



Chip Reception, Storage & Reclaim System

PROJECT REPORT

CLIENT: NORSKE SKOG, NEW ZEALAND



CONCEPT DESIGN MANUFACTURE INSTALL COMMISSION OPERATE

INNOVATIVE SOLUTIONS TO INDUSTRY



The Situation

Norske Skog Tasman wished to extend facilities for the receipt, storage and reclamation of chip imported to their Kawerau, New Zealand mill site.

Their existing facility, which originally designed for 350,000 tpa of chip, was processing more than 400,000 tpa. The increased number of truck movements associated with this increase in throughput created an unacceptable risk of accidents in areas where chips were unloaded.

Norske Skog Tasman wished to further increase the volume of imported chip to 740,000 tpa and segregate it by density into 4 grades in order to improve the strength of fiber to their paper machines. To achieve this high level of throughput any system employed must be able to maintain a cycle time of 6 minutes for each truck and trailer combination.

Not only was the existing storage pad too small, but the risk of accidents further increased.

The Solution

BEL were contracted by Norske Skog Tasman to deliver a Full Turn-Key Chip Import, Storage and Reclaim system that included Traffic Management, Product Separation and Data Communications.

BEL headed this Project and as such Designed, Manufactured, Installed and Commissioned all aspects of Civil, Mechanical, Electrical and Control.

The system includes:

- Truck lay-by and queuing system
- Traffic management, flows and sequencing
- Bar-code system for product identification and separation
- Truck ramp and a Hopper capable of receiving 90m³ discharge
- Truck Driver operated interface at discharge, reducing manning requirements
- Automated distribution conveyor system to 4 separate product piles at 500 t/hr
- Storage capacity of 10,500 tonnes minimum
- Reclaimer and process feed conveyors
- Integrated radio controlled process management system



The Specifications

Truck Receiving Station:

Grizzly and Hopper located at the top of an elevated ramp.

Delivery method	Various Truck and Trailer combinations
Plan dimensions	10m x 6m
Material density	320 – 390 kg/m ³
Hopper capacity	100m ³
Discharge method	Apron chain conveyor
Discharge capacity	500 t/hr @390 kg/m ³

Chip Distribution System:

Inclined belt conveyors and Distribution Gallery

Transport method	1.2m wide belt conveyors
Total length	130m
Elevation	0m – 23m
Capacity	500 t/hr @390 kg/m ³
Discharge system	Diverter Chutes and Belt Ploughs

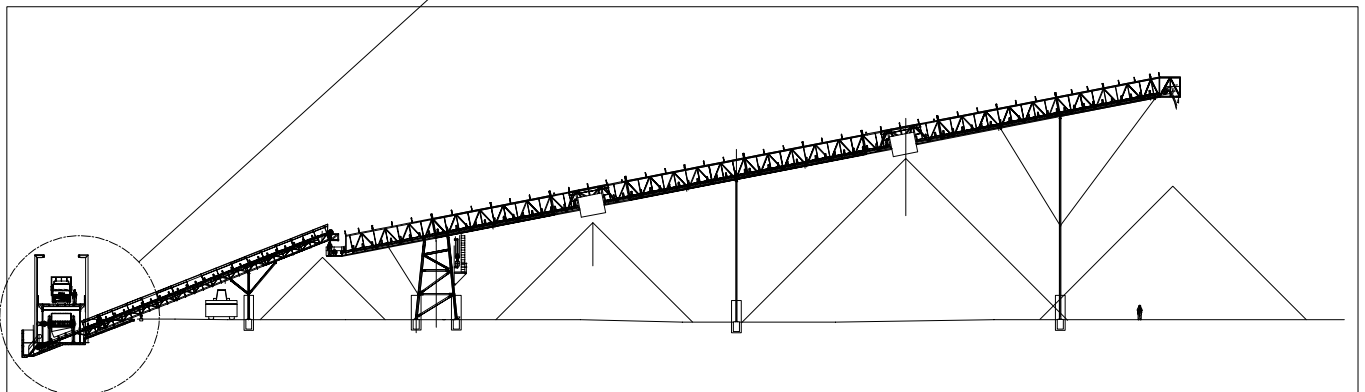
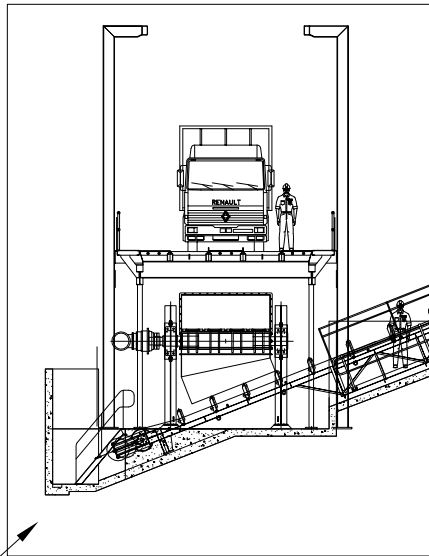
Chip Reclaim System:

Drag Chain conveyor discharging onto belt

Chain reclaimer:

Delivery method	Front End Loader
Plan length	42m
Reclaim length	35m
Discharge method	Apron chain conveyor
Discharge capacity	220 t/hr @ 390 kg/m ³
Belt Conveyor	
Transport method	1.2m wide belt conveyor
Total length	45m
Elevation	0m – 8m
Capacity	220 t/hr @390 kg/m ³
Discharge system	Chute





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