

Western Coalfields Limited inks MoU for Mine Tourism with MTDC (Maharashtra)

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CHAPTER

**CONSERVATION AND  
DEVELOPMENT OF  
TRANSPORT  
INFRASTRUCTURE**



# CONSERVATION AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

## Coal Conservation

Conservation of coal is an important area, particularly when the coal reserves are finite. The aspect of conservation of coal is taken into account right from the planning stage and maximum recovery is ensured during the implementation stage. Mines are designed to work the coal seams either through **opencast** or through **underground** methods, depending on the technical feasibility and economic viability.

Mechanised opencast (OC) mining is presently the commonly adopted technology for extraction of thick seams at shallow depth. This is also important from the conservation point of view since the percentage of recovery by this technology is around 80% to 90%. Presently, this technology dominates the coal industry contributing about 93% of Country's coal production. Further, whenever feasible, the developed pillars of underground mines are being extracted through opencast operations.

Introduction of new technologies like long-wall method, short-wall method, blasting gallery technology, high-wall mining and continuous miner technology have resulted in increased percentage of extraction in underground (UG) mining.

With the improvement in roof support technology with mechanized bolting with resin capsules it has been now been possible to maintain wider gallery span and extract seams under bad roof conditions more efficiently resulting in improved conservation of coal.

The Ministry of Coal governs the Coal Mines (Conservation & Development) Act 1974 for conservation of coal and development of mine areas through Coal Controller Organization. A stowing excise duty of Rs. 10/- per tonne is collected on coal production/despatch and coal companies are extended assistance for undertaking conservation measures.

## Sand Stowing

Sand stowing in underground mines is yet another effective

means of coal conservation, which is widely used for extraction of coal pillars from underground coal seams lying below built-up areas, such as important surface structures, railway lines, rivers, nallahs, etc. which otherwise would have resulted in locking of coal in pillars. Stowing also helps in extraction of thick seams in several lifts increasing the percentage of extraction. Due to scarcity of sand, various experimental trials are being conducted to use other materials like fly ash, boiler ash, and crushed overburden material etc for stowing underground mines as substitute for sand. Currently, crushed overburden material is being used commercially for stowing purposes in underground coal mines where sand is not available in the near vicinity of the mine or where it is costlier to transport sand from distant river sources.

## Conservation and Development of Transport Infrastructure

### RAILWAY INFRASTRUCTURE PROJECTS

In order to achieve the planned growth in production and evacuation in future, CIL has undertaken the following major Railway Infrastructure Projects. These railway infra-projects are being implemented by either Indian Railways or JV companies formed with IRCON representing Railways, subsidiary company (representing CIL) and concerned State Government. Presently there are three major Rail Infrastructure Projects.

- East Central Railway, Patna is executing the Tori –Shivpur new BG line with a length of about 44.37 Km for North Karanpura Area of CCL, Ranchi, Jharkhand.
- Execution of Shivpur-Kathotia section, with a length of 49.085 Km is now being undertaken by newly formed JV company named Jharkhand Central Railway Limited (JCRL) with CCL, IRCON and State Government of Jharkhand, as its partners.
- South Eastern Railways, Kolkata is executing the Jharsuguda- Barapalli-Sardega Railway Infrastructure

Project with a length of about 52.412 Km for Ib valley coalfields of MCL situated in Sundargarh district, Odisha.

To cater the evacuation of coal of Mand-Raigarh and Korba-Gevra coalfields of SECL, the following two Railway Corridors have been identified for construction:

- East Rail Corridor is being executed by Chhattisgarh East Rail Ltd.(CERL), a JV company formed by SECL, IRCON and State Government of Chhattisgarh, in two phases.
  - o Phase 1: Kharsia – Dharamjaygarh with Spur to Gare- Palma and three feeder lines of about 132 Km.
  - o Phase 2: Dharamjaygarh- Korba with a length of about 67 Km.
- East-West Rail Corridor (Gevra Road to Pendra) via Dipka, Katghora, Sendurgarh and Pasan with a length of about 135 Km, Urga – Kusmunda of about 16 Km and Feeder Lines of about 35Km is being executed by Chhattisgarh East-West Rail Ltd.(CEWRL), a JV company formed by SECL, IRCON and State Government of Chhattisgarh.