well as to support transition towards nearly zero- energy buildings.

With this respect, there are specific challenges concerning sustainable summer comfort technologies—e.g. solar control, thermal mass, ventilative cooling strategies, cool roofs—which therefore will be explored in more detail. One striking example with ventilative cooling lies in the reluctance of designers to take this option if they are required to meet strict summer comfort criteria. On the other hand, they are encouraged to consider this option with tight limitations on cooling energy use, allowances for short periods where comfort criteria are not met, robust industry solutions, etc.

Through its dissemination activities, venticool will support the identification and critical review of such examples. The first international QUALICHeCK conference will be held in Brussels on September 30.

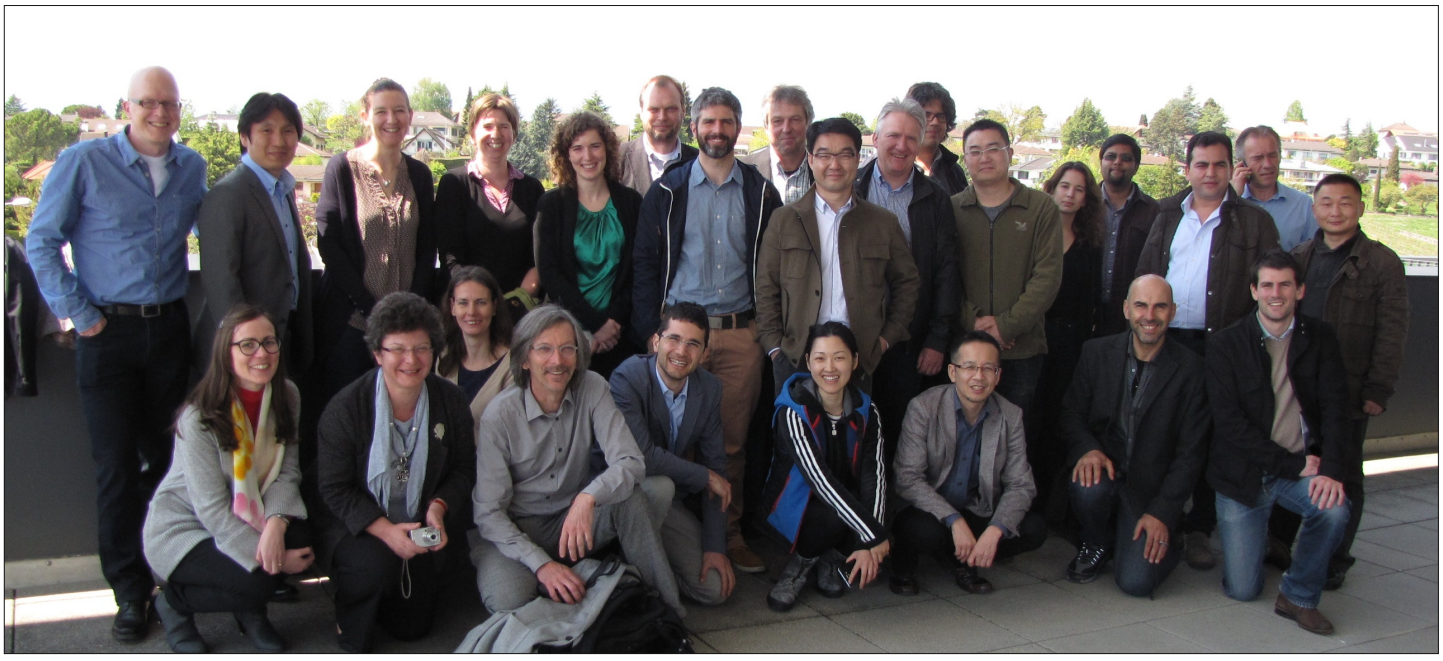
More information can be found at www.qualicheck-platform.eu

Annex 62 “Ventilative cooling” met in Lausanne

By Per Heiselberg,
University of Aalborg, Denmark

After its successful preparation phase, the IEA EBC Annex 62 entered in January 2014 its four year working phase (2014-2017). The first meeting of the working phase was held in Lausanne, Switzerland, with 32 representatives from research institutes and private industries from 15 countries (the full Annex participants list with affiliations is available at venticool.eu/annex-62-participants).

The main focus of the meeting was the preparation of the state-of-the art report based on the drafts of the 6 main chapters. The final version is expected to ready before the second expert meeting in September 2014. The participants reviewed the work status of subtasks A and B on “Methods and tools” and “Solutions”, respectively. Regarding the dissemination action plan, in the short term, the participants have decided to organize a workshop on 17 September 2014, in Brunel, UK, in conjunction with the next expert meeting to discuss ventilative cooling issues with key local actors, including industries, consultants, standard writers and policy makers. In addition, the 35th AIVC conference in Poznan, Poland, 24-25 September 2014, will include a session specifically on the Annex.



32 representatives gathered for the 1st Annex 62 expert meeting. The meeting was held on the campus of EPFL in Lausanne, Switzerland and hosted by Flourentzos Flourentzou, ESTIA.

What is ventilative cooling?

Ventilative cooling refers to the use of natural or mechanical ventilation strategies to cool indoor spaces. This effective use of outside air reduces the energy consumption of cooling systems while maintaining thermal comfort. The most common technique is the use of increased ventilation airflow rates and night ventilation, but other technologies may be considered as well. Ventilative cooling is relevant in a wide range of buildings and may even be critical to realize renovated or new NZEB.

What is venticool?

venticool is the international ventilative cooling platform launched in October 2012 to accelerate the uptake of ventilative cooling by raising awareness, sharing experience and steering research and development efforts in the field of ventilative cooling.

Disclaimer

PARTNERS

- **AGORIA-Naventa** is the Belgian association of manufacturers of natural ventilation in residential and non-residential buildings. This group was founded within Agoria, the federation of the Belgian technological industry. As Naventa, we give special consideration to health-related issues when developing new natural ventilation, solar shading and night cooling systems. By supporting the venticool platform, Naventa wants to increase her knowhow and raise awareness that there is a huge need for CEN standards to calculate the influence of ventilative cooling on the energy performance of buildings..

- **ES-SO**, the European Solar-Shading Organization (ES-SO) is the umbrella body representing the European solar shading and roller shutter industry. Its objectives are to provide a permanent point of contact between its members (mainly the national professional trade associations) and the European authorities, and to demonstrate that solar shading can make a substantial contribution to energy savings and indoor comfort. By joining the ventilative cooling platform ES-SO underlines the importance of different technologies and strategies to be used in a multidisciplinary and integrated conceptual way to reach the target of low energy buildings' thermal comfort criteria as well as maintaining a good indoor climate and visual comfort .

- The **VELUX** Group offers a wide range of solutions for daylight and fresh air through the roof – regardless of roof pitch, size and purpose of the building.The VELUX Group considers ventilative cooling to be a sustainable technology. A technology which today is not at all used to its full potential. The mission of venticool is therefore crucial. It supports the effective and knowledge-based promotion of the use of ventilative cooling, it fills in the gaps in the value chain of ventilative cooling that exist in calculation methods, standards and regulations, and it promotes the communication and awareness of ventilative cooling that could act as a catalyst in the development of the right solutions for the market when they are most needed.

- **Wienerberger** is the world's largest producer of clay blocks and number one in facing bricks in Europe and the USA as well as the market leader for clay roof tiles in Europe with 214 plants in 30 countries. In an ever-evolving construction market with stricter energy, insulation and sustainability requirements for homes and buildings, Wienerberger is constantly striving towards innovation with intelligent building concepts and total solutions, attaching great importance to the aspect of sustainability in green manufacturing, construction and living.

  Our partnership with Venticool enables us to further develop and optimize the sustainable building solutions we offer to our customers. Moreover, we want to transfer knowledge to our customers (both builders, renovators and building professionals such as architects, engineering agencies, contractors, etc.) by means of theory- and practice-oriented training courses, seminars, workbooks, etc.

- **WindowMaster A/S** is founded on a vision to create better buildings that have plenty of fresh air and excellent and safe indoor climates. We supply sustainable indoor climate solutions for all types of buildings and our solutions are based on natural and hybrid ventilation. Also natural smoke ventilation is a part of our offerings. Our expertise is built on our knowledge of regulatory standards and project development, and our experience from thousands of completed projects across Europe.

PLATFORM FACILITATOR

- **INIVE** is a registered European Economic Interest Grouping (EEIG) that brings together the best available knowledge from its member organisations in the area of energy efficiency, indoor climate and ventilation.