

Conveyor belt system for the Santa Lucia Tunnel, Italy

Conveyor belt system for Europe's largest tunnel heading machine

The Apennines are an approximately 1,500 km mountain range in Italy. Crossing them has always been a challenge. The A1 freeway, which was built in the 1960s, passes over them. The section between Florence and Bologna is particularly dangerous due to tight curves. With more than 2,000 accidents in the last ten years, it has one of the highest accident rates of any Italian freeway.

The Autostrade S.p.A. freeway company wants to improve both traffic flow and road safety with the A1 freeway upgrade.



Client
Pavimental AG, Italy

Created
October 2016 to March 2017



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The conveyor belt system consists of

- Tunnel conveyor width 1,400 mm, length approx. 7,900 m
- Interurban conveyor width 1,400 mm, length approx. 2,000 m
- Connecting conveyor width 1,400 mm, length approx. 80 m
- Tripper car: Belt width 1,400 mm, length approx. 300 m
- Reversible transverse belt on tripper car: Belt width 1,600 mm, length approx. 12 m
- Belt length 600 m per roller for the tunnel conveyor

Technical specifications

- Conveying capacity: 1,750 t/h
- Speed approx. 3 m/s
- Grain size: 0 - 300 mm



The route of the new freeway passes through the middle of the mountains, so 44 tunnels must be built in addition to more than 40 viaducts and bridges.

The almost 8-km-long Santa Lucia Tunnel is one of them. The largest tunnel heading machine ever put into operation in Europe is being used for the driving work. Our conveyor belt system is responsible for the removal of enormous quantities of excavated material.

1. Interurban conveyor B200 drive station
2. Tripper car with reversible transverse belt for material discharge on exterior dump
3. Connecting conveyor B250