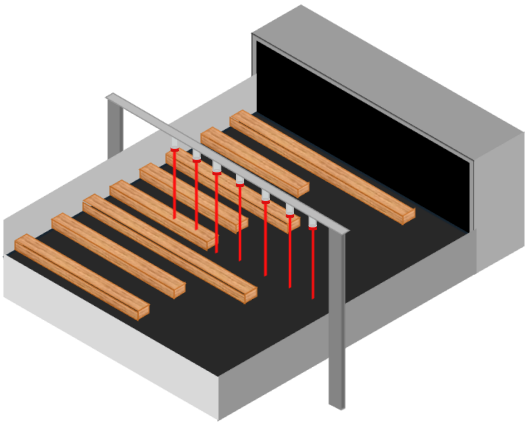
Tally Beam System for Sawlines

INTRODUCTION

Understanding the volume of timber going through the Mill is vital to getting a clear picture of productivity and capacity, exactly matching PlantRun's fundamental rationale. The variability of timber on some sawlines means that each piece needs to be identified, its length determined and counts of the various sizes collated.



HOW THE SYSTEM WORKS

The Tally Beam system utilises PlantRun's standard I/O capabilities with a range of specially developed functions to track the timber. Typically, 16 proximity sensors are mounted over the conveyor at 300mm intervals, starting at 1.5m. As the timber passes under the sensors they trigger, which allows a range of lengths up to 6.3m to be clearly identified and volumes calculated in real time.

The total and average lengths are provided instantly but the volume calculations require the thickness and width dimensions. PlantRun can be set up to gather this information in a number of ways:

- An operator can enter them manually
- A product can be selected from a pre-defined database
- Information can be brought automatically from a planning system
- Communications can be established with the sawline control system

TECHNICAL DATA

Features

Range	1.5m to 6.3m typical
Sensors	16 x Proximity
Counts	1.5, 1.8, 2.1, 2.4, 2.7, 3.0, 3.3, 3.6, 3.9, 4.2, 4.5, 4.8, 5.1, 5.4, 5.7, 6.0, 6.3m
Output	LAN communications to PlantRun system

Installation

Panel	500 x 500 x 210mm
Display	In-panel LCD display of production counts
LAN	RJ45 hardwired LAN
Power	240V a.c. with 24V d.c. PSU internal

MAJOR TIMBER PROCESSOR INVESTS IN PLANTRUN TALLY BEAM SYSTEM

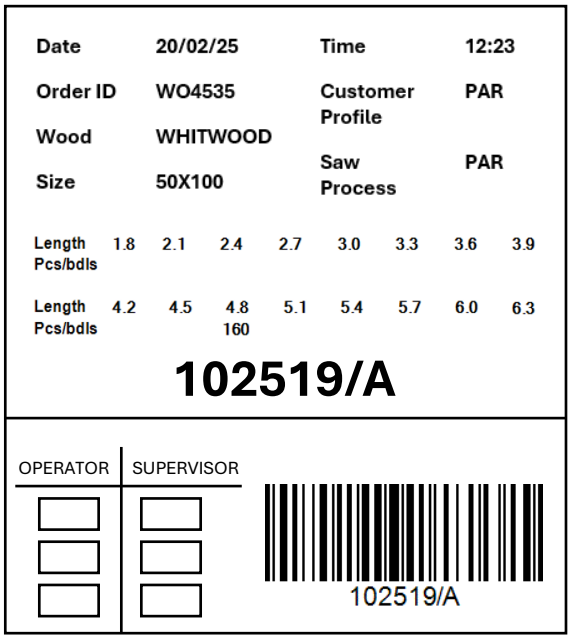
The system was initially installed on two sawlines. Each sawmill included five key assets, each requiring the same core tracking functionality but with process-specific adaptations.

All lines use a tally beam system incorporating 16 sensors spaced at 300mm intervals. These sensors detect timber as it moves along the conveyor, maintaining counts of the different lengths.

The system easily coped with the sawline maximum throughput rates of 84 timber pieces per minute.

Measurement data was passed to the PlantRun system for process tracking and analysis. Automatically generating reports for production management meetings.

At the end of line stackers, PlantRun also controlled automated label printing so that each pallet contents were identified correctly. As can be seen on the right, details included counts of each particular length, total area and volume output, along with batch, date/time, and production data.



CONCLUSION

The Tally Beam System has significantly improved count accuracy, reducing manual entry and errors, and significantly enhancing data reliability.

The live production data was also made visible through shop floor and production office TV screens, highlighting production metrics, the system supported efforts to improve efficiency, reduce waste, and has ultimately increased profitability.

The positive outcome of tracking the two sawlines also led to the system expansion to cover additional sawmill operations.