

**ITAWTC 2015**

LACROMA VALAMAR CONGRESS CENTER  
DUBROVNIK, CROATIA



# Aging Tunnels - Safety in operation and during refurbishment

Workshop organised by ITA COSUF as part of the  
ITA-AITES World Tunnel Congress 2015



26 May 2015, Lacroma Valamar Congress Center, Dubrovnik, Croatia

# Aging Tunnels - Safety in operation and during refurbishment



User safety, structural reliability and security during tunnel operation are clearly a part of the main focus of each tunnel owner. For tackling all the corresponding questions lots of research has been done during the past 15 years, providing decision-makers with sophisticated approaches and a steadily growing set of infrastructure and operational safety measures to make our tunnels a safer environment. Since a major part of our infrastructure is aging, the refurbishment and safety upgrading of the existing building stock becomes more and more the center of attention. Some imminent questions are usually brought-up:

- How can one rehabilitate a tunnel and keep up the availability of the infrastructure?
- What about risk levels during rehabilitation? Are they possibly increasing?
- Is safety during rehabilitation only a matter of working space safety or are there lingering problems that were not part of past risk assessments of the tunnel?
- Are our safety systems safe enough to deal with incidents during rehabilitation works?
- Is there any measure for a temporary upgrade of tunnel system's safety?

These and others questions will be tackled during the ITA-COSUF workshop which is especially devoted to the safe operation of underground facilities in times of rehabilitation and refurbishment. The speakers from all over Europe will show case studies, new technologies and new approaches. Risk levels will be discussed and common problems and their possible solutions will be presented.



# Preliminary Programme



**08:30 - 09:00 ITA COSUF General Assembly**

*Intended for ITA COSUF members but open to all*

## **Session 1: Opening session: Case studies**

09:00 - 09:10 Opening by ITA-COSUF chairman Roland Leucker

09:10 - 09:30 Implementation of the EU directive 2004/54, Enrico Pastori (TRT, on behalf of DG-Move)

09:30 - 09:50 The Mont Blanc tunnel, Gilles Rakoczy (Director of the Mont Blanc Tunnel)

09:50 - 10:10 Case studies of tunnel inspection and assessment, Peter Wright (CH2M)

10:10 - 10:30 Refurbishment under operation - tunnel in tunnel method, Thomas Edelmann (Herrenknecht)

10:30 - 10:40 Discussion

**10:40 – 11:00** Refreshment break

## **Session 2: Monitoring, inspection and assessment**

11:00 - 11:20 Robotic systems for autonomous tunnel inspection, Philippe Chrobocinski (CAS)

11:20 - 11:40 ASTRA / ASFINAG

11:40 - 12:00 Greek Road Tunnel Case studies, Panos Panetsos (EGNATIA)

12:00 - 12:20 Structural assessment of the lining based on measurements from the intrados, Dimitrios (DBA)

12:20 - 12:40 Discussion



# Preliminary Programme



**12:40 - 14:00 Lunch**

## **Session 3: Research and new products**

- 14:00 - 14:20 Tunnel Inspection and Evaluation: The Robo-spect Project, Costas (ICCS)
- 14:20 - 14:40 Acceptable risk levels during refurbishment work, Nils Peter Hoj (Hoj Consulting GmbHe)
- 14:40 - 15:00 Mobile Robot for Tunnel Inspection, Rafael Lopez (Robotnic)
- 15:00 - 15:20 Computer Vision for Structural Damage in Tunnel Intrados, Nikos (ENPC&ICCS)
- 15:20 - 15:40 Discussion

**15:40 – 16:00** Refreshment break

## **Session 4: Risk and Refurbishment**

- 16:00 - 16:20 Refurbishment of Railway tunnels during operation, Jan Dirk Chabot (SBB)
- 16:20 - 16:40 Autostrada Brennero - Emergency Exercise, Carlo Costa (Autostrada)
- 16:40 - 17:00 Refurbishment of a listed tunnel: Maas Tunnel Rotterdam, Han Admiraal (ENPRODES)
- 17:00 - 17:20 ITA-COSUF Award
- 17:20 - 17:40 Discussion





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This ITA COSUF workshop is open to all participants of the ITA-AITES World Tunnel Congress 2015. Registration to the congress should be made through the congress website: [www.wtc15.com](http://www.wtc15.com). One-day registration is available for those who wish to attend the ITA COSUF workshop only; it gives access to all congress events which take place on 26 May 2015. After 15 March 2015 the registration fees for the full conference will increase. A second increase will follow on 15 May 2015.