

EDITORIAL

It's a matter of honour to have been associated with the Indian Society for Rock Mechanics and Tunnelling Technology (ISRMTT) right since its inception and also with its journal. The pioneering effort of group of dedicated engineers based at Roorkee deserves all appreciation for bringing out the journal. The journal has been publishing informative and useful articles contributed by authors with wide experience in their respective areas.

The complex and unpredictable behaviour of rock masses has always been drawing specific attention of engineers and scientists. The problems of excavation of tunnels and underground power houses in geo-thermic zones (Nathpa Jhakri Project, H.P), highly sheared and almost flowing rock conditions, chimney formations and crown failure in power house cavern (Tala H.E. Project, Bhutan), high ingress of water (Dulhasti Project, J&K) have been successfully tackled but causing delay and increase in cost. Having exhausted the easy feasible sites, challenges ahead include handling projects in weak sandstone formations as in Subansiri Project (Arunachal Pradesh) tendency for liquefaction (Pagladiya Project, Assam) and many other issues in recent development projects under consideration.

Energy is the prime mover for the rapid progress of a nation and hydropower being the clean replenishable resource, it has been rightly targeted to add about 15000-20000 MW in each of the coming decades. This requires a very rapid time bound construction schedules. This poses many a challenge to rock mechanics engineers as these projects will now have to be sited in very complex geological formations in the Himalayas which are being violently pushed towards the north throwing up constant challenges to hydropower developers in the lower Himalayas.

Rock Mechanics will play a vital role as we are building infrastructure of Highways and Metro at a very rapid pace in India. The use of TBM in these Projects shall be rapidly increasing and we will have to lay more stress on our R&D effort in use and design of TBM.

In the years to come, our predictive ability based on our past experience, inputs from capability of simulation will have to be greatly improved. We will have to simplify the complex job of characterizing weak rocks.

I wish the journal all success in achieving the objectives of better understanding of the science and art of rock mechanics and tunnelling technology.

*Dr A K Dhawan
Director
Central Soil and Materials Research Station
Olof Palme Marg, Hauz Khas
New Delhi - 110016*