Workshop on “Tunnel Design: Issues and challenges”
10th October 2017, Hotel Radisson Blu, Jammu

PROGRAMME

Tuesday, 10th October, 2017

09:00 – 09:30 hrs.  Registration
09:30 – 10:00  Inaugural Session
  Welcome Address: Shri G.P. Patel, Treasurer, TAI & Director – Water Resources, CBIP
  Inaugural address: Shri A.K. Sachan, CAO-Construction, USBRL Project, Northern Railway
  Vote of thanks: Shri B.B. Tomar, Chief Engineer – USBRL Project, Northern Railway

10:00 – 13:00 Hrs.  Session 1: General Aspects of Tunnel Design
  ◆ Geophysical investigations for tunnels, caverns and underground projects – Dr. Sanjay Rana, Director, Parsan Overseas (P) Limited
  ◆ Issues of Rock Mass Classification based Empirical Design Approach – Dr. R.K. Goel
  ◆ Linkages between site investigation, design and construction - Dr. Florian Krenn, Managing Director, GeoConsult

14:00 – 15:30 Hrs.  Session 2: Tunnel Design
  ◆ Design Philosophy : Tunnel Design and management, Specificities and Stages of tunnel design and Structural design (Calculation, Dimensioning, Face stability) – Dr. Florian Krenn, Geoconsult
  ◆ Aseismic design and analysis of underground structures – Dr. Umesh Soni, HCC Limited
  ◆ Design of support system in tunnel - Heman Manchanda, Geodata

16:00 – 17:30 Hrs.  Session 3: Innovations in Tunnel Design
  ◆ Ground improvement techniques – Lawrence Halls
  ◆ Tunnel lining configuration – Amit Kaul
  ◆ Ventilation in long tunnels – Rajesh Jain, DMRC

Tea/Coffee Break: 11:00–11:30 hrs.
Lunch: 13:00–14:00 hrs.
Evening Tea /Coffee Break: 15:30–16:00 hrs.
Conference on Tunnelling in Himalayan Geology
11-13 October 2017 in Jammu at J&K

PROGRAMME

Wednesday, 11th October, 2017
08:30 – 09:45 hrs. Registration
10:00 – 11:00 hrs. Inaugural Session
11:30 – 13:00 hrs. Plenary Session
   ❖ Geological problems in execution of tunnels in USBRL project – Dr. K.S. Rao
   ❖ Challenges in design of tunnels in Himalayan geology – Dr. Florian Krenn
   ❖ Challenges of Tunnelling In Himalaya – Dr. R.K. Goel, CMFRI

14:00 – 15:30 hrs. Technical Session I: Planning, Investigation and Design of Tunnel
   ❖ Advancement in geophysical investigations for tunnels – Dr. Sanjay Rana
   ❖ Earthquake design criteria and parameters for underground structures with reference to Indian Standard - Subhash Soni & Satish Kumar Sharma
   ❖ 3D Numerical modelling of underground powerhouse complex – A Case Study - Sharique Khan
   ❖ Geological studies for construction of T 74 R – Problems and solutions - Rushdi Yusoff, and Kedar Nath Adhikari
   ❖ Slope stability of Sangaldan area portals - Rajesh Gupta and R.R. Mallick

Communication Papers
   ❖ Estimation of rock load for the design of tunnel lining – P.S. Gupta and Rashmi Ranjan Mallick
   ❖ Importance of strength anisotropy in numerical analysis - Ankesh Kumar, Aditya Singh, Swapnil Mishra, K. S. Rao
   ❖ Parametric study of lined and unlined tunnels at shallow depths under coupled static and cyclic loading condition - Swapnil Mishra, Challa Abhijith, Aditya Singh, Ankesh Kumar, K. S. Rao, N. K. Gupta
   ❖ Comparison of simplified closed-form solution of drucker-prager Criterion with finite element solution - Shivam Gupta, Aditya Singh, Ankesh Kumar, Swapnil Mishra, K. Seshagiri Rao

16:00 – 17:30 hrs. Technical Session II: Risk, Contract Management and Financing of Tunnel and Underground Projects
   ❖ Contractual issues in Himalayan geology – Surinder Pal
   ❖ Contractual Risk Management for tunneling – A Case Study of Vishnugad Pipalkoti Hydro Electric Project – R.K. Vishnoi
   ❖ Implementation of large Project on PPP - Best Strategy for Large Project for risk mitigation Case study of Chenani Nashri Tunnel Project – Ashutosh Chandwar
   ❖ Tunnelling in Visco-Elasto-Plastic ground in Tunnel T5 of the Katra-Dharam Section of the Udhampur Srinagar Baramulla Rail Link Project - Dr. Bineshian Hoss and G.B. Nagendra

19:00 – 22:00 hrs. Dinner at Hotel Radisson Blu

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Thursday, 12th October, 2017

09:30 – 11:00 Hrs.  Technical Session III: Tunnel & Cavern Construction - Technologies & Equipment

- Challenges and issues in execution of USBRL project – An Overview – A.K. Sachan, CAO – Construction, USBRL Project
- Impediments in speedy execution of projects in Himalayan geology – Satish Kumar Sharma & Basavraj Kumbhar
- Drilling & Blasting of long tunnels in Himalayan geology – H.S. Venkatesh, R. Balachander and G. Gopinath
- Construction of railway tunnels in highly adverse geological conditions in Himalayas by Using NATM – A Case Study – R.K. Khali
- Challenge of tunnelling through the main boundary thrust in Tunnel T1 of the Katra – Dharam Section of the Udhampur – Srinagar - Baramulla Rail Link Project - G.B. Nagendra
- Tunnelling in Himalayan geology: A Case study of Kishanganga Hydroelectric Project (330 MW), construction of head race tunnel by Tunnel Boring Machine - Arunesh Bihari Dwivedi
- TBM Tunnelling in Himalayan geology – Nitin Garg
- Tunnel excavation by Roadheader in Himalayan geology – A Case Study of Pir Panjal Railway Tunnel – S.D. Jeur and Basavraj Kumbhar
- Innovative FRC design for underground application (Inner lining, shaft, CIP) using new generation of fibre – Chandan Vaidya
- Communication Paper
- Shotcrete in tunnelling - concept, precaution & methodology – Deepak Singh and Rampal

11:30 – 13:00 Hrs.  Technical Session IV: Industry Special aspects

- In-Service performance of macro synthetic Fibre reinforced shotcrete Linings - Friedrich Aguasa
- The use of micro fine cements and specialists chemicals for pre and post injection grouting – Lawrence Halls
- Ground Consolidation, Ground Improvement & Ground Stabilization in Soft Ground & Weathered Rock – Kim Kooper
- Tunnel waterproofing in Himalayan geology – Abhishek, Jain
- Waterproofing systems for watertight tunnels – Mangesh Dhamele

14:00 – 15:30 Hrs.  Technical Session V: Safety issues including Ventilation

- Sustainable landslide mitigation measures – A Case Study on Lambagarh - Minimol Korulla
- Tunnel safety – R.G. Saini
- Ventilation and fire safety in long tunnel – Rajesh Jain
- Chenani-Nashri Tunnel – Illuminating the Future - Ashutosh Chandwar, Vijay K Sharma, M K Bharatan, Salil Singh
- Electrical systems at high altitude, tunnel lighting concept, ventilation and fire safety In long rail and road Himalayan tunnels - Ms. Srivasha Kodali
- SISO (an internet based real time data management system) in T-48 – for dynamic administration and controlling of projects - Surinder Pal & Ann George,

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Technical Session VI: Innovative Techniques

- Chenani-Nashri Tunnel – Intelligent Tunnel - Ashutosh Chandwar, Vijay K Sharma, M K Bharatan, Salil Singh
- Modernization of equipment- Need of the Hour for High Performance Spray Concrete – Amit Kaul
- Tunnel seismic prediction – Kripal Chaudhary
- Pre-Grouting for handling Geo-technical & water ingress problem in Himalayan Tunnel – Milon Mukhopadhyay
- Construction of Rockfall Mitigation Measures above and near tunnel portals along Hill Road - A Case Study - Roshan. R.S.V, Meccaferrri
- Tunneling in overstressed rock: Example from the lesser Himalaya of Jammu and Kashmir, India - Pratap Chandra Dhang

Friday 13th October 2017

Visit to USBRL Project Site Tunnel T-5 (near Reasi) *

Tea/Coffee Break: 11:00–11:30 hrs. Lunch: 13:00–14:00 hrs. Evening Tea: 15:30–16:00 hrs.

PS

- Those delegates who are interested in Field Visit can enrol their name at the registration Desk so that transport and refreshment, as well as Lunch arrangements could be made accordingly.