

Table 1
Salient Features of Piparwar

1.	Annual ROM coal	6.5 Mt
2.	Annual clean coal capacity	5.52 Mt
3.	Mineable reserves	197.49 Mt
4.	Stripping in ratio (av.)	0.65 m/t
5.	No. of personnel	775
6.	OMS (on 268 days basis)	31 t.
7.	Sanctioned capital outlay	Rs. 542.43 Crores
8.	Scheduled date of completion	June
9.	Grade of coal (ROM)	G
10.	Clean coal F	34% ash & 8% moisture
11.	Total land requirement	1120 hectares
12.	HEMM	Electric rope shovel 20 m : 1
		Electric rope shovels : 2
		Rear dumper 85 T : 24
		Hyd. Excavator 12 m : 1
		Blasthole drills 250 mm : 5 nos.
		Track dozer 400 HP : 5
		Mobile crusher 2800 tph : 1
		Belt conveyer 2800 : 1
		Coal conveyer 2800 tph : 1

Ramagundam OC-II (Andhra Pradesh), with 172 Million DM German credit/loan planned to produce 2 MTY in 8th Plan, will also have in-pit crushing and conveying system.

Machinery

Besides increasing the size of the equipment, hydraulic shovels have been introduced in place of rope shovels to improve the operational efficiency. The selective mining capability of hydraulic shovels have been successfully used for mining of the banded coal seams.

Tandem operation of draglines have been successfully implemented to make the removal of overburden faster and efficient, and help in quick exposure of the coal seam.

The increase in the size of the opencast mines has in turn resulted in the organization of large size blasts to efficiently handle the overburden. Successful introduction of Bulk Explosives, Plant Mixed Slurries, Site Mixed Slurries and Emulsions has been made to help organise large rounds of blasting. This involves the use of up to 200 ton of explosive in each round. This technique and development of structures in proximity to the working mine have created the problems of safety and security of these structures and the associated population. To resolve this problem, the technique of controlled blasting has been developed.

The cost per ton of coal mined by opencast method has ranged from US\$ 5 to 7. The cost per cubic meter (cum) of excavation has been in the range of US\$ 2.5 to 3.5.