

FORESIGHT ENGINEERING SERVICES

“Practical, reliable and efficient engineering solutions”

BULK MATERIALS HANDLING

Foresight Engineering offers a range of consulting services for Bulk Materials Handling systems. From preliminary conceptual studies to detailed construction drawings, Foresight can optimise your Materials Handling Processes for maximum efficiency, reliability and capacity. With a strong foundation in civil and mining projects, Foresight has the unique ability to manage the complete project from feasibility through to construction and commissioning.

MATERIALS HANDLING EQUIPMENT DESIGN

Foresight Engineering can design new plant, modify existing systems or optimise your current equipment. Typical equipment:

- Conveyors e.g. Belt, chain, roller, screw.
- Feed chutes, discharge chutes, rock boxes and transition optimisation.
- Feed hoppers and storage silos.
- Weighing systems and electromagnetic separation systems.
- Cleaning and scraping systems.
- Screens, grizzlies and loading points.
- Dust capture and handling systems.

BELT CONVEYOR DESIGN AND ANALYSIS

Foresight Engineering offers a range of detailed analysis services for belt conveyor systems

- Conveyor safety and guarding assessments (AS1755 and AS4024).
- Capacity limit reviews e.g. determination of maximum tonnes per hour.
- Efficiency reviews e.g. reduction of running costs.
- Conveyor calculations e.g. Belt tension, take up mass, belt lift, motor sizing.
- Head and tail drum design and discharge trajectories.
- Supporting structure design e.g. access and structural supports.
- Cleaning and scraping system design.
- Dust and fume handling system design.
- Component design and selection e.g. Motor and gearbox selection, shaft design, idlers, head and tail drums, impact beds, holdback devices, belt carcass selection.

INDUSTRY EXAMPLES

Examples of projects previously undertaken by Foresight Engineering’s personnel include:

- 40 Tonne hopper for oversize material at a minerals sands mine.
- Various belt conveyor calculations and construction drawings for a number of clients and materials such as Superphosphate, rock, wood chips, grain, mineral sands, coke and alumina.
- Design of a hydraulic pivoting grizzly to minimise downtime from oversize rocks.
- Detailed Design of a 60T Monazite storage and truck loading system, including screw conveyor systems.

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