

Over 35 years of
successfully solving
the world's most challenging
bulk material handling problems



mechanical structural control instrumentation software consulting

Pipe Conveyors

Yubei, China | 2017
15 km Pipe Conveyor with Box Truss
and Maintenance Trolley



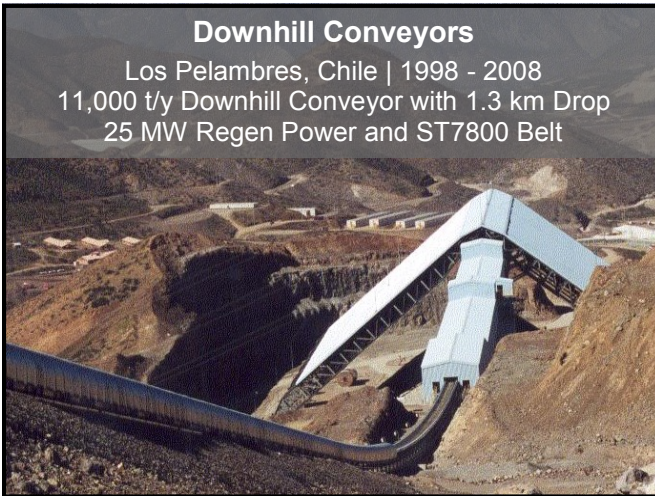
High Speed Conveyors

Adani Dahej Port, India | 2013
6,000 t/h Coal Trough Conveyor at 7.5 m/s
with Triangular Truss and Maintenance Trolley



Downhill Conveyors

Los Pelambres, Chile | 1998 - 2008
11,000 t/y Downhill Conveyor with 1.3 km Drop
25 MW Regen Power and ST7800 Belt



Curved Conveyors

Curragh North, Australia | 2007
20 km Single Flight Trough Conveyor



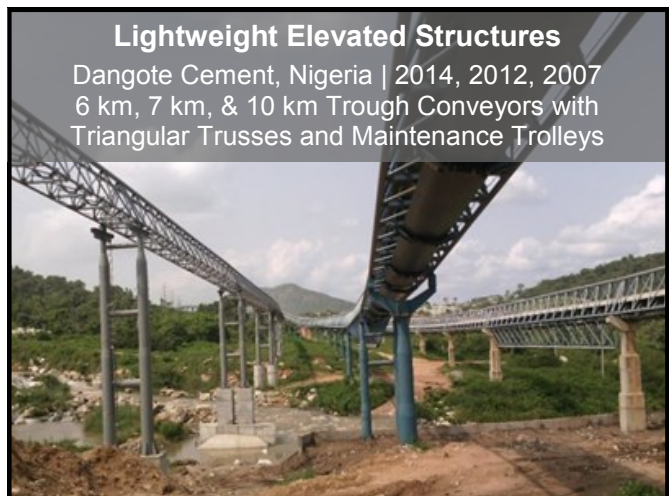
Long Overland Conveyors

Impumelelo, S. Africa | 2015
27 km Single-Flight Trough Conveyor



Lightweight Elevated Structures

Dangote Cement, Nigeria | 2014, 2012, 2007
6 km, 7 km, & 10 km Trough Conveyors with
Triangular Trusses and Maintenance Trolleys



From conceptual studies through detailed drawings, CDI offers a broad range of consulting services for the bulk material handling industry

SYSTEM / COMPONENT ENGINEERING

- ✓ Long overland, curved, and bi-way conveyor designs
- ✓ Trough, pipe, and cable- and air-supported conveyors
- ✓ Route and structural optimizations
- ✓ Conveyor static / dynamic analysis
- ✓ Pulley and idler analysis
- ✓ Component specifications
- ✓ Advanced conveyor belt technology

CONTROL / COMMISSIONING

- ✓ Control logic diagrams
- ✓ PLC programming
- ✓ Specialized drive and brake controls
- ✓ Head / tail / mid-booster, soft-start and soft-stop drive controls
- ✓ Tachometers, UPSs, and data acquisition systems (DAQs)
- ✓ Commissioning

FORENSIC FAILURE ANALYSIS

- ✓ Brake systems audit, evaluation, and diagnostics
- ✓ Drives torque delivery and load sharing optimization
- ✓ Control algorithms evaluation and optimization
- ✓ Pulleys & belt splicing evaluation using FEA analysis
- ✓ Conveyors dynamic behavior recording and evaluation
- ✓ Telemetry assisted field torque measurements

CHUTE DESIGN & OPTIMIZATION

- ✓ Chute geometry optimization using ROCKY DEM software
- ✓ Granular flow simulations in chutes, feeders, bins, crushers, & mills
- ✓ Throughput and bottleneck studies
- ✓ Identify and solve root causes for blocking, spillage, product degradation, dust, belt tracking, and liner wear
- ✓ Material Calibration

CDI's design approach is maintenance friendly, cost-effective, and emphasizes both minimal moving parts and trouble-free control systems.

In addition, our advanced, CDI software tools (BeltStat, BeltFlex, PStress) and special modeling tools (FEA and DEM) enable us to provide our clients with the most efficient and economical conveyor designs possible.

Incorporated in 1981, **Conveyor Dynamics, Inc. (CDI)** is a world leader in designing complex overland conveyor systems. Recognized internationally for our key involvement in some of the world's longest, strongest, fastest, and most economical conveyor systems, our primary focus is optimizing the designs of overland conveyor belts and related systems to solve our clients' unique mechanical, structural, control, electrical, terrain, and economic design challenges.

CDI is proud to serve the mining, mineral processing, construction, and manufacturing industries worldwide. Contact us to learn more about how we can help optimize your bulk material handling systems.



Conveyor Dynamics, Inc.

3633 Alderwood Avenue
Bellingham, WA 98225-2922 USA

Tel: 360-671-2200

Fax: 360-671-8450

E-Mail: cdi@conveyor-dynamics.com

URL: www.conveyor-dynamics.com