UNIVERSITY OF NEWCASTLE AUSTRALIA

TUNRA BULK SOLIDS

Belt Conveying Showcase and Site Tour

Belt Conveyor & Component Testing Capabilities Overview

Presented by TUNRA Bulk Solids for Industry

Wednesday 6th August 2025

The storage, handling and transportation of bulk materials are major activities for a variety of industries throughout the world. These range from the handling of small quantities of material in the pharmaceutical and chemical processing industries to the high throughputs processed in the mining industry. This diversity is particularly evident in Australia where the nature and scale of operations is somewhat unique.

Considerable advances continue to be made in research, development, application and implementation of the technologies associated with belt conveying as well as components testing.

TUNRA Bulk Solids are pleased to welcome you for a half-day presentation on the latest advancements in the belt conveying field, along with a site tour of TUNRA's state-of-the-art testing facilities which are ISO45001, ISO14001 and ISO9001 certified.

Topics Covered

- Advancements in the energy-efficient design of belt conveyors
- Latest testing available for system components
- Belt and idler tender processes
- Research on wear and friction
- Case studies

Who should attend

This will be of particular interest to:

- Mechanical, reliability, maintenance and process specialists
- Manufacturers and suppliers of conveyor components (belt, idlers, pulleys, scrapers)
- Researchers

Industries including: mining and mineral processing, power generation, energy and environment, chemical, agricultural, food processing and manufacturing.

Why attend

- Diversify your expertise and further knowledge of belt conveying advancements and associated testing
- Network with experts in the field of materials handling
- Stay up to date with the latest developments in bulk solids research

Location - TUNRA Bulk Solids - NIER Site, A Block - 70 Vale St Shortland, NSW

Belt Conveying Showcase and Site Tour

- 1:15 pm — Registration
- 1:30 pm — Overview of TUNRA Bulk Solids
  Jayne O'Shea
  Operations Manager / Senior Consulting Engineer
- 1:45 pm — Belt Conveyor Component Testing Overview and Case Studies
  Jayne O'Shea & Yusuf Badat
  Consulting Engineers, TUNRA Bulk Solids
- 2:35 pm — Current Belt Conveyor Research and Advancements
  Peter Robinson
  Research Associate, Centre for Bulk Solids & Particulate Technologies
  Belt and Idler Wear Research and Advancements
  Tiago Cousseau
  Consulting Engineer, TUNRA Bulk Solids
- 3:10 pm — Afternoon Tea Break and Networking
- 3:30 pm — Site Tour
  All
- 4:30 pm — Conclusion

Conveyor Component Testing Services

The comprehensive testing facilities of TUNRA Bulk Solids at the University of Newcastle, Australia, enable a wide range of conveyor component testing services to the mining and manufacturing industries in reference to relevant International Standards and/or guidelines.

Tests are conducted according to AS1332, AS1333, AS1334 and other associated standards for all types of belting.

Conveyor idler rolls and idlers are tested with reference to SANS 1313, DIN 22112 and MDG 3608. Design Audits are conducted in accordance with ISO 5048, DIN 22101, CEMA and in-house procedures.

- Small and large sample indentation rolling resistance measurement
- FRAS tests according to MDG 3608 and AS 4606
- Idler roll noise testing
- Idler roll rotational resistance testing, including rim drag, break-away force and maximum start-up drag, MIS and TIR of idlers
- Idler dust and water ingress
- Belt cover ply adhesion and resistance to tear propagation
- Cord breaking force, static & dynamic cord pull-out strength
- Belt surcharge angle and maximum inclination angle
- Belt scraper efficiency
- Conveyor belt tensile strength and elongation
- Troughability
- Abrasion testing for idler and belt components
- Inspections and failure analysis, site inspections, audits and reviews
- Thermal imaging

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TUNRA BULK SOLIDS
CELEBRATING 50 YEARS

Why TUNRA Bulk Solids?

Experience and Expertise

We have provided expert solutions to industry for over 40 years and are the leading organisation for materials handling research and consulting in Australia and internationally

Research and Development

We have a proven track record in research and development through the close association with The University of Newcastle

Quality Service

We have highly qualified, well-trained and specialist staff that are committed to delivering excellence

First Class Facilities

Our laboratory is a state of the art facility located within the Newcastle Institute of Energy and Resources (NIER)

Industry Standards

We are accredited to ISO 45001, ISO 14001 and ISO 9001

Independent

We are independent and not for profit

For further information regarding the half-day event

PLEASE CONTACT
Danielle.Harris@newcastle.edu.au

OR PHONE TUNRA Bulk Solids
02 4033 9055