GUEST EDITORIAL

I have been closely associated with the Indian Society for Rock Mechanics and Tunnelling Technology and its journal since its inception. It gives me great pleasure to share my views with the rock mechanics and tunnelling community.

The study of Rock mechanics has assumed considerable importance because of its wide application in Engineering more predominantly in Water Resources and Mining Engineering. Although rock engineering is based over thousand years' experience, it is only in the last few decades that it has been supported by scientific theories and measurements. In India, research into understanding of strength and deformation behaviour of rocks has picked up considerable momentum during the last decade. This is particularly so, because of unforeseen challenges faced by geotechnical engineers, while working in Himalayas and other unexplored regions. Considerable interest is also being shown by Engineering Geologists and Geophysicists.

Underground mining for minerals, tunnels and caverns for hydel projects, metros, underground storages and strategic use of underground space are very common in the present day technological world. The science of mining and underground construction has made great strides in the last few decades and a great deal of experience had been obtained by the scientists and technologists all over the world.

Despite tremendous alround advancement in technology, a full understanding of natural forces and phenomena particularly in the construction of water resources projects, eludes the design engineer. The perfection in design much depends on accurate characterisation of the rock mass. With better understanding of the behaviour of rock mass in the natural environment, under the influence of stresses, deformation and water, the reliability of the design and construction processes of structure will be enhanced.

Economic prosperity and technological excellence of a nation depends upon its capability to use its resources with utmost prudence and foresight. The management and optimum use of the natural resources is thus a very important plank of our socio-economic activity. The earth is the primary source of all resources and the efficient exploitation of these resources is the key to prosperity. Mining of minerals and creation of underground structures for various utility purposes is thus a very important sector of our developing economy.

Safe economic design and construction of such structures cannot be conceived without a close knowledge of the behaviour of the geological materials like rocks and their products, which support and closely interact with structures for safety.

I wish the journal all success in its endeavour to develop better understanding of Rock Mechanics and Tunnelling Technology.

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CONTENTS