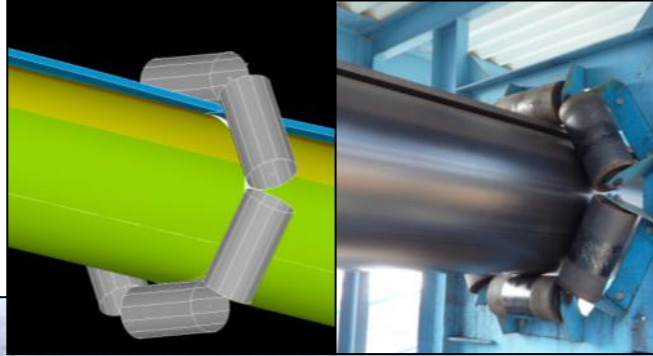


Over 30 years of
successfully solving
the world's most challenging
bulk material handling problems

mechanical structural control instrumentation software consulting

7 km Pipe Conveyor

Goodyear Confine® Belt with
Patented Construction,
Advanced Power Analysis,
Stable Seams,
and Low Rolling Resistance
China



Pipe Conveyor Experience

- Designs beyond:
- ST3200 N/mm strength
 - 4500 kW power
 - 600 mm diameter
 - 7 km length
 - -40 to 400°C temp.

20 km Curved Overland

World's
Longest
Trough Belt
Curragh North
Australia



14 km Elevated Trusses with Maintenance Trolleys

Dangote Cement
Nigeria

7 km Bi-Way Overland

Port Hedland
Australia



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 belt designs
- ✓ Conventional trough and pipe belts
- ✓ Route optimizations
- ✓ Static / dynamic belt, idler, and pulley analysis
- ✓ Component specifications
- ✓ Low rolling resistance (LLR) rubber technology

CONTROL / COMMISSIONING / TESTING

- ✓ 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 / training / trending

FORENSIC 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 USING DEM

- ✓ Chute geometry optimization using ROCKY Discrete Element Modeling (DEM) software
- ✓ Granular flow simulations in chutes, feeders, bins, crushers, & mills
- ✓ Identification of potential issues with blocking, spillage, product degradation, dust, belt tracking, and liner wear
- ✓ Full-color report with animations and metrics

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-designed software tools (BELTSTAT, ROCKY) and specialty products 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.



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