



INCOSE UK Chapter – Rail Interest Group

Cooling the Tube

1800H, Wednesday, 11 October 2006

The Tunnel Cooling Programme (TCP) has been instigated to provide solutions to improve thermal conditions on the London Underground network. The current conditions and future expected increases are due to:

- Growth in service levels.
- Inadequacy of the existing ventilation provision in relation to improved service levels.
- Growth in energy consumption to reduce journey time and consequent heat generated.

Some of the specific challenges faced by the TCP include:

- Implementation of a wide range of solutions from simple fans on stands, to boreholes 150m underground and new ventilation shafts up to 8m diameter.
- Procuring solutions through all parts of the LU supply chain.
- Managing the network wide, long term cooling challenges.
- The interconnected nature of heat flow across the underground network and its stations.

Mark Gilbey and Jon Harding of Parsons Brinckerhoff will:

- Describe the cooling problem and the TCP approach to understanding and defining the cooling requirements.
- Explain the TCP approach to translating cooling requirements into delivery projects.
- Look at the types of solutions under consideration.

The meeting will take place at Tube Line's offices at 15 West Ferry Circus, London E14 4HD. Non-members are welcome and there is no charge for attendance but places must be booked in advance. To book, obtain directions or for any other questions, please contact the RIG Chair, Bruce Elliott (bruce.elliott@atkinsglobal.com) or +44 (0)7970 694043.

The International Council on Systems Engineering (INCOSE) is an international professional society for systems engineers whose mission is to foster the definition, understanding, and practice of world-class systems engineering in industry, academia, and government. INCOSE was formed in 1992 to develop, nurture, and enhance the interdisciplinary approach and means to enable the realization of successful systems. Since then, INCOSE has grown dramatically. Today there are over 5,000 member systems engineers, 50 chartered chapters worldwide, and more than 40 Corporate Advisory Board members from government, industry, and academia.

The INCOSE UK Rail Interest Group has been formed:

- *To provide a forum for those interested in Systems Engineering in rail to network in a less formal environment, to exchange good practice and to provide mutual support in an area which can require some sustained perseverance;*
- *To promote, improve and share the practice of Systems Engineering within the rail industry;*
- *To foster connections with other professional bodies within rail and thereby promote cross fertilisation of knowledge and experience across sectors and community disciplines; and*
- *To promote awareness of INCOSE UK and encourage membership within the rail industry.*

For further information, see <http://www.incose.org.uk/rig.htm>.