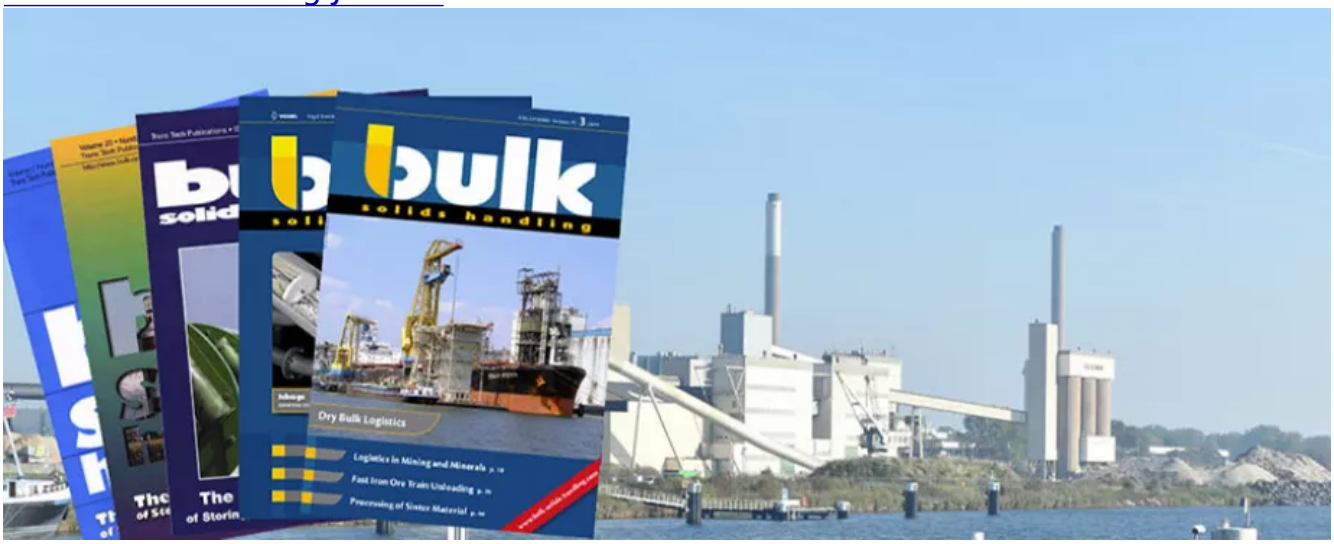
bulk solids handling Journal




Whitepaper

# Belt Conveyors of the Future

Bearbeitet von am 9. Okt. 2023
Published in bulk solids handling, Vol. 1 (1981) No. 3

Belt conveyors are nowadays widely used as one of the most economical methods of continuous conveying of bulk materials over medium and long distances. Since the economy of the handling operation is dependent on many boundary conditions, including, for example the terrain configuration, it has been found in the past that the economic performance of belt conveyor systems can be substantially improved if their alignment can include horizontal curves to adapt them to the terrain. In this way it is possible to avoid intermediate transfer points with their associated problems and cost. The incorporation of horizontal curves in combination with convex and concave vertical curves is bound to gain greatly in importance in the design of future installations. This article describes belt conveyor systems comprising one or more successive horizontal curves, including one with an overall length of about 11,000 m with four horizontal curves in succession attaining a total curved length of about 5,500 m, showing what is possible in this field of engineering. Such a system with left-hand and right-hand horizontal curves can claim to be unique and can provide a powerful impetus to the design of new installations embodying these possibilities.

Belt conveyor systems are now extensively used for the efficient transport of bulk materials over long distances. The choice of this conveying method does, however, depend on the result of a comparison, in economic terms, with alter native methods:.

- ropeway
- railway.
- truck (road vehicle)
- pipeline
- other methods (e.g., high-speed "trains" of tubular containers powered by linear motors, more particularly the German "asbz" system)

The following factors are of major importance with regard to the economy of a conveying system:.

- capital cost.
- cost of land.
- operating costs.
- maintenance costs.
- repair costs.
- operational reliability.
- capacity reserve.
- personnel requirements.
- energy consumption.