Pakistan

Name: Pakistan Tunneling and Trenchless Society (PTTS)

Type of Structure: Non-profit, open association

Number of Members: 102 including 6 corporate members

ASSOCIATION ACTIVITIES DURING 2022 AND TO DATE

Four Workshops

- Workshop #1: 28-03-2022 (Smart Scaffolding Solutions, by Mr. Tarc Feorlic, Meva, Germany)
- Workshop #2: 26-11-2022 (Introduction to Building Information Modeling, by Dr. Sohail Malik, Associate Prof. NUST Islamabad, Mr. Naqeeb Ullah & Syed Rafay Bukhari, Tunnelling Institute of Pakistan)
- Workshop #3 : 27-12-2022 (Introduction to Construction Management Productivity Tools, by Dr. Zia ud Din, Associate Prof. Huston University)
- Workshop #4: 03-02-2023 (Concrete Mix Design & Sand Analysis through Sika App, by Dr. Oscar Marazzini & Kashif Gardazi, SIKA Pak)

Tunnel Talk Series

- Tunnel Talk #1: 14-03-2022 (Shotcrete Technology & TBM Aids, by Dr. Oscar Marazzini)
- Tunnel Talk #2: 08-12-2022 (Underground Solutions for a Better World, by Prof. Arnold Dix)
- Tunnel Talk #3: 02-02-2023 (Soft Ground Tunnelling, by Dr Oscar Marazzini, Asif Riaz (FWO), Ashraf Hussain (TIP)

Site Visits

- Site Visit #1: 17-08-2022 (969MW Neelum Jehlum Hydropower Project)
- Site Visit #2: 29-09-2022 (48MW Jagran-II Hydropower Project)

Publications

- Publication#1: Impacts and challenge faced during deep excavation 1125.3m, rock encountered its effects on support and solution: A case study review from Suki Kinari Hydropower Project 870 MW Pakistan, Authors: Asif Riaz, Haris Waheed, Ashraf Hussain, Dr. Abdul Qudoos Khan, WTC-23
- Publication #2: Mixed use potential of existing road tunnels for conveying water for hydropower generation: A case study of motorway tunnels in swat Pakistan, Authors: Asif Riaz, Ashraf Hussain, Ajdar Nawaz, Dr Zia ud din, WTC-23
- WGs : Think Big - Innovative UG use in the country

Jagran Hydropower project-II

CURRENT TUNNELLING ACTIVITIES

Ongoing Tunnelling & Hydropower Projects:

Diamer Basha Dam & Hydropower Project
- Location: Gilgit Baltistan
- Total Length of Tunnels : 17km
- Tunnelling Method: Drill & Blast
- Design Capacity: 4500MW

Dasu Hydropower Project
- Location: KPK Province
- Total Length of Tunnels: 26km
- Tunnelling Method: Drill & Blast
- Design Capacity: 4320MW

Suki Kinari Hydropower Project
- Location: KPK Province
- Total Length of Tunnels: 40km
- Tunnelling Method: Drill & Blast
- Design Capacity: 880MW

Jagran-II Hydropower Project
- Location: AJ&K
- Total Length of Tunnels: 8km
- Tunnelling Method: Drill & Blast
- Design Capacity: 48MW

Kurram Tangi Dam & Hydropower Project
- Location: KPK Province
- Total Length of Tunnels: 3km
- Tunnelling Method: Drill & Blast
- Design Capacity: 83.4MW

Mohmand Dam & Hydropower Project
- Location: KPK Province
- Total Length of Tunnels: 8km
- Tunnelling Method: Drill & Blast
- Design Capacity: 800MW

FUTURE TUNNELLING ACTIVITIES

Lahore Water & Wastewater Management Project (LWWMP)
- Project Contracting Mode - Design and Built
- About 28km of microtunnelling
  - Main Sewer Line 1(15~16km): Internal Dia - 2.44m
  - Main Sewer Line 2 (13~14km): Internal Dia - 1.52m
- Project Owner -Lahore Water & Sanitation Agency (LWASA)
- Financier -AIIB funded project: US$533.3M
- Project Timeline -5 Years

STATISTICS

1. List of tunnels completed

- River Diversion Tunnel for the Dasu hydropower project
- River Diversion Tunnel on the Mohmand dam hydropower project
- Tunnelling components of Jthe aggran-II hydropower project

2. List of tunnels under construction

- Adits and headrace tunnels on the Dasu, Mohmand, Suki Kinari, Kurram Tangi hydropower projects

EDUCATION ON TUNNELLING IN THE COUNTRY

- Tunnel Talk Series and Training Workshops initiated by the joint efforts of the Pakistan Tunnelling and Trenchless Society (PTTS) and Tunnelling Institute of Pakistan(TIP)
- Diploma Course at the Tunnelling Institute of Pakistan (Second Batch)
- MSc Tunnelling at UET Lahore, Pakistan (First Batch)