

EU

European Thematic Network on Fire in Tunnels

FIT (Fire in Tunnels) is a €1.48 million R&D programme almost fully financed by the European Union within the Fifth Framework Programme. It provides a platform for dissemination and information of updated knowledge and research on fire and tunnels. FIT represents over 30 members from 12 EU members. The programme started in March 2001 and will end in February 2005. Visit www.etnfit.net. The lead participant is Centre Scientifique et Technique de la Construction, a research organization based in Brussels. Contact carlo.depauw@wtcbcstc.be. Other partners are:

- STUVA (Germany), visit www.stuva.de
- Arup, visit www.arup.com
- Institut National de l'Environnement Industriel et des Risques, visit www.ineris.fr
- Mott MacDonald, visit www.mottmac.com
- Netherlands Organization for Applied Scientific Research, visit www.tno.nl/homepage.html
- Building Research Establishment Ltd in Garston (UK), visit www.bre.co.uk/services/Fire_safety.html
- Dragados, visit www.dragados.com
- Gesellschaft für Anlagen- und Reaktorsicherheit (Germany), visit www.grs.de
- Italian Agency for New Technology, Energy and the Environment in Bologna (Italy), visit www.enea.it
- Lyon Turin Ferroviaire, visit www.ltf-sas.com
- Fogtec Brandschutz GmbH & Co KG, visit www.fogtec.com
- Sistemi Esperti per la Manutenzione (Italy), visit www.sesm.it
- Deutsche Montan Technologie (Germany), visit www.dmt.de
- Cowi (Denmark), visit www.cowi.dk
- University of Greenwich (UK), visit www.gre.ac.uk/schools/cms/index.html
- Institut für Baustatik in Graz (Austria), visit www.cis.tu-graz.ac.at/ifb
- Centre for Civil Engineering and Research Codes (Netherlands), visit www.cur.nl and www.cob.nl
- Kent Fire Brigade in Maidstone (UK), visit www.kent.fire-uk.org
- Stockholm Fire Brigade, visit www.etnfit.net/content/partners/sweden_stockholmf.html
- Sund & Baelt Holding A/S (Denmark), visit www.sundogbaelt.dk/Corporate_UK/Frontpage.htm
- RATP (the Paris metro operator), visit www.ratp.fr
- Metro de Madrid S.A., visit www.metromadrid.es
- France-Manche S.A.
- Centre d'Etudes des Tunnels (France), visit www.equipement.gouv.fr/cetu
- AlpTransit Gotthard, visit www.alptransit.ch
- Fire Safety Design AB (Sweden), visit www.fsd.se
- HSE in Buxton (UK), visit www.hse.gov.uk and www.hsl.gov.uk
- Traficon (Belgium), visit www.traficon.com
- Hochtief, visit www.hochtief.de/hochtief/hochtief
- Consejo Superior de Investigaciones Cientificas, visit www.ietcc.csic.es
- SP Swedish National Testing and Research Institute, visit www.sp.se/sv/default.asp

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- Technical Research Centre (Finland), visit www.vtt.fi/rte, e-mail juho.saarimaa@vtt.fi

World Digest of Tunnels Under Planning

Armenia-Iran. Edik Barseghian, the governor of southern Armenian province of Syunik, which borders with Iran, announced that the 3 km Kajeran-Meghri road tunnel, estimated at \$43 million, is expected to kick off in the first half of 2003. Armenia will provide 15% of the funding. Visit www.tunnelbuilder.com, am/11 and ir/18.

Canada. A transportation ministry report reveals that building a bridge linking Vancouver Island with the mainland is not realistic as it would cost \$12 billion and take 25 years to complete. If current technology were to be used to build a fixed link, users would have to pay a one-way toll of \$800 to achieve a 20% return on investment for the province. The report, A Potential Fixed Link to Vancouver Island, also looked at other options, including a bored tunnel, a submerged floating tunnel, a floating pontoon bridge and a series of cable-stayed bridges supported on floating anchored piers. However, all fixed link options pose challenges including technological, social, environmental, financial and safety concerns. There are very unusual conditions in the Strait of Georgia. Since 1909, 13 major earthquakes with a 4.9 magnitude or greater and hundreds of lesser earthquakes have occurred. The report said other engineering challenges include the fact the crossing could be up to 26 kilometres long in water as deep as 365 metres. Deep, soft sediments of up to 450 metres are on the ocean bed and potential marine slope instabilities along the eastern side of the Strait of Georgia could result in underwater landslides.

Malaysia. Work on the 37 km-long tunnel to channel water from Sungai Telemung in Pahang state to Selangor will begin next year. The RM5.7 billion (US\$1.5 billion) tunnel was proposed after the Klang Valley water crisis in 1998. It is due for completion in 2007 and will meet the demand up to 2020. The Japanese government granted a loan for the project. Soil investigation studies by Malaysian and Japanese experts have been completed.

Spain. The EIS for the 170 km Huesca-Pamplona highway has been approved. The selected option in Aragon runs through Monrepós, Jaca and Sabiñánigo. Construction in Navarre will start in 2003 but not before four years in Aragon. There will be a nearly 5 km tunnel under the Monrepós Pass. This highway will cost €1.2 billion.

United Kingdom. Further ground investigation work, starting on 6th January, is to be carried out on Hindhead Common as part of the A3 Hindhead tunnel scheme. This additional ground investigation work will be carried out along the tunnel and tunnel portal approaches of the A3 scheme giving a better assessment of the ground conditions and filling in the gaps needed for the detailed tunnel design. This work includes boreholes and trial pits in Boundless Copse, on the Hindhead Common and in Tyndalls Wood, and includes one borehole within the Devils Punch Bowl area itself. The work involves the drilling of 26 additional boreholes and 26 trial pits. The work forms part of the investigations being undertaken to provide twin tunnels beneath Hindhead Common for the realignment of the A3 to take trunk road traffic out of the centre of the town. The ground investigation work will be carried out between January and May 2003 by Soil Mechanics Ltd. The Highways Agency awarded the contract to design and build the £132 million road scheme, including a 1.9 km tunnel on 1st October, 2002 to Balfour Beatty Major Projects with Mott MacDonald at its design agents. Work would start in 2005 and be completed by 2009. Visit www.highways.gov.uk and



Picture 1: Graphic view of the Hindhead tunnel.

www.tunnelbuilder.com, uk/37.

United States. Engineering problems could add significantly to the cost of a proposed \$1.9 billion subway connection between lower Manhattan and the AirTrain commuter rail station at Jamaica, Queens. The so-called Super Shuttle would run trains along the Long Island Rail Road's Atlantic Avenue branch from Jamaica, and then switch to existing subway lines in downtown Brooklyn before heading to a new World Trade Center station. But MTA experts studying the proposal have determined that one of the two new tunnels needed for the project – linking the C line at Hoyt-Schermerhorn to the F line at Jay Street – would not work.

World Digest of Bids

Canada. Notice of proposed procurement for the electric refurbishment of the Louis-H. Lafontaine tunnel entrance in Montréal, deadline 15th January, 2003. Estimated amount of the contract: C\$1 to C\$5 million. Contact Ministère des transports, Salle des soumissions Québec, 700 boulevard René-Lévesque Est, 2e étage, Québec G1R 4Y9, tel. +1 418 6448848 or 6440439, or Salle des soumissions Montréal, 440 boulevard René-Lévesque Ouest, 6e étage, Montréal H2Z 2A6.

France. Open call for bids, deadline 31st January, 2003 for construction of the 400 m tunnel in Utelle in Alpes-Maritimes county. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=199717-2002>, OJ S 250, or contact Conseil général des Alpes-Maritimes, Nice, fax +33 497186008. E-mail dgtr@cq06.fr

Iran. Alstom, Siemens, Bombardier, Norinco and China International Trust and Investment Corporation are five foreign companies among the 16 that have purchased bid documents for the turnkey contracts to design and build two new underground metro lines in Tehran. Adding around 57 km to the existing network, which comprises only two lines, the projects are scheduled to be completed by 2011. Bids for construction are scheduled to be submitted by early January with work starting as early as March 2003. The bidders must include with their bids proposals for financing the projects and foreign companies must subcontract at least 51% of the work to local firms. The contract will cover 20 years, with a 12-year repayment phase following the eight year construction period.

Italy. Periodic information notice for the supply of tunnel lighting. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=202532-2002>, OJ S 252, or contact Rete Ferroviaria Italiana, Rome, fax +39 064741263. E-mail acquisti@rfi.it. Visit www.rfi.it/negoziale

Spain. Open call for bids, deadline 27th February, 2003 for work control and supervision of the connection Castrelo-Bouzas / Puxeiros-Val Minor in Vigo. There is a 260 m cut-and-cover tunnel. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=202317-2002>, OJ S 252, or contact Ministry of development, Madrid, fax +34 915978537 or 8470. E-mail cpublic@mfom.es. Read E-News Weekly # 29.

World Digest of Contract Awards

Ireland. Indra Sistemas SA said it has been awarded a €6.8 million contract from Bouygues Travaux Publics unit Mowlem Intrafor to install security and traffic control systems in the two Dublin port tunnel tubes. Indra will supply systems for fire detection, ventilation control, lighting, energy supply, signalling, video monitoring, fault detection, communications and sound. The technology systems are expected to come onstream in December 2004.

World Digest of Ongoing Tunnelling



Armenia. Drilling work is continuing at the 2,257 m Sevan-Dilijan road tunnel under Mount Dilijan in Tavush province. The contractor is Arpa-Sevan Co. Construction was halted in 1992 due to the then economic recession in Armenia. The project will cost \$6.7 million and is financed by the US Lincy Foundation programme. It will last until the end of 2003. Visit www.spyur.am/arpasevan.htm

Picture 2: Portal of the Sevan-Dilijan tunnel.

Italy. Construction firm Locatelli is building the 537 m San Martino tunnel in Ancona to connect Marconi street and San Martino street. The 8 m-wide double-lane tunnel will be bored on a length of 450 m, the remainder will be a disused anti-bombing shelter. The dual-lane one-way tunnel is driven using traditional means.

Italy. A JV of Coopcostruttori and Sparaco Spartaco has taken over from bankrupt contractor Vienne the construction of lot zero between Cadorna street and Porta Romana, on national road 80, south of Teramo in Abruzzo region. The project, which includes three tunnels, is four to five months behind schedule. To catch up the delay, the JV has asked tunnellers to work on weekends hoping to finish the job within 20 months in August 2004.

World Digest of Inaugurations

France. The 1,418 m La Major tunnel in Marseille has been inaugurated on 16th December, 2002. Two new cut-and-cover stretches have been added to both ends of the existing Dames-Joliette tunnel (368 m) to extend it: the La Major section (607 m) and the Dunkerque section (443 m). The tunnel relieves transit traffic in the vicinity of the old La Major cathedral. A total of €58.7 million has been invested on the project. Visit www.mairie-marseille.fr/vivre/images/pdfmajor/lamajor.pdf and www.raby-f.com/quartiers/la_major.html

Germany. The 1,730 m Weserauen tunnel has been inaugurated on 6th December on road B61n in Porta Westfalica. This is the longest tunnel in North Rhine-Westphalia. On 16th December, the first tube of the Nollinger Berg tunnel (1,268 m) has been opened on highway A98/A861. The second bore is planned to open in 2005. Finally, a new section of the A71 motorway in Thuringia has been opened to traffic on 20th December. This section includes the Berg Bock tunnel (2,750 m). The A71 motorway will be fully commissioned next spring with the opening of the Rennsteig tunnel (7,916 m + 7,878 m). Visit www.a71.de

World Digest of Tunnel Renovation & Maintenance

France. Preinformation notice for clearance upgrading of four tunnels, all 5 m in width, on county road RD926: Arcellaz (118 m), Combe Soudan (184 m), Grand tunnel (499 m) and Petit tunnel (38 m). Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=200229-2002>, OJ S 250, or contact Conseil général de la Savoie, Chambéry, fax +33 474750472. E-mail pascale.clerec@cg73.fr

Germany. Periodic information notice for building a reinforced concrete shell in the Loreley and Roßstein tunnels on the Wiesbaden-Lahnstein railway section. Work value €17-€18 million. Visit <http://ted.eur-op.eu.int/udl?request=Seek-Deliver&language=en&docid=202527-2002>, OJ S 252, or contact DB Projektbau, Frankfurt, fax +49 6926543152. E-mail mathias.breidenstein@bahn.de