

## Challenges in underground metro railway construction

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**Department of Civil Engineering, MVJCE**, organized a Guest Lecture on ‘Challenges in Underground Metro Railway Construction, for the fifth and seventh semester BE students, at Seminar Hall No. 4, on 01/09/2018, at 9.30 am.

The Guest Speaker was **VIKAS CHANDRA**, who is currently working with BMRCL, Bangalore, as an Assistant Executive Engineer. He has specialized in underground metro construction and site supervision for construction of Metros, Villas etc., over the past 11 years.

**Prof. Apoorva Kiran**, Assistant Professor, Department of Civil Engineering, introduced the speaker and the topic of the lecture to the students.

### **Summary of Presentation:**

Infrastructure plays a stellar role in the social and economic growth of any country, particularly of metropolitan cities. Bangalore is a city growing at a rapid rate, and improving the infrastructure to keep pace with this growth, is the top priority of any government. The exponential increase in traffic is creating a major hurdle in the development of the city, with commuting time increasing day by day.

Metro Railway construction is one of the feasible solutions to tackle this problem. But in a densely populated city, it is not always possible to have Metro rail constructed over the ground surface, and underground construction becomes inevitable. Underground metro construction poses many problems. In this connection, it was decided to have a Guest Lecture on this topic, to understand the issue, better.

The following Sub topics were discussed:

- Underground stations and tunnels
- NATM (New Austrian Tunneling method)

- History of NATM
- Definition of NATM
- Broad principles of NATM
- Why NATM?
- Summary of the Procedure in NATM
- Sequence of Execution of NATM
- Concept of 3D Monitoring
- Where NATM is using in INDIA
- Software's used in underground designs
- Case studies

## Gallery



**Mrs. VIKAS CHANDRA** (AEE, BMRCL) delivering lecture on **“Challenges in underground metro railway construction”** to 5<sup>th</sup> & 7<sup>th</sup> semester students of Civil Engineering department on 01/09/2018 at seminar hall:4



Chief Guest (**Mr. Vikas Chandra**) receiving **token of appreciation** from Prof. Muralidhara R for delivering guest lecture to Civil Engineering students (5<sup>th</sup> & 7<sup>th</sup> semester) on 01/09/2018.

### **Outcome of the Event:**

The students understood the roles and responsibilities of Civil Engineers in the construction of Underground Metro, and also gained knowledge of constructional practices and remedial measures that are taken to tackle the challenges that arise during the construction of underground metro.