

# Methodology of Construction of Railway Tunnel

Parth talaviya<sup>1</sup>, Prof. Vikas bhavsar<sup>2</sup>

<sup>1</sup>M.E. (Civil Infrastructure Engineering), L.D.R.P. Institute of Technology & Research, Gandhinagar

<sup>2</sup>Faculty, Civil Department, L.D.R.P. Institute of Technology & Research, Gandhinagar

**Abstract-** Dhorajia Projects & Construction JV (DPC) to perform a geotechnical investigation and structural design of the proposed tunnels construction at the project site. The purpose of this geotechnical investigation is to obtain information on the subsoil conditions by drilling boreholes and performing in-situ and laboratory tests on selected soil or rock samples. These information's obtained is used to provide geotechnical parameters recommendations for tunnel design at the project site. It is understood that, Client This report is presented herewith summarizes the results of the core drilling and core processing activities completed at three nos. of boreholes with moderate depth in vertical direction, analyses based on thorough study of the geotechnical investigation results. A complete geotechnical assessment was undertaken to indicate the nature and behavior of soil/rock under the application applicable load conditions on proposed tunnel near Pachola, Aklera, Dist. Jhalawar, Rajasthan.

**Index terms-** tunnel construction, spiral tunnel, slope tunnel, shortcrete

## I. INTRODUCTION

Indian Railway has proposed a new railway line from Ramganj-Mandi to Bhopal. Under this project, CH 82580 to CH 83140 an underground passage (Tunnel 2) of length of 560 meter has awarded to Dhorajia Projects & Construction JV (DPC) by West Central Railway, Kota Division – Engineering Department Construction Unit (WCR).

## II. METHODOLOGY

Construction methodology and quality control manual will be issued in below.

1. Survey Work & Profile Marking
2. Drilling, Loading and Blasting
3. Mucking
4. Loose Scaling

5. Shortcrete
6. Rock Support / Rock Bolt Fixing
7. Rib Erection
8. Concrete Backfilling
9. Tunnel Lining

## III. SURVEY WORK AND PROFILE MARKING

This is a main and primary aspect of tunneling:

Survey profile generally done by surveyor as per geologist's direction.

This aspect related with pay line as per design and types of rock as per site geologist.



Figure 1: Survey profile

## IV. CONCLUSION

The purpose of this research is to identify problems in construction of tunnel at specific location and give remedial measures.

## REFERENCES

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