THE UNIVERSITY OF NEWCASTLE AUSTRALIA

TUNRA BULK SOLIDS

Services

TUNRA Bulk Solids is an established business of The University of Newcastle Research Associates (TUNRA)

We are world leaders in applied and fundamental bulk solids handling research. TUNRA Bulk Solids has been in business for more than 40 years and has built a strong reputation in industry for our professional contract research services and our world class research in materials handling and flow properties. We have completed more than 3,000 projects for over 1,000 companies across Australia and more than 40 countries internationally.

Consulting and Contracted Research

Our team of experts provide consulting and contract research services to a wide range of industries. Our business success is a result of our commitment to building long-term partnerships with business. We work with industry to overcome unique materials handling or flow issues. We add value for industry in our capacity to plan our projects and ensure trouble-free plant operation.

We provide services to industry that include:

- Expert site assessment and site performance recommendations for efficient materials handling
- Advanced analytics through numerical and computational modelling
- Materials handling and flow property solutions including concept designs
- Large-scale commercial and industrial research and development projects
- Advanced and individualised testing services
- Full engineering workshop services to enable prototyping of scale designs

TUNRA Bulk Solids consulting, research and development service encompasses handling and processing of powder-form and bulk materials in most industries ranging from:

- Mining and mineral processing
- Power generation
- Chemical processing
- Agriculture
- Manufacturing
- Food production
- Pharmaceuticals

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We have proven expertise in identifying solutions for industries who have engaged us to undertake the following:

Materials Testing

- Flow properties testing
- Dust (environmental) testing
- Shipping-related testing – Transportable Moisture Limit (TML) and Stowage Factor.
- Abrasive wear, erosion and attrition
- Conveyor belt testing against Australian and International Standards
- Conveyor Belt Indentation Rolling Resistance (IRR) testing in world class facilities
- Idler roll testing against Australian and International Standards
- Conveyor component Fire Resistance Anti-Static (FRAS) testing
- Pneumatic conveying
- Hydraulic conveying

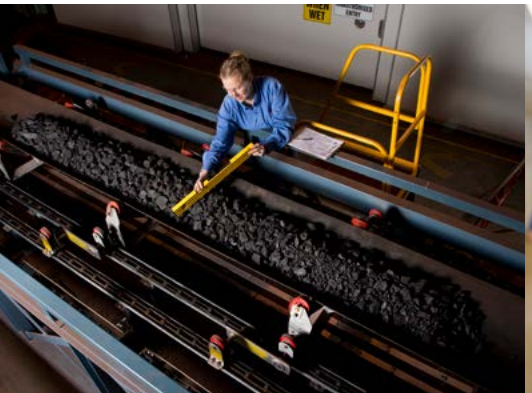
Materials Handling Consultancy

- Customised in-house short courses and on-site training
- Bin design, wall loads and flow patterns
- Stockpile draw-down geometries
- Stockpile live capacity estimates
- Belt conveying design reviews and audits
- Conveyor motion resistance calculations
- Feeder performance and load calculations
- Pneumatic conveyor scale modelling
- Transfer chute conceptual designs
- Wear and flow design optimisation
- Hydraulic conveying
- Instrumentation
- Fatigue testing
- General material handling design audits
- Discrete element modelling (DEM)
- Computational fluid dynamics (CFD)
- Finite Element Analysis (FEA)
- Site inspections

Technology and Knowledge Transfer

TUNRA Bulk Solids also provide a platform for commercialising research and transferring technology to ensure the expertise we gain through research is widely distributed for industry application.

We offer on-site and in-house training, innovation and development workshops to ensure our industry partners are working with the best research and technology available.



Further information

- To access our Case Studies **visit www.bulksolids.com.au**
- To discuss your industry and business needs **phone 02 4033 9055**