

# 10

## CHAPTER

ANNUAL REPORT  
2015-16



Water sprinkling for dust suppression

# CONSERVATION AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE



# CONSERVATION AND DEVELOPMENT OF TRANSPORT INFRASTRUCTURE

## Coal Conservation

Conservation of coal is an important area, particularly when 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 recovery by this technology is around 80% to 90%. Presently, this technology dominates the coal industry and contributing about 92% of country's coal production. Further, whenever it is feasible, the developed pillars of underground mines are being extracted through opencast operations.

Introduction of new technologies like longwall method, short wall method, blasting gallery technology, high wall mining and continuous miner technology in Underground mining have resulted in increased percentage of extraction.

With the improvement in roof support technology with mechanized bolting with resin capsules it has 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 (MoC) governs the Coal Mines (Conservation & Development) Act 1974 for conservation of coal and development of mine areas through Coal Controller Organisation. 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 in use 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 the 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 in 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 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.

East Central Railway, Patna is executing the Tori –Shivpur new BG line with a length of about 93.45 Km for North Karanpura of Central Coalfields Limited, Ranchi, Jharkhand.

Execution of Shivpur-Kathotia section is now being undertaken by newly formed JV company named Jharkhand Central Railway Limited (JCRL) with CCL, IRCON and Government of Jharkhand as its partners.

South Eastern Railways, Kolkata is executing the Jharsuguda-Barapalli-Sardega Railway Infrastructure Project with a length of about 52.4 Km for Ib valley coalfields situated in Sundargarh district of Mahanadi Coalfields Limited, Odisha.

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

- East Corridor (Bhudeopur-Gharghoda-Dharamjia garh upto Korba with a spur from Gharghoda to Dhonga Mahua to connect mines of Gere-Palma block) with a length of about 180 Km is being executed by Chhattisgarh East Rail Ltd.(CERL), a JV company formed by SECL, IRCON and Government of Chhattisgarh.
- East-West Corridor (Gevra Road to Pendra) with a length of about 122 Km being executed by Chhattisgarh East-West Rail Ltd.(CEWRL), a JV company formed by SECL, IRCON and Government of Chhattisgarh.

### **Singareni Collieries Company Limited (SCCL):**

In order to achieve the planned growth in production and evacuation in future, SCCL is modernizing / expanding / constructing the Coal Handling Plants. SCCL has planned for laying four new railway links / sidings for coal evacuation from existing and new coal fields.

- Bhadrachalam Road to Sattupalli Railway line (55 Km)
- Srirampur CHP to Singareni Thermal Power Plant (33 Km)
- Railway siding from Bethampudi Railway Station to Koyagudem Mines (8.2 Km).
- Goleti Railway siding – Kazipet – Ballarshah.