

Air Infiltration and Ventilation Centre

PROJECT DESCRIPTION

Ventilation and air infiltration into buildings represent a substantial energy demand which can account for between 25% to over 50% of a building's total space heating (or cooling) needs. Unnecessary or excessive air change can therefore have an important impact on global energy use. On the other hand insufficient ventilation may result in poor indoor air quality and consequential health problems.

Designing for optimum ventilation performance is hence a vital part of building design. This task is made especially difficult, however, by the complexities of airflow behaviour, climatic influences, occupancy patterns and pollutant emission characteristics.

In recognition of the significant impact of ventilation on energy use, combined with concerns over indoor air quality, the Air Infiltration and Ventilation Centre was inaugurated in 1979. The AIVC offers industry and research organisations technical support aimed at optimising ventilation technology. A range of services and facilities are offered, including comprehensive database on literature, standards, and ventilation data.

A series of guides and technical notes is also produced. The Centre holds annual conferences and workshops and publishes a quarterly newsletter, *Air Information Review*, with an accompanying website. Through the newsletter and website readers are kept informed on a wide range of ventilation related issues.

Duration

1979 - ongoing

OPERATING AGENT

The operating agent of the AIVC is INIVE eei (International Network for Information on Ventilation and Energy Performance).

PARTICIPANTS

Belgium, Czech Republic, France, Greece, Japan, Netherlands, Norway, USA

REPORTS/PAPERS PUBLISHED IN 2006

Building Ventilation – The State of the Art, Earthscan, August 2006

Ventilation Information Papers:

VIP 11: Use of Earth to Air Heat Exchangers for Cooling

VIP 12: Adaptive Thermal Comfort and Ventilation

AIVC Technical Notes

TN 60: Efficacy of Intermittent Ventilation

Airbase Bibliographical Database – including over 2000 full papers.

Standards Database – Online Database of CEN related ventilation and energy standards.

REPORTS/PAPERS PLANNED IN 2007

- AIVC Technical Notes on: Natural and Hybrid Ventilation in Urban Environment and Energy, Ventilation and Indoor Environmental Quality of Low Income Households
- Literature Lists and Annotated Bibliographies including: Annotated Bibliography on Residential Ventilation Requirements; Ventilation related reports from ECBSC; Reshyvent publications.
- AIVC 2006 Conference Overview Report
- AIVC "Contributed Reports" including Reshyvent WP 1 report; Reshyvent WP 2 reports
 - occupant behaviour; Reshyvent report WP 8
 - Summary Report; Economic considerations on ventilation; low-pressure drop HVAC design for laboratories; and capabilities of energy performance simulation programmes.
- Ventilation Information Papers on CEN standards; Air Quality in Planes; Ceiling Fans and Double Ventilated Facades.

MEETINGS IN 2006

27th AIVC Conference / 4th EPIC conference, Lyon, France, 20-22 November 2006