

# ***HAULING & TRANSPORTATION OF ORE***

*How to reduce cost of waste material transportation*



The haulage of ore and waste is an important activity in every underground mining operation. Generally, the haulage of these materials, represents **20-25% of the total mining costs**. However, it is also one of the activities that is least tracked with regards to productivity and costs. But there is a big opportunity to increase productivity and reduce costs.

Haulage costs can be subdivided in 2 categories. **Ore haulage, which accounts for approx. 80% of the total haulage costs, and waste haulage which accounts for approx. 20% of the total haulage costs.** Exploration mine advance and underground developments generate waste. This waste is normally hauled to surface and dumped on the waste dumps. With increased mine development and with increased mining depth, the haulage distance of waste increases, resulting in higher costs.

Waste dumps can also have an environmental and social impact. As part of completing the mining cycle, mining companies are required to rehabilitate the affected land such as waste dumps. This is done by flattening waste dumps, covering them to prevent acid drainage and plant vegetation on them.

To reduce waste handling costs, mining companies should consider new technologies and equipment to keep waste rock underground. **Not only could waste rock remain underground, but tailings can also be back filled underground.**

BAS Mining Trucks has several fleets of trucks in underground mining operations. With fleets of **50 tonne mining trucks in underground stoping operations**, BAS Mining Trucks recently delivered a fleet of pusher trucks in a French Room and Pillar mining operation.

Because the **trucks dump horizontally**, as opposed to vertically like a normal dump truck, the trucks can **back-fill waste material in the underground voids** up to the hanging wall. The trucks are very stable, even on side slopes and can even dump while moving.

Emptying the truck takes 30 seconds and can take place in areas that are 3m wide and 3.5m high. Backfilling stopes in stoping operations does not require scaling sublevels. After the load has been dumped, the truck can return immediately. Using this type of truck, the waste material can be used as backfill but also as road maintenance material.





**There is a big opportunity to increase productivity and reduce costs**

## **COSTS OF WASTE HANDLING**

Using the BAS Mining Trucks pushers in underground mining operations eliminates:

1. Costs to obtain permits for permanent waste dumps on surface
2. Costs to engineer and construct waste dumps
3. Waste haulage costs on surface
4. Rehabilitation costs



Using BAS Mining Trucks pushers in underground mining operations, in addition to the cost savings, you can also benefit from :

- ✓ **Improvement in safety and health.** With improved stability and with less trucks on surface, less personnel is exposed to machinery resulting in safer mining operations.
- ✓ **Improvement of environment.** Little or no waste material is permanently stored on surface. This greatly reduces the risk of environmental contamination. This has a positive impact on the communities around the mine.
- ✓ **Rockmechanical stability.** The homogenous backfill material is confined within the stopes or rooms. This material ensures that stopes and rooms do not collapse. This has a positive effect on underground safety.
- ✓ **Backfill of tailings.** Dry tailings can also be used as backfill material. This results in a cost and safety benefit, because tailings storage facilities on surface are not required.
- ✓ **Less support equipment required.** Pusher trucks can spread material or can dump the material in a large cavity. This greatly reduces the requirement for support equipment to push material into the stopes/rooms.
- ✓ **No scaling required.** Because pushers do not raise the dump body, the sublevels, drill levels, rooms or any area that needs to be backfilled from, do not require scaling. The minimum pusher truck height is 3.5m.
- ✓ **Better road maintenance.** Some waste material can also be used as haul road base material or even haul road surface material. This reduces the requirement for the supply of these materials and it increases truck and tyre availability.

**This has a positive effect  
on underground safety**

## Seems interesting?

We invite you to analyze the benefits for your project! Send us a message to explore how **BAS Mining Trucks' Pusher** can reduce costs on your project and to improve efficiency.

[Click here to get in contact](#)





## THE MINING HAULAGE SPECIALIST

The mining industry is a highly specialist sector which sets unique criteria, expectations and requirements with regards to haulage. For example, it demands very strong and durable materials. It involves the haulage of large quantities of ore, minerals, coal and overburden. And it requires high rimpull. BAS Mining Trucks delivers when it comes to strong and durable trucks that are ideally suited for the mining, quarrying and construction industries.

The mining industry is very demanding. Both on people and materials. At BAS Mining Trucks, we understand that better than anyone else. Therefore, operators need full support when doing their work. The equipment must therefore offer them optimum comfort, a perfect overview and awareness of their workplace, maximum protection of health & safety and complete user friendliness. This all leads to high productivity at the highest degree of safety and at the lowest cost per tonne.

We enable companies to boost the efficiency of their operations while optimising the facilities placed at the workers' disposal. We call this 'the new efficiency'. The knowledge, skills, products and passion of BAS Mining Trucks can even make the interests of our customers and the interests of BAS Mining Trucks reinforce each other. In every partnership we take our responsibility, both socially as well as financially, with respect to people and environment. Together we can move mountains!

[www.basminingtrucks.com](http://www.basminingtrucks.com)