

Italy

Genoa Harbour Tunnel May Be TBM-Driven

Tunnel di Genova SpA is seriously considering to drive the harbour tunnel between Calata Sanità and Calata Gadda in Genoa using a TBM instead of building an immersed tunnel. The bored tunnel would lie at a depth of 50 m. However, the choice between the two solutions has yet to be made. The bored tunnel option seems preferred to the immersed elements to avoid disruption to the harbour traffic. It is also believed that the tunnelling solution would not cost more than the immersed tube technology. The immersed tunnel would feature two tubes with three 3.75 m-wide lanes and a 3 m-wide emergency lane in each tube. The tunnel would start in San Benigno and exit in Calata Gadda. The bored tunnel could be a very large diameter single tunnel, 18 m in diameter, or a smaller diameter double tunnel, around 14 m in diameter, accomodating three lanes and a 70 cm-wide lay-by in each tube, or even a triple tunnel with two tubes for lorries and one tube in between for light vehicles. The decision will be made after mid-May. The designers are High-Point Rendel, Tunnel Engineering Consultants, Technital and D'Appolonia. Visit www.tunnelbuilder.com, it/49.

Italy

Mestre Tunnel Not a Danger to Venice, Writes Dr Martin Herrenknecht

Further to the publication of our article in E-News Weekly 17/2003 in which we reported that Richard Lovat expressed his concern to Italian minister for infrastructure Prof. Pietro Lunardi about the construction of the Mestre tunnel which may endanger Venice, Dr. Martin Herrenknecht wrote to Richard Lovat to fully support the idea of building such a tunnel and express his disagreement with Lovat's stance. "If this would be the case, writes Dr. Herrenknecht, we could never do tunnelling in Shanghai, Amsterdam, or generally in the Netherlands in sluppy ground. With positive breast support like a Mixshield (slurry or EPB, closed mode), it is possible to easily handle such projects with success. Professor Lunardi is a high qualified professor in tunnelling who knows the business. (...). He did handle difficult projects with great success, so I am sure with positive breast support, the Mestre tunnel can be built without sinking the lovely Venice." Visit www.herrenknecht.com and www.lovat.com

World Digest of Tunnels Under Planning

Spain. The Ministry of development, the Valencia regional government, the city of Alicante, RENFE – the Spanish state railways, and GIF – the state-owned body in charge of building high speed lines will sign this month a €188 million financing agreement for the passage of the Madrid-Valencia-Murcia high speed railway in Alicante, which requires to sink underground the line.

Spain. The 9,780 m Os Peares bypass on the 103.3 km Ourense-Monforte-Lugo high speed rail link requires a 8,750 m tunnel to save Ribeira Sacra, ending on the right bank of River Cabe, and a 300 m túnel in Bóveda (read E-News Weekly 7/2003).

The 12,720 m Rubián bypass will require three tunnels (5,350 m, 600 m and 400 m).

The environmental impact statement is awaited for the 7.5 km Puebla de San Julián bypass. There will be a 570 m tunnel under Mount Castavelo and a 1,520 m tunnel under Mounts Chaia and Porqueiro. This section will cost €78 million.

tunnelbuilder

E-News Weekly 19/2003
No. 71 – 1st May 2003

- Projects under planning
- Up-to-the-minute news of bids and awards
- Informed comment on the state of the international tunnelling industry
- Complete spectrum of tunnelling activity
- Innovations and R & D
- Subsurface Development
- Renovation and maintenance
- Useful links

To subscribe to **E-News Weekly**, click on www.tunnelbuilder.com/enewsform.htm, or visit the Resources section at www.tunnelbuilder.com and select **E-News Weekly** from the dropdown menu, or contact e-news@tunnelbuilder.com

Further details or advice on our news items may be given, when available, contacting research@tunnelbuilder.com or by telephone +33 5 62 07 02 36

Published on Thursdays. 52 issues per year.

Copyright tunnelbuilder Ltd 2003. E-News Weekly may not be reproduced in hard copy without the prior permission of the publisher.

Spain. Tenders should be invited soon for the first phase of tramway line 2 in Valencia to connect Torrefiel and Orriols, north of Valencia, with the city centre. This line is a partially underground north-south line running from Torrefiel and Orriols to Nazaret in the south. From Torrefiel and Orriols, the line will enter the north-south tunnel at Pont de Fusta. There will be underground stops in the city centre at Torres de Serranos, Plaza Músico López Chávarri and Mercado Central. This stretch will be TBM-driven. Then, the line will carry on until the City Hall in cut-and-cover before reaching Xàtiva. This is where will start the 4.3 km second phase until Nazaret. The public hearings for this phase ended on 29th April. The line will intersect the future central station in Germanías and Lines 3/5 in Bailén. It will continue underground along Avenida Reino de Valencia with three more stations and finally come to the surface in Alcalde Reig Street to serve the Palace of Arts, the Museum of Sciences and the Oceanografic Marine Park, now major tourist attractions. The city of Valencia has decided to drive the underground section with a TBM instead of the cut-and-cover method to save palm trees in Avenida Reino de Valencia. Visit www.coput.gva.es

United Kingdom. A traffic tunnel could be established in the centre of Swansea to turn the city's busy Oystermouth Road, now a major traffic route, into a shops and restaurant-lined boulevard leading from the city centre to the maritime quarter. Cars and lorries would be diverted into a tunnel, allowing the centre of Swansea to be re-connected with the waterfront.

United States. A plan to build a \$4 billion highway link between Orange and Riverside counties, California is gaining momentum as officials from both sides of the Cleveland National Forest are lining up \$55 million in studies for the idea. One alternative to be considered calls for three 16 km tunnels for rail lines and cars under the Santa Ana Mountains. Riverside officials have spent more than \$1 million since 1999 studying corridor options but have maintained that they need backing from Orange County leaders. That support has finally arrived. The counties are lobbying for \$50 million in federal transportation funds to support a feasibility study of a new corridor. The Orange County Transport Authority (OCTA) is expected to contribute to a separate \$5 million study later this year. Each study would look at a half-dozen alternative corridors, most of which call for carving a highway along or below the Cleveland National Forest. To date, the most celebrated choice calls for building three tunnels from the Corona Freeway (I-15) at Cajalco Road in Riverside County to the Eastern Toll Road. The plan includes building three 13.7 m-diameter tunnels that would carry high-speed rail, cars, trucks and utility lines. Read E-News Weekly 16/2003.

World Digest of Bids

Denmark. Negotiated procedure, deadline 21st May, 2003 for technical consultancy services for a sewage project in Odense, including a 700 m-long 2 m-diameter tunnel. Contractors will be invited to prequalify in June. The early and detailed design of the project and choice of construction methods will be decided under a partnership between the municipality, the consultant and the contractor. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=070414-2003>, OJ S 79, or contact Odense Vandselskab, Odense, fax +45 63132334. E-mail ov@ov.dk and erling.holm@teliamail.dk

France. Negotiated procedure, deadline 16th May, 2003 for geological and geotechnical investigation between Laissaud and Saint-Jean-de-Maurienne, in particular analysis of the expected geotechnical conditions during tunnelling. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=072408-2003>, OJ S 81, or contact Réseau Ferré de France, Lyon, fax +34 72840579. E-mail jean-louis.bernard@rff.fr

Germany. Negotiated procedure, deadline 30th May, 2003 for construction supervision for the 720 m-long Schottenberg tunnel, composed of a main tunnel and a rescue tunnel, to be bored using NATM. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=073198-2003>, OJ S 82, or contact Straßenbauamt Meißen, Meißen, fax +49 3521742480. E-mail

poststelle@sbamei.smwa.sachsen.de

Portugal. Open call for bids, deadline 2nd July, 2003 for construction of a 2,975 m section of the north/south road connection, section Avenue Padre Cruz-connection to the Lisbon inner orbital highway. Includes the design and building of the Ameixoeira tunnel, 120 m in length. Tender value: €32 million. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=072771-2003>, OJ S 82, or contact Instituto das Estradas, Almada, fax +351 212947793.

Spain. Open call for bids, deadline 22nd May, 2003 for construction of a connection in Guipuzkoa's Basque province between roads GI-638 in Mutriku and N-634 in Deba, requiring a 304 m tunnel. Tender value: €12 million. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=071843-2003>, OJ S 81, or contact Transport and Road Department, Donostia-San Sebastián, fax +34 943429417. E-mail lareito@garraioa.guipuzkoa.net

Spain. Open call for bids, deadline 19th June, 2003 for work control and supervision for a 9 km section of road N-I in Treviño county between Burgos and Álava, including a double-tube tunnel (320 m + 520 m). Tender value: €1.8 million. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=072144-2003>, OJ S 81, or contact Ministry of development, Madrid, fax +34 915978537. E-mail cpublic@mfom.es. Read E-News Weekly 16/2003, 47/2002 and 45/2002.

World Digest of Contract Awards

Spain. A JV composed of Aldesa Construcciones, Dicaminos and Tableros y Puentes has won the building of the second carriageway of the 4.1 km Trubia-Llera section of the Oviedo-La Espina motorway. Read E-News Weekly 3/2003. The JV already won the contract to build the first carriageway (read E-News Weekly 10/2003 & 34/2002). The two contracts are worth €57.9 million. There will be the construction of the Priañes tunnel (611 m + 614 m), a bored tunnel with a maximum overburden of 65 m and a radius of 6.29 m. There will also be a cut-and-cover tunnel north of San Pedro de Nora (77 m + 105 m). Visit www.mfom.es

Sweden. NCC has won a SKr245.4 million contract to build a 625 m cut-and-cover tunnel on Road 48, section Borgunda-Skövde. Visit www.ncc.info

World Digest of Ongoing Tunnelling

China. Construction on the Outer Ring Road tunnel across the Huangpu River in Shanghai has been completed on 28th April, with the link expected to open for traffic in late June. The 2,800 m-long tunnel, which took three years and US\$204 million to build, runs from Sancha Port in Pudong to Wusong Park in Puxi. The 49 m-wide tunnel – which includes a 736 m-long immersed section consisting of seven reinforced concrete elements, each up to 108 m-long and 9.55 m-high – is comprised of three parallel tubes with eight traffic lanes. The two outer tubes accommodate three single-direction lanes while the middle tube has two lanes that can be adjusted to travel in either direction according to the traffic situation. The concrete elements, which weigh 50 tonnes each, were prefabricated in docks in Pudong and then floated down the river and sunk into ditches, the deepest of which is 33 metres below the surface. Shanghai Urban Construction Group is the contractor. The speed limit is 80 km per hour and up to 50,000 vehicles are expected to use the link each day. Read E-News Weekly 28/2002.

United Kingdom. The cut-and-cover section of new tunnels for the Thameslink 2000 as part of contract C103 of the Chanllen Tunnel Rail Link is nearing completion. Contractors Kier and Nuttall will complete the tunnels between the future Thameslink station box at St Pancras and the East Coast Main Line. As well as the cut-and-cover section, the main part of the tunnels consists of twin 6 m ID, 650 m-long bored tunnels, which are scheduled to begin driving through London clay in June. The

major civil engineering for the CTRL Section 2, the 39 km between Southfleet in north Kent and St Pancras station in central London is now about 45% complete. Section 1, the 74 km from the Channel tunnel to Fawkham Junction in north Kent, is now over 95% complete. Visit www.ctrl.co.uk and www.tunnelbuilder.com, uk/21.

World Digest of Inaugurations

China. The Xuanwu Lake tunnel in Nanjing opened to traffic on 29th April. The tunnel with the total length of 2.66 km starts from the second stage of Xinzhuang Flyover Bridge in the east, passes Mofan Road in the west, crosses Xuanwu Lake, the Ancient City Wall and Central Road, links up the crossing of Luxiyang Road and ends near Nanjing University of Chemical Technology.

Russia. Moscow's 166th metro station, Park Pobedy, will open on 6th May in the city's west. The station will be the last stop on the dark blue Arbatsko-Pokrovskaya line 3, 4 km from Kievskaya metro station. It exits onto Kutuzovsky Prospekt near the triumphal arch between the Victory Park World War II memorial complex and the Borodino panorama. The station is the deepest in the world at 97 m underground and will have the world's longest escalator at 125 m. The station had to be built at that depth because of the geological conditions in the area.

Spain. The 2.3 km Alameda-Ayora section of metro line 5 in Valencia has been opened to traffic on 30th April, 2003. The €104 million line runs in a cut-and-cover tunnel serving three stations in Ayora, Amistad and Aragón. It has been built by Necso, Torrescámara and Dragados. Visit www.metrovalencia.com

World Digest of Tunnel Renovation & Maintenance

Austria. Restricted procedure, deadline 2nd June, 2003 for construction supervision for eight escape connections between the Arlberg motorway and railway tunnels, as well as caverns and shafts. Approximately 100,000 cubic metres. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=075158-2003>, OJ S 84, or contact Alpen Straßen, Innsbruck, fax +43 51252012134. E-mail otmar.alber@asg.co.at or zentrale@asg.co.at

France. Motorway concessionaire SAPRR has awarded to Clemessy the renovation of the centralised technical management facilities of the Chamoise, Saint-Germain and Chatillon tunnels on motorway A40. The lengths are as follows: 3,300 m + 3,264 m (Chamoise); 1,196 m + 1,161 m (Saint-Germain); and 2 x 720 m (Châtillon). Visit www.saprr.fr and www.clemessy.fr

Italy. Notice of work contract, deadline 26th May, 2003 for ventilation equipment in the shelters of the Frejus tunnel and associated electrical work. Tender value: €6.8 million. Visit <http://ted.publications.eu.int/udl?request=Seek-Deliver&language=en&docid=072828-2003>, OJ S 82, or contact Traforo Autostradale del Frejus, Torino, fax +39 0115621466. E-mail mail@sitaf.it or segretaria.t4@autofrejus.it

Italy. Italferr has awarded to a JV of Troiani & Ciarocchi, CIEI, and Tesaut the safety improvement works of the San Giovanni Diavolo tunnel and Vasto tunnel (6,833 m) on railway section Pescara-Termini Imerese on the Pescara-Bari line. The contract is worth €17.7 million. Visit www.italferr.it

Switzerland. The federal council has approved the refurbishment of the two Belchen tunnels on motorway A2. The decision paves the way to the final design which will go to a public inquiry in about 18 months in the Basel-Campagne and Soleure cantons. Read E-News Weekly # 31/2002.