

Opportunities by the Adriatic



Davorin Kolic, president of the Croatian Association for Tunnels and Underground Structures (ITA Croatia), talks to WT about the promise of World Tunnel Congress 2015

The historic city of Dubrovnik, which is more than 1,300 years old, is the venue for WTC 2015

At World Tunnel Congress 2012 in Bangkok, Thailand, ITA Croatia bid against Denmark and Germany to host the 2015 event.

The Croatian city of Dubrovnik was up against the cities of

Copenhagen and Munich, both in countries with more mature tunnelling history, equipment and skilled labour.

While it has experiences with highway tunnels, Croatia is one of the countries in southeast Europe

(SEE) where tunnelling is not as developed as it is in other parts of the continent. Croatian campaigners wanted to present the SEE region as an area of intensive tunnelling business in the future where many infrastructure projects could utilise underground space.

Members of the International Tunnelling and Underground Space Association (ITA-AITES) voted for Dubrovnik to host the 41st General Assembly and World Tunnel Congress in 2015.

LOOKING BACK, LOOKING FORWARD

Much like its neighbouring countries, Croatia created its first tunnels as part of mining activities. Later, these nations

Key congress subjects

- Planning and designing tunnels and underground structures
- Mechanised tunnelling in development and practice
- Conventional tunnelling methods in development and practice
- Immersed and floating tunnels
- Operation and maintenance of tunnels/underground infrastructure
- Fire safety of tunnels and underground structures
- Range of equipment in the sector
- Intelligent systems, mechatronics and robotics
- Case studies on traffic, waste, energy, water, sewer projects, etc.
- Urban planning and use of underground space
- Soft ground urban tunnelling/rock tunnelling in karst (SEE region)
- Risk analyses and techniques
- Cost optimisation and financing



Delegates might have the chance to use the outdoor pool at the Lacroma Valamar hotel and conference centre

developed underground structures for traffic-infrastructure projects: most of those in Croatia comprise tunnels covering about 1,200km of highways that were constructed in the last 10-15 years.

At the same time, tunnels were built into plans for hydropower projects, something that will be further developed in the near future, starting with the 68MW HPP Ombla hydropower plant in the vicinity of Dubrovnik; this will

be built entirely underground.

In Croatia, as well as other territories in the Balkan Peninsula, contractors mostly use the drill-and-blast method, with some tunnelling machines in use for small-profile microtunnelling.

The last recorded use of a large tunnel boring machine was a Robbins model from 1972-73 for the 488MW Zakučac Hydroelectric Power Plant near Split, on the eastern shore of the Adriatic, for 5km of tunnels

driven through karst formations.

ITA Croatia aims to inform its community about the possibilities of bored tunnels and immersed tubes that have a big potential in connecting the Adriatic islands with the mainland – Croatia relies heavily on tourism and has 1,235 islands.

At the moment most tunnels are being built in hydro projects, but tunnels are expected to be built as part of new railway lines and on different highway projects on the Adriatic coast as part of plans to boost transport infrastructure in cities.

The biggest challenge in the country's underground-construction sector is securing financial resources, as well as knowledge about effectively using underground space.

In the last five years ITA Croatia and ITA-AITES Working Group 5 (health and safety in works) has organised a number of conferences and issued eight



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