

New Hitman processor system ready to hit the market



This Waratah 624-equipped Tigercat H860C operated by Plantation Logging Company in West Australia has been part of the successful trials with the Hitman PH330.

THE LONG-AWAITED HITMAN PH330 processing head acoustic optimisation system, from Christchurch-based Fibre-gen Ltd, is now ready to hit the market following two years of intensive trials and performance validation.

The innovative Hitman PH330 system allows a processor head to take acoustic soundings of a stem to test its stiffness prior to making a log length cutting decision. The head then makes a log according to specifications entered into the software that manages the system, enabling a logging crew to precisely match logs to the requirements of a mill and, in particular, identify sought-after structural grade logs.

It's been five years in development, with initial trials in Scotland followed by more in the US, Australia and New Zealand, proving the technology does work, but also throwing up some issues with reliability. After modifications were made to the sensors and the software, more tests in the US and Australia on a Waratah 624 have confirmed the PH330 is now very robust and ready for the market.

"The upgraded units have shown considerable reliability improvements, to the point that we are satisfied that we can now talk to customers with a view to fitting production versions to their processing heads with full confidence in the performance of the PH330," says Peter Carter, Chief Executive of Fibre-Gen.

Mr Carter says the PH330 will initially be targeted at contractors who have existing Waratah 624 and 626 heads for retro-fitting, but he expects talks to take place with manufacturers soon on integrating the system

into a wider range of brand new units.

The PH330 consists of a pair of probes fitted into the top and bottom of the processor head and these are inserted 1cm into the stem prior to the log making decision, first testing the butt and subsequently measuring each log up to the top of the felled tree. Prior to each cut the wood quality is measured and if the stiffness is lower than needed, it will adjust the log length back to a non-structural grade.

The aim of the PH330 is to extract more value from each log by knowing its quality, and using this information for smarter log making. The information can be used for sorting logs by quality at the harvesting production site, and could be associated with a barcode or RFID tag that stays with the log to identify it for better downstream processing.

Current computerised optimisation systems used on processor heads only measure the taper of the stem and integrate this with the sweep and knot information fed into the system by the operator, to determine what grade of log to make.

With structural grade logs typically netting a premium of up to \$15 per cubic metre over non-structural logs, the ability to identify these and obtain the best price is becoming necessary for contractors and forest owners alike. Mr Carter points out that if only 50% of logs in a stand meet structural specification and a PH330 unit processes 300 m³ total volume per day, it is possible to gain more than \$2000 of additional benefit per day by utilising the PH330.

He also says that while the Hitman HM200

hand tool may be used to sort logs for structural properties in the forest, the log length decision has already been made so non-structural logs have been cut to the wrong length, skid sites are often very constrained in area for measurement and subsequent sorting, and mechanising the system provides a simple solution from the comfort of the operators cab.

Improvements made to the PH330 during the two years of field trials and four installations, working in Northland and Nelson in NZ, as well as West Australia and Oregon, have led to increased speed, as well as reliability. Mr Carter says there is now little discernable loss of productivity when employing the PH330 in the log making decision.

He says the ability of the PH330 to read the stiffness of a stem prior to making a cutting decision is the next step to complete optimisation and this application on a processor head is a world first. Currently it works independently to the computerised optimisation system on a head, but ultimately, Mr Carter believes the PH330 will be fully integrated into the optimisation systems in all new processing heads and he says Fibre-gen is aiming to form strategic partnerships with head manufacturers to get this complete integration under way.

The current focus is on the Waratah 624 and 626 heads - units from other manufacturers will be looked at in the future.

Fibre-Gen proposes to lease each system for around \$300 per day, though it will consider purchase options. ^(NZL)