

ALWAYS ADAPTING TO CUSTOMER NEEDS

DYNA ENGINEERING CONTINUES TO UPDATE ITS CONVEYOR GUARD TECHNOLOGY WHILE MAINTAINING ITS SAFETY AND SUSTAINABILITY CREDENTIALS.



THE LIGHTWEIGHT HDPE GUARDS ARE EASIER TO MOVE WHILE STILL BEING ROBUST.

After designing, manufacturing, and distributing a new conveyor guard system for mining operations across Australia, DYNA Engineering listened to customer feedback and has undertaken further modifications to its high-density polyethylene (HDPE) plastic guards.

“Since releasing our HDPE guards in 2019, there have been requests from customers to see greater capability for the use of high-pressure hoses in order to more easily spray water beyond the panels, as well as a need for increased visibility in the configuration of the guards,” DYNA Engineering general manager Thomas Greaves told *Australian Mining*.

“The mesh size for HDPE guards is a lot thicker than steel mesh, so recently we have developed a different type of mesh. It’s triangular in shape, creating increased viewing

angles, addressing our customers’ visibility requirements.

“We have also developed a solution for high-pressure hose use, which is superior to our original square-shaped guards.”

Using DYNA Engineering’s HDPE plastic conveyor guards rather than more traditional steel mesh guards comes with some significant benefits. Chief among them is the fact the lightweight HDPE guards eliminate the stress of heavy lifting, while still being robust and easy to install.

“In terms of safety, when lifting them on and off conveyor systems workers are exposed to less repetitive-strain injuries,” Greaves said.

Installing and removing the HDPE plastics guards takes only minutes, limiting the amount of time spent around the conveyor and reducing the risk of accidents occurring during periods of maintenance.

Conveyor belt systems are among a mine site’s most high-risk areas, so the ability to limit time spent around them is of significant benefit to workers.

The fact the HDPE panels can be installed or removed quickly also limits downtime, and their makeup helps limit maintenance.

“HDPE guards don’t corrode or rust, nor do they require surface treatment such as galvanising or painting,” Greaves said. “Often conveyors are not properly guarded because of corrosion. Steel mesh guards rust, they break, and then they aren’t replaced, so the HDPE guards simply stay in place longer, requiring less repairs and maintenance and, if need be, are able to be replaced quickly.

“They are very cost-efficient due to their longer life spans ... with a lifespan in the range of 10 to 15 years.”

DYNA is always looking to innovate but doesn’t make any decisions about its products in a vacuum.

“That’s the thing about DYNA; we’re always developing new and improved versions of our HDPE guards, listening to customers when they express, as a priority, the need for greater visibility or increased spray-through capability,” Greaves said.

“We respond to their feedback and, through iteration, go about designing, developing and manufacturing a new and improved version of the HDPE guard.”

The improved guards are versatile and able to be configured for access platforms, conveyor pull wires, retractable idler roller frames, metal detectors, and belt change stations, while maintaining strong chemical resistance.

“If you’re dealing with a product that is corrosive, HDPE guards tend to resist pretty much most common chemical products or by-products that are found on mine sites,” Greaves said.

The sustainability benefits of the HDPE plastic guards are significant, and within the mining industry DYNA Engineering is at the forefront of the circular economy by making its panel components infinitely usable.

“We use recycled and recyclable plastics, the kind of plastics that are commonly used in bottles and containers, and once they have completed their service life they can be recycled into new HDPE plastic conveyor guards,” Greaves said.

“We firmly believe that recycled material is the future, and we are determined to see the rest of the industry embrace a greater focus on sustainability.”

DYNA’s latest HDPE plastic conveyor guards are manufactured at the company’s new workshop south of Perth.

Customers have already provided positive feedback, impressed with both the design improvements and with the product’s sustainability credentials.

“Our customers want to use a product made out of plastic that can be recycled, that isn’t going to end up in landfill,” Greaves said.

“And our HDPE guards are fundamentally sustainable, assisting the mining industry establish sound environmental outcomes.” **AM**