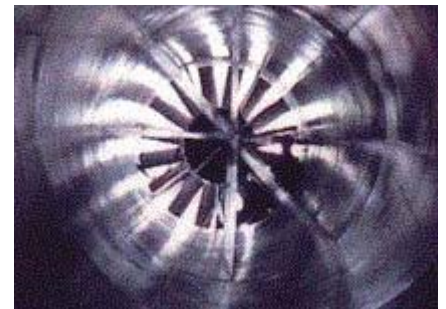
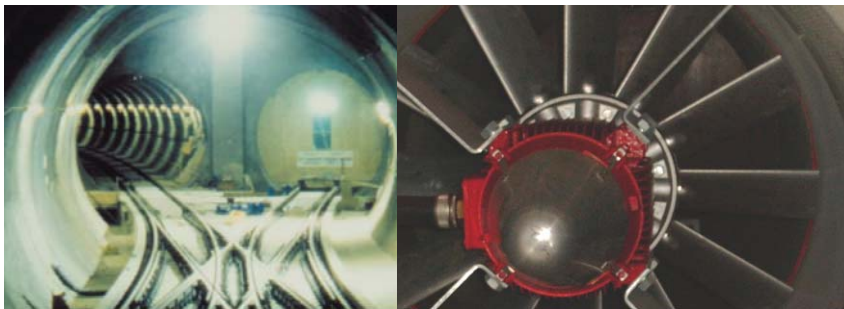


Call for Papers

14th International Symposium on

AERODYNAMICS AND VENTILATION OF TUNNELS



BHR Group is delighted to announce that the Symposium will be held in Dundee, Scotland 11 – 13 May, 2011.

In the aftermath of the severe downturn in the World's economies, there will inevitably be increased pressure upon designers and engineers to develop more cost-effective solutions for tunnel construction without compromising safety. Can the technical community deliver an ever-better product to satisfy both the financiers and economists yet offer greater protection to the public who will use the facilities?

Developing also means improving the awareness of past successes and failures across the industry. There are regular instances where techniques and ideas are offered as novel answers to problems when the reality is that such methodologies have been evaluated on numerous occasions in the past. Engineers and researchers have a duty to be thorough in their research of past work and to examine their work critically so that genuine advancements can be recognised as such and acknowledged by the leaders in the field.

As engineers, we are asked to put forward new findings that will improve the work we do. Consequently we must always ask ourselves "What relevance does my work have to the construction, operation or refurbishment of tunnels and how can my findings be of value to other designers?" If we fail to address this question, the work may be interesting but not offer real value to the working community.

The ISAVT Technical Committee has recognised that tunnel ventilation does not simply apply to vehicle tunnels. There are millions of other tunnels, whether these are pedestrian or mining tunnels or tunnels carrying pipelines or cables. All of these can be accessible to humans at times and therefore require as much care, protection and safety as those used by passenger-carrying vehicles. Accordingly the Technical Committee has decided to widen the scope of the Symposium to include technical papers on work designed for these alternative tunnels.

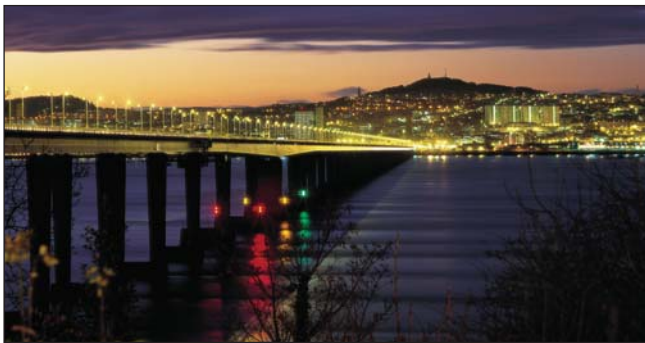
Papers are invited on all aspects of the technical or commercial decision making, stakeholder requirements, project or detailed engineering, risk analysis, research, objective or legal considerations.

Sponsored by:  **PARSONS
BRINCKERHOFF**

Venue

The Symposium will be held at the Apex Hotel, Dundee, Scotland, Dundee, on the banks of the River Tay on the East Coast of Scotland, is a historic city famous for its “three Js - Jam, Jute and Journalism” – and boasts many famous sights and historic figures. It is midway between Edinburgh, the capital city, and Aberdeen, Scotland’s oil capital. The Symposium venue is close to all the local facilities as well as rail links to the rest of the UK. Dundee’s Convention Bureau operates a free hotel booking service and will provide free transfer services from Edinburgh international. The city also has a small local airport with connections to London City Airport provided by Air France.

Travel and accommodation details will be included in the registration leaflet available December 2010.



Best Paper Prize

BHR Group is pleased to announce that a prize will again be awarded for the best paper presented at the symposium. The winner will be chosen by the Technical Advisory Committee. The prize is offered thanks to the kind sponsorship of HBI Haerter AG, Switzerland.

Sir Alan Muir Wood Lecture

A Prestige Lecture series named in honour of the late Sir Alan Muir Wood was inaugurated in 2006 with the first address being given by Sir Alan himself and entitled ‘Realistic aspirations for 21st century tunnels – safety, comfort and energy efficiency’. The lecture series provides a platform for distinguished speakers within and without the industry to provide the ISAVT audience with an expansive, thought-provoking and inspirational view of the environment in which we all operate. The Symposium in 2011 will include the third in this series of Prestige Lectures.

Offers of Papers

Authors are invited to submit title and abstract within the scope of the Symposium, to reach Ally Davies by 7 July 2010. The abstract must be relevant to the scope, and the title should briefly describe the content of the paper. Abstracts should be submitted by email to confx2@bhrgroup.co.uk.

Timetable of Deadlines

Receipt of abstract: 7 July 2010

Receipt of manuscript: 7 November 2010

Selection Criteria and Objectives

The selection of papers will strictly take account of originality, relevance and likely interest to delegates, with priority being given to papers that present new material. Predominantly theoretical papers are normally expected to include experimental or other practical validation. Papers must be of a technical nature and must seek to advance the state of the art by improving knowledge or by demonstrating innovative applications of best practice. Symposia in this series are always oversubscribed with papers and feedback from past Symposia indicates that delegates prefer a reduced number of high quality presentations and increased discussion time.

Authors who wish to present commercial material are invited to take an exhibition stand in addition to presenting their technical paper.

It is expected that the Symposium will include a variety of session styles, including:

- Plenary, parallel and poster sessions for the presentation of individual papers
- Panel sessions focussed on groups of papers addressing common themes
- Discussion/debate forums led by invited speakers

In allocating papers to sessions the Committee will seek to maximise the benefit for all authors and delegates. All papers will be included in a bound Volume of Papers and CD to be given to delegates at the Symposium.

Scope

1. Physical and theoretical models and design tools

Focussing on (i) physical, analytical or numerical methods of simulating tunnel aerodynamics and ventilation including validation and standardisation, (ii) risk, sustainability or cost benefit analysis or (iii) tools tailored for use in the design and operation of ventilation systems.

Preference will be given to papers that, in the opinion of the Technical Committee, satisfy a clear need and include convincing validation of method and accuracy. Papers should demonstrate the decision making or other factors employed in their development or application.

Example topics include:

- Fire Heat Release and Smoke Generation Rates
- Physical and numerical models of airflows, pressures, temperatures and pollution
- Influence of tunnels on the environment – exhaust, dilution, dispersal
- Simulators of fire, smoke and visibility
- Methods of analysing pressure wave propagation and attenuation
- Analysis of risk aspects including cost benefit of alternative design solutions
- Full-scale and model-scale testing
- Algorithms for effective monitoring and control
- Validation of design tools and methodologies – actual system performance
- Basic design parameters – heat release rates, vehicle drag and emission, etc

2. Innovations in application and practice

Another group of papers will focus on technical aspects of the design and operation of tunnels and underground stations. Some may be targeted at feasibility studies and conceptual design – for either real or hypothetical applications – and in this case they should demonstrate the reasoning behind the chosen route and the desired objective. Others will address the design, commissioning and operation of actual tunnel projects – deviations from standards, and justification for them, are relevant aspects to be covered here.

Preference will be given to papers that, in the opinion of the Technical Committee, show special novelty or are outstanding examples of best practice and present clearly reasoned paths to the conclusions drawn.

Topics may include, for example:

- Design standards, comfort criteria
- Routine and non-routine operation – maintenance, incidents, etc
- Equipment and its environment – fans, dampers, switchgear, etc
- Monitoring and control – sensors, data acquisition, operator interfaces, etc
- Responding to continuing reductions in vehicle emissions
- Upgrading existing ventilation systems – hardware and software
- Ensuring safety and reliability – availability levels, integrity levels, etc

3. Operational and professional issues

Other papers will address non-technical aspects of tunnel design and operation, including issues that influence the effectiveness with which ventilation systems can be used in practice and factors limiting the scope for innovation in design and operation.

Preference will be given to papers of special relevance to engineers and infrastructure owners with direct responsibility for aerodynamics and ventilation in tunnel systems. Papers that relate only indirectly to the main theme of the Symposium are not encouraged.

Topics may include:

- Training – staff, users, emergency services
- Stakeholder Management
- Societal issues – liability, responsibility, sustainability
- Risk, insurance, cost, comfort
- Dissemination of best practice
- Human factors and their influence on automatic vs manual control
- Keeping up to date with research and innovation
- Learning from near misses and from constructive "what if.." scenarios



Important – Authors Please Note

- Papers must be original, unpublished, and not pending publication elsewhere.
- The author submits each paper on the understanding that it will be independently reviewed. If the paper is accepted, the author must attend the whole Symposium to present the paper and discuss with delegates. The presenting author is entitled to a 25% discount on the full Symposium fee.
- Papers, and presentation at the Symposium, must be in English.
- Papers should be no longer than 15 printed A4 pages. There is no minimum length.
- The title should be appropriate to the scope of the Symposium and should accurately describe the content of the paper.
- BHR Group will supply guidelines for the preparation of manuscripts. Papers conforming to these guidelines will be accepted for publication, subject to final refereeing.
- The copyright of accepted papers must be transferred to the Publisher. Authors who wish to retain copyright must notify the organisers when submitting their abstracts.
- The presenting author will receive one copy of the published proceedings and a CD of the papers.
- Register your details and abstract or interest online at www.bhrconferences/isavt14, including accommodation and site visits will be included in the registration leaflet available later in the year.

Sponsorship & Exhibition

Do you have a product or service to promote and would like to enhance your brand awareness? For details of how we can tailor a sponsor package to suit your needs, please contact the organisers. There will also be a tabletop exhibition alongside the Conference. Exhibition stands will be limited and prospective exhibitors are strongly advised to register their interest with the organisers at the earliest opportunity.

Continuing Professional Development/ Continuing Education

The technical content of the conference will enable engineers seeking opportunities for Continued Professional Development to count their attendance towards their total of CPD activities.

BHR Group

BHR Group is an independent Research and Technology organisation. Our services to industry are based around our core skills in Fluid Engineering and include consultancy, research and development, conferences, seminars and specialist training.

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Ian Cockram	Consultant, UK
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