Matrix and GRT-VALLEY RUBBER collaborating on truck lining sensor solution

Posted by Daniel Gleeson on 22nd March 2023

Indiana-based Matrix Design Group is entering the truck bed analytics and monitoring market through a partnership with rubber body manufacturer GRT-VALLEY RUBBER, *IM* discovered at the *SME MINEXCHANGE 2023 Annual Conference & Expo* in Denver, USA, last month.

Matrix, renowned in mining for its proximity detection and vision-based safety solutions, recently entered into a partnership with Arkansas-based GRT-VALLEY RUBBER. The two companies have deployed a prototype 'smart' truck body solution to showcase the benefits of GRT-VALLEY RUBBER's rubber truck bed liners (RTBL).

GRT-VALLEY RUBBER is a well-known name in the wear resistant moulded rubber products sector, providing both OEMs and mine sites rubber lining solutions that, the company says, reduce maintenance associated with consistent shovel and payload interactions, while improving the operator experience.

Michael Redford, Head of Operations: Analytics at Matrix, and Greg Elliott, Product Manager – Haul Trucks at GRT-VALLEY RUBBER, revealed this new development at the Denver event.

At a mine in the Iron Range of Minnesota, Matrix has installed an integrated solution consisting of a series of sensors on a steel truck bed, and one truck with GRT-VALLEY RUBBER's rubber truck bed liner solution. The system is benchmarking the results of shovel loading on truck beds both with and without the bed liner.

Having this setup established for over six months now, the two companies have been able to quantify a significant reduction in "energy events" when using GRT-VALLEY RUBBER rubber-based solution, Redford told *IM*.

Bed Impact in G force

Blue Spike-With Liner Red Spike-No Liner

Matrix and GRT-VALLEY RUBBER have been able to quantify a significant reduction in "energy events" when using GRT-VALLEY RUBBER rubber-based solution compared with a steel truck bed

Initially, the project was scoped to outline the maintenance benefits of using rubber-liners on trucks, yet it has also highlighted the significant improvements in reducing operator impact forces and noise reduction that come with using GRT-VALLEY RUBBER's solution.

"In terms of attracting and retaining haul truck drivers, these results could prove to be very important," Elliott said. "Not only is there less physical harm done to operators by using our rubber linings due to reduced shock impacts, the reduction in decibel levels from a noise perspective is massive."

The two companies are planning to roll out this solution on several other rubber-lined haul trucks in the next few months.

"We service several industries – not just mining – with a wide range of rubber products," Elliott said. "We have many companies interested in seeing the benefits at their sites, so it is just a matter of getting the hardware installed and getting it speaking to the software."

Redford said truck impacts may be the initial focus of this sensing system, but there is scope to expand into productivity improvement functions – educating shovel operators of optimal loading patterns, for instance.

He concluded: "We're very much at the beginning of where this technology will go."