

Article Overview

Conveyor belts can be installed on specialized bridge structures, such as lattice conveyor bridges or suspension-based cable bridge conveyors, to span long distances and obstacles efficiently.

Types of Conveyor Bridges

1. **Lattice Conveyor Bridges:** These are steel lattice structures that support one or multiple belt conveyors. They allow longer spans between supports--typically around 40 meters compared to 12-18 meters for standard conveyors--and can be open, covered, or insulated depending on operational needs. Multiple conveyors can be positioned in width and height to optimize material flow for specific plant requirements . 2. **Cable Bridge Conveyors (CBC):** CBC systems combine conventional belt conveyors with suspension bridge principles. The bridge deck is supported by cables, eliminating the need for high truss towers. Typical spans range from 200 to 600 meters, making them ideal for crossing rivers, valleys, roads, or buildings. CBCs reduce civil work, minimize environmental impact, and maintain compatibility with standard conveyor belts . 3. **Chain Conveyor Bridges and Belt Transitions:** For modular or chain conveyor systems, belt bridges or roller bridges can transfer goods between conveyor sections without major modifications. Driven belt bridges ensure smooth transport of soft or unstable products and allow sections to run empty, improving efficiency and reducing product loss .

Design and Installation Considerations

- o **Support Spacing:** Longer spans reduce the number of supports but require careful structural design to maintain rigidity and prevent sagging .
- o **Belt Alignment and Stress:** Curves and elevation changes must be carefully controlled to reduce belt stress, allowing the use of standard steel cord or fabric belts .
- o **Environmental and Civil Constraints:** Elevated conveyors allow traffic or natural features to pass underneath, reduce footprint, and minimize civil construction costs compared to ground-based systems .
- o **Safety and Maintenance:** Elevated bridges require planning for safe access, inspection, and maintenance, especially in industrial or tunnel environments .

Practical Applications

- o **Tunnel and Mining Projects:** Conveyor bridges transport excavated material from underground to surface stockpiles, sometimes spanning roads or other obstacles with spans of 50 meters or more .
- o **Industrial and Overland Transport:** CBCs and lattice bridges are used in mining, cement, and bulk material handling to cross valleys, rivers, or urban areas without extensive civil works . By selecting the appropriate bridge type and designing for load, span, and environmental conditions, conveyor belts can efficiently transport materials across challenging terrain while maintaining safety and operational efficiency.

Conveyor belt onto bridge

CESCO offers two types of conveyor bridges designed to meet the demands of different conveying

Our belt and roller bridges offer you precisely customised solutions to ensure smooth transport between

Long conveyor lines need crossing points, and there are 3 general options. Let's break down the advantages and

Conveyor Belt System For Bridge Course - Free download as PDF File (.pdf), Text File (.txt) or view presentation slides online. The

The F60 conveyor bridge in operation in Welzow-Süd mine A conveyor bridge is a piece of mining equipment used in strip mining for

Abstract Above ground, elevated belt conveyors with span >200m between support points can cross valleys, rivers, forests and

CHAPTER 2--DEFINITIONS, p. 2 placing concrete; the design of conveyor systems in relation to the properties of the plastic

Whether it's on the production line, or in the baggage handling area, the presence of a conveyor belt can make walking around the

A conveyor bridge is manufactured as a lattice structure whose purpose is to carry one or more conveyor belts that are placed inside

Abstract Above ground, elevated belt conveyors with span >200 m between support points can cross valleys, rivers, forests and

The cable bridge conveyor (CBC) is a new type of suspension bridge based belt conveyor system that has long spans

Wildeck's industrial conveyor crossovers (also known as crossover ladders, crossover stairs, or crossover

Above ground, elevated belt conveyors with span >200m between support points can cross valleys, rivers, forests and buildings with

With EQUIPTO's expanded line of conveyor crossover platforms and bridges you will keep your workers

Conveyor belt onto bridge

Bridge conveyors are belt conveyors that are designed to move material directly from the face to a final point, e.g., a spoil pile in

Steel cable bridge is a kind of flexible suspension bridge with steel wire rope as the main stress components. It has the

Web: <https://www.kremgroup.co.za>

