

MANAGING LOAD AND HAUL INEFFICIENCIES

Limpopo and Mpumalanga, South Africa

PROJECT TYPE: Opencast pits ore load and haul

PROJECT DESCRIPTION:

Improving the efficiency of truck haulage on Concor mining sites is a priority. One of the biggest cost drivers in haulage is diesel consumption.

Haulage system inefficiency is typically derived from inadequate engineering, which results in poor haul road design, machinery standby and downtime, and inefficient circuit traffic.

Many factors affect the efficiency of haul trucks such as the accuracy of dispatching systems, payload, truck speed, haul road condition, amount of trucks in the cycle, queuing time, idling time, road design, traffic layout, fuel quality, weather conditions and drivers' skill.

Based on these hauling operation components, four main times can be defined and must be clearly understood; fixed time, travel time, queue time and cycle time:

- Fixed time is a summation of the loading, maneuvering, dumping and spotting time. It is called 'fixed' because it is substantially invariable for a truck and loading unit combination.
- Travel time is the time taken to haul and return the payload.
- Queue time is the time the truck must wait before being served by the loading unit, waiting in a queue for dumping and the waiting time in line behind the overloaded trucks.
- Cycle time is the round-trip time for the truck. It is the sum of the fixed, travel, and queue times.

