



DYNA ENGINEERING TAKES CONVEYOR GUARDS TO NEXT LEVEL

THIS REVOLUTIONARY TAKE ON THE HUMBLE CONVEYOR GUARD IS TAKING THE MINING INDUSTRY BY STORM, ONE PIECE OF RECYCLED PLASTIC WASTE AT A TIME.

Two years ago, DYNA Engineering recognised an issue with conveyor guards that had plagued the industry since the product was conceived

decades earlier.

Traditionally, steel conveyor guards have capably contained conveyed material around a mine site, providing a relatively sturdy and cost-effective option for the Australian mining industry.

However, traditional never meant problem-free, according to DYNA Engineering general manager Thomas Greaves.

"Steel guards have been used for 40 or 50 years and no one's ever come up with something better. So customers have always had the same problems about corrosion and painting which they were looking to fix," Greaves told Australian Mining.

"This presented a niche in the market and DYNA saw it as an opportunity to help. We started thinking about what sort of product could solve it and we came up with a material that's lighter and that's

commonly used in mining processes. That was HDPE."

HDPE – high-density polyethylene – has been recognised by DYNA as the best, most cost-effective, safest

and longest-lasting material available for guarding bulk-handling systems.

DYNA's take on the product is 40 per cent lighter than steel guarding, making it much easier and

safer for maintenance teams to install and replace.

Compared to steel guards, HDPE is also very low maintenance due to its resistance to corrosion and abrasion.



THE GUARDS' X-DESIGN REDUCES MATERIALS AND IMPROVES STRENGTH.

DYNA ENGINEERING'S HDPE CONVEYOR GUARDS IN ACTION.



we've got that first-mover advantage and we're really starting to produce it at scale."

This scale has included some of Australian major miners, mostly in Western Australia, but DYNA is aspiring to expand across the country and has also begun to see success in the eastern states.

In 2021, the company set up a dedicated workshop in Bayswater, outside Perth, which has allowed DYNA to cope with year-on-year growth in sales.

Greaves said the use of recycled plastics to create the guards was a big factor in their popularity.

"There's always improvement to be made over time, but having a recycled and recyclable product is really in fashion these days," he said.

"Everyone's looking at their sustainability and ESG (environmental, social and governance) initiatives, and this product fits into that niche quite nicely."

HDPE was chosen for the conveyor guards due to its easily recyclable nature. DYNA sources the materials from a local recycling partner and uses between 7–10kg of plastic waste per guard.

Greaves explained the inspiration behind the use of recycled plastic.

"We saw a lack of demand for recycled plastic even though Australia

produces a lot of plastic waste and we don't have a great use for it at scale," he said.

"So something like the HDPE guards can take quite common plastics and make them into something that's useful.

"Where a milk bottle has a two- or three-week life, the HDPE guards last for 10 to 15 years."

Considering the higher cost per unit of HDPE, the team at DYNA Engineering had to ensure every piece of its conveyor guard was necessary.

They came up with their own X-design which was found to strengthen the panels substantially without requiring additional attachments or framing to strengthen it.

Greaves said without this key design feature, DYNA's HDPE conveyor guards may never have gotten off the ground.

"To present a cost benefit for the customer, our X-design lowers the amount of components needed to make the guards and made our guards competitive against fabricated steel guards," he explained.

"With our HDPE guards, you're not paying extra but you're getting all these other benefits with it, and that's made the industry really sit up and listen." **EM**

Greaves said all these benefits and more have made it a big success over the last two years.

"It's quite new to the market and I think our version of the product is quite revolutionary. It doesn't require any frame or stiffening to be added to

meet Australian standards, which is one of our key benefits. This reduces the manufacturing costs and makes it competitive compared to its steel counterpart," Greaves said.

"There have been competitors who have seen us achieve success, but