

Sustainable transport solutions for the coal mining industry



Sempercord product at Belchatow mine, Poland (all photos: ©Semperit AG Holding).

The coal mining industry is a major contributor to the global economy, providing energy and raw materials for various industries. However, the process of extracting coal also has a significant impact on the environment. To minimize this impact, it is crucial that all aspects of the mining process are carried out in a sustainable manner. This includes the use of conveyor belts.

Semperit Conveyor belts (Sempertrans) is a major provider of conveyor belts for

the mining industry. It has been active in the mining industry for over 50 years. During that period, the company has been able to acquire great experience with coal, copper and iron ore mining, as well as other fields of mineral resource extraction. Major players in the mining industry all over the world count on Sempertrans' expertise and liability and enjoy a successful relationship with the company. The products are known for their durability and reliability. However, Sempertrans is also

committed to sustainability, and this is reflected in the design and manufacturing of its conveyor belts.

The sustainability of Sempertrans conveyor belts is important for several reasons. Firstly, sustainable products help to reduce the environmental impact of the mining process. For example, the use of energy-efficient motors and drives helps to reduce the amount of energy used in the conveyor system, reducing the greenhouse gas emissions associated with the mining



The 'Multitrans' multi-purpose textile belt is used for general to highly demanding applications and is being used at the port of Dunkirk, France.

process. Sempertrans successfully implemented the energy-saving belt TransEvo Ultra for surface mining and TransEvo-V for underground coal mining. These belts enable power savings of up to 25%, which is highly recommended in case of long-distance conveyance to reduce energy consumption.

In addition, sustainable conveyor belts are also designed to be more durable and have a longer lifespan. Thus, they will require less frequent replacements, reducing the amount of waste generated by the mining process. Furthermore, the use of sustainable materials in the production of the conveyor belts helps to reduce the use of finite resources and minimize the impact on the environment.

Another key aspect of sustainability in the mining industry is the health and safety of workers. Sempertrans conveyor belts are designed with the safety of workers in mind to meet the highest safety standards. This helps to minimize the risk of accidents and injuries in the workplace, making the mining process safer for everyone involved.

In the lignite industry, using heavy conveyor belts to transport lignite can provide several benefits over using trucks.



On average, conveyor belts have a higher transportation capacity, with some systems capable of moving over 10,000 metric tonnes of lignite per hour, compared to trucks which typically have a capacity of around 50–60 metric tonnes per trip. This means that conveyor belts can significantly decrease the number of trips needed to transport the same amount of material, reducing both fuel consumption and emissions.

In terms of cost, conveyor belts have been shown to be more cost-effective in transporting large quantities of lignite over long distances, with some estimates suggesting a considerable savings up to 50% in typical settings in terms of operating expense in comparison to truck transport.

Furthermore, conveyor belts emit

approximately up to 95% less in terms of greenhouse gases and pollutants than trucks, making them a more environmentally friendly option. They also result in less wear and tear on roads and highways, leading to reduced maintenance and repair costs. Finally, conveyor belts can operate 24/7 without the need for rest stops or refuelling, increasing productivity and reducing downtime. Overall, heavy conveyor belts offer a safer, more efficient, and more sustainable method of transporting lignite.

By reducing the environmental impact of the mining process, improving worker safety and, because they are very cost-effective, Sempertrans conveyor belts play an important role in making the mining industry more sustainable.