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(A Miniratna Cat.1 Gov. of India Undertaking)

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COAL TRANSPORTATION ARRANGEMENT PLAN & COAL HANDLING PLANT, Dhankasa UG Mine, Pench Area

INTRODUCTION

Dhankasa UG project has two workable seams viz. Seam- IV(Combine) (lower seam) and Seam-II(Packet) (upper seam). The average parting between the two seams is around 6 to 8m.

Two continuous miner districts and one LHD district have been envisaged for this project.

Belt conveyors have been provided for gate and trunk transport of coal. Rope haulages have been provided for material transport while chair lift system has been provided for men transport.

GATE TRANSPORT

Coal evacuated by continuous miner will be transported to feeder breaker by shuttle cars. The feeder breaker will size the coal to conveyable sizes [(-) 200mm]. Coal from feeder breaker will be further transported to main trunk route by a series of 1000 mm wide gate belt conveyors.

Ten numbers of 1000 mm wide gate belt conveyors with total length of 4000m have been envisaged. All the gate belt conveyors have been designed to carry 250tph at 2.0m/sec speed and have been provided with 90 kW drive.

For LHD district, four numbers of 800 mm wide gate belt conveyors (total length 900m) with 55 kW power has been envisaged

TRUNK TRANSPORT

The trunk route, has been suggested in Seam IV(Combine) only. A series of (six numbers) 1200 mm wide belt conveyors working in tandem have been provided to cover the entire trunk route(s). These trunk belts are designed to carry 600tph and are powered with 2 x 90 kW drive. The total trunk length works out to 2350m. This includes the portion of the trunk belt in surface from incline opening to top of hoppers.

Two staple pits have also been provided in the trunk route. These staple pits are provided with reciprocating feeder at their discharge ends for uniform loading on succeeding conveyors. These staple pits will act as a surge bunker and also limits the running of belt conveyors.


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Coal from faces brought by gate belts will be collected on a 1200 mm wide belt conveyor, which will be laid on the trunk route of Seam-IV(Combine). Coal will be transported to surface CHP by a series of trunk belt conveyors working in tandem.

PVC belting has been envisaged for trunk and gate transport. The possibility of using steel cord belting should be explored during implementation stage, after obtaining approvals from DGMS, etc.

MATERIAL TRANSPORT

Rope haulages have been provided for material transport. A 100 kW direct haulage has been provided for transport of material in the incline, while two numbers of 37 kW endless haulages have been provided in trunk route. In addition to these four numbers of direct/ Tugger haulages have been provided for the trunk transport.

Four numbers of endless haulages have been provided for the three districts. Two numbers of tugger haulage has also been provided to meet any unforeseen requirement.

The endless haulages will have single track only as the use of the haulages are only for transport of material.

COAL HANDLING PLANT

A small coal handling plant has been envisaged to handle the entire production of coal from mine. The CHP will have facilities like storage of coal. The mode of despatch will be by road with the help of trucks to miscellaneous consumers. Coal will be dispatched by road to EDC siding, which is located nearly 36 kms from the proposed Dhankasa inclines. In order to reduce the road travel distance and increase the off take capacity, a new railway siding is being proposed near Naheriya U/G mine.

COAL FLOW (Surface transportation)

Coal from the underground will be brought to surface by trunk belt conveyor TB1 and discharged on to a reversible 1200 mm wide belt conveyor C1. Two sets of 2 x 100 t (totaling 400t) capacity overhead twin bunkers have been provided, one set at each end of the reversible conveyor.

The reversible belt conveyor, which receives coal from trunk belt conveyor, will discharge coal to either of the two twin bunker sets.

Trucks will be loaded below these hoppers with the help of reciprocating feeders at the bottom openings of the hopper.

Trucks will be weighed on electronic road weighbridges.

In case there is no off-take and hoppers are full, coal from hoppers will be dumped by trucks at a suitable location on ground. These heaps will be liquidated at a later date, as and when required by equipment available in the project.

The truck so loaded shall pass through the service road maintained for the coal transportation purpose which use the road presently being used for transportation of coal from Urdhan OC Mine to Railway Siding.

In case the coal is not being transported directly from the Hoppers, Coal brought from the Pit shall be stacked separately at the Coal Stock Yard so demarcated. Only tenancy land

acquired is being used for transportation purpose of coal from the Underground Mine.

The coal so brought to the surface shall be transported by truck by Hiring of Tippers by contractor by a 2.4 Km service tar felted road leading to Urdhan OC mine despatch road. The rated coal production of around 2,000 Te. / day shall be transported through around 60 tippers per day on this road.



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