Bell Equipment establishes position as safe-tip software forerunner with help from Chepstow Plant

As ADT manufacturers increasingly work towards 'retro fitting' machines with safe tip software, Bell Equipment reiterates to plant hire and quarry operations that it is the original 'early adopter', as only Bell has included integral on-board anti-tip technology within its machines, since 2008.

The digital age has truly arrived in the quarry. The inclusion of safe tipping software within ADTs is certainly becoming more evident, with on-board technology proving vital in the prevention of accidents and expensive machine damage.

However, very few manufacturers include this far-sighted technology as standard, which has led to many ADTs being 'retro-fitted' with software capable of working compatibly with inclinometers.

As a safety specialist in the ADT market, Bell has invested heavily in research to develop systems that prevent its ADTs from performing unsafe or overloaded tips. The company considers the development and installation of integral safe tipping solutions 'a none-negotiable' essential, citing its included software as 'being as fundamentally important as the engine itself'.

Bell 'Tip-Safe' software works by cross-referencing the machine's angle reference taken using its integral inclinometer with the on-board weighing feature. A pitch-and-roll sensor then sets appropriate limits for safe bin-tip activation. If the vehicle is positioned at an angle where a bin lift could cause instability, the machine's operator will be warned of a potentially dangerous action on the display monitor, and will consequently be able to cancel the load manoeuvre, and prevent the bin from tipping.

Bell Equipment's commitment to developing and installing effective digital safe-tip solutions has, in parallel with the ADTs themselves, evolved in recent years.

Since commencing its launch of the E-series of ADTs back in 2014 - designed as the progressed successor to the incontestably successful D-series range of machines - Bell Equipment has further developed its on-board 'Tip-Safe' software, working in conjunction with client and safety research partner, Chepstow Plant International, following development meetings both in South Africa and the UK, so again this progression of safe operation becomes a boundary less benefit.

This recognised mineral extraction firm has pitched itself as an operator seeking to create a safer tipping environment as standard, and has set the bar for being an industry front-runner, providing clients with machines that can consistently and realistically set the payload within protected parameters.

Chepstow Plant has a long-established relationship with Bell, based on the 'solid trust' the two firms have developed over seventeen years. With over 17 Bell ADTs currently performing within the Chepstow Plant fleet, the company's Managing Director, John Corcoran, feels that the brand continues to perform safely and reliably for his firm, enhanced by the vehicles' inclusion of Fleetm@tic® technology.

It is this on-board digital reporting system that has successfully provided Chepstow Plant with automatic reports, alerts, production data and pole-to-pole satellite coverage over the years, enabling the firm's CI (Continuous Improvements) department to manage its fleet with greater control and efficiency.

The 'Tip-Safe' software is installed within the Fleetm@tic® system, and is constantly used by the CI team to prevent accidents and analyse findings. Recently nominated as a finalist for a MPA Health & Safety Award for ADT stability development, the division has chosen to further its own capabilities by providing real time information to Bell, under an initiative created to constantly evolve its ADT technology with every new model and system update.

John Corcoran says: "Safety is the number one priority in our industry and protecting our employees and customers is of paramount importance to us. Fleetm@tic®, Bell Equipment's purpose-designed on-board fleet management system, is enabling us to do this effectively. Our first-hand knowledge of the technology along with our continuing commitment to safe working practices also makes us the ideal development partner for Bell and we're keen to be involved with the continued development of the system and the extent to which it can be used. The system will always only be a supporting security device that has to be managed and integrated into a workforce that has an interdependent safety behavioural approach.

"Most recently, we have been looking at how it can support site and operator safety. This has resulted in the system being able to monitor not just a machine's production performance but also vital safety elements such as physical stability and tipping points," adds John.

This partnership has allowed Bell to continually, effectively and realistically, fine-tune its 'Tip-Safe' on-board offering. As such, improvements including the development of more effective tipping angles and more precise reporting systems are now evident within the latest E-series machines.

Nick Learoyd, Managing Director at Bell Equipment UK explains more: "Safety, for both the operators of our ADTs and the ADTs themselves, has been fundamental to the Bell Equipment ethos since our first trucks were designed and manufactured. This has continued and led to the development of our industry-leading Fleetm@tic® system.

"Working with Chepstow Plant has enabled us to fully research what this system is capable of, with on-the-ground trials providing invaluable information to help us fine-tune its features and performance. As such we are confident that the latest E-series has only cutting-edge safety technology on board.

"Furthermore, as our 'Tip-Safe' software has been fitted 'as standard' to Bell Equipment models since 2008, our pre-owned models can still be considered the safest on the market, especially compared to their contemporaries," adds Nick.

Increasingly, the future of safety in the quarry environment is relying on the right software. Having innovated, researched and advanced its Fleetm@tic® system to develop such tools, and by using insight from Chepstow Plant, Bell Equipment is not only a forerunner, but a specialist in the field.