

coal per year by the adoption of this method. However, in the coming years production by this method is expected to increase.

Underground Coal Gasification

Large reserves in India have been estimated to be ideally suitable for underground gasification.

Ripping

Ore bodies having rippable characteristics are being identified in some non-coal mines. India will be looking to introduce this technology in identified mines.

Spare Part Management

While adopting a technology with imported equipment, a major problem is faced with regard to the spare part management. It is, therefore, necessary that adequate provisioning of spares for the entire life of the equipment should be considered at the initial stage.

Infrastructural Set-up

Adequacy of the infrastructural set up in terms of outbye transport, ventilation, coal handling and repair and maintenance capabilities is necessary for the success of any mining technology. In fact, a large extent of the instances of failure are attributable to inadequacy.

Technology Issues - Non-Coal Sector

Most mines only adopt conventional mining methods and the shift for large capacity units at Kudremukh (Met-Chem, Canada) has made the system capable of meeting the very high excavation level. This experience has been utilised in other large mines. In the recent years, NALCO's 2.4 MTY bauxite mine was established by incorporating a number of state-of-the art features. Some of the new features are:

- (a) Vacuum suction exploratory drill for high speed drilling, sampling and analyses to assist in geo-statistical mine planning.
- (b) Articulated dumpers.
- (c) All excavation by hydraulic excavators & wheeled loaders.
- (d) Ripping of ore/waste amenable to ripping using D-10 dozer of 700 HP class.
- (e) Mechanised mixing and charging of ANFO.
- (f) Computer assisted mine planning, production planning, etc.
- (g) Hydraulic impactors for ground stability and haul road maintenance.