

Coal Mining Issues

Mechanisation of mining operations - bord & pillar and long wall, equipment designing, washery technologies, and stowing methods are some of the major issues as demonstrated below.

Diverse technologies

India is a unique example of where different levels of technology, obtained from different countries under aid programs, are in operation simultaneously. This in itself poses problems in obtaining spares, particularly for equipment supplied by former USSR, and matching these with equipments/ machinery obtained from diverse sources.

The lignite mining complex at Neyveli, with its state-of-the art technology for the extraction of lignite through the use of 'continuous mining technology', has placed India as one of the leaders in lignite mining.

The major thrust areas before the coal producing companies are:

- (a) detailed scientific exploration, evaluation, etc. to assist in the proper design of the mine and selection of equipment.
- (b) proper production planning which gives due importance to HEMM maintenance, spares part planning, machinery rehabilitation, indigenous development of spare parts.
- (c) energy conservation in most mining and material handling systems.
- (d) providing a matching capacity of material handling systems for coal handling and transportation.
- (e) evolving a system to procure spares for most erstwhile USSR made equipment for the smooth operation of these units.
- (f) introduction of new technologies such as truck despatching system, excavator performance monitoring system, in-pit crushing and conveying for coal and overburden, etc.

In this context, the introduction of 'air-deck' pre-splitting techniques at Jharia Block II mines of Bharat Coking Coal Ltd. (BCCL), by Indian School of Mines (ISM) & IBP jointly is quite commendable. Currently, at Kudremukh, Optiblast of Australia is engaged in applying air-deck techniques to reduce the consumption of explosives, thereby decreasing the cost of blasting. In this connection it may be noted that Indian research institutions are now well equipped to handle any aspect of blasting - from blast design to optimisation, blast monitoring and modelling through computer application.