BEST PRACTICE

LOCATION:	**Concrete products plant**	**ARTICLE YEAR**	**2018**
ACTIVITY:	**Reducing Occupational Road Risk**	**COMPANY:**	**Tarmac Building Products**
SUB ACTIVITY:	**No Sub Activity Available**	**COMPANY LOCATION:**	**Aircrete**
BEST PRACTICE No:	**BP2028**	**COMPANY TEL:**	**0000**
COUNTRY OF ORIGIN:			

TITLE

Aircrete load security - void guards

ARTICLE

DESCRIPTION

Due to their lightweight construction, packs of aircrete products can be double or treble stacked when being transported. A gap or 'void' is left down the centre of the load to enable the crane grab to access the packs during offloading. This also enables the clamp trucks to load the vehicle.

The gap creates a 'weakness' in the load when it is strapped up, as there is nothing to prevent the packs moving towards each other during transit. To protect against this, a driver was required to insert some form of brace between the packs whilst they were being loaded. This required a driver to either climb on the load or stand on the deck. The driver was exposed to the risks associated with working at height and the possibility of being hit by either the crane or a pallet.

To overcome these risks any solution also needed to meet the following criteria;

1. The bracing device would need to be adjustable, as the size of the void can vary depending on how it is loaded.
2. It would need to work with a range of different vehicles and cranes that are used within the haulage market.
3. It would need to allow the driver to insert and remove the device without climbing onto the vehicle.
4. It would also need to be lightweight and easy to store on the vehicle.
5. It would need to be available at an acceptable cost for the haulage sector.

The building products transport team at Tarmac worked on various solutions; engaging with suppliers, drivers, haulage companies and a local university. Various concepts were trialled using materials such as polystyrene, wood and metal. Eventually, a plastic design was adapted by introducing 'wings'. The wings allowed the guards to 'rest' on the top of the load without falling in.

The various solutions were trialled with the drivers and cameras were installed on selected trucks to measure effectiveness in transit.

A gantry was designed that enabled the drivers, using a tool adapted for the purpose, to insert the void guards into the load prior to strapping. The driver does not need to step onto the loaded vehicle. The device is lightweight and storable on the vehicle, and it can be removed by the crane grab on the customer site.

BENEFITS

- Reduces risk from working at height on vehicle
- Reduces risk of operator being struck during loading
- Flexible and low cost device
- Increases the amount that can be loaded onto vehicles
- From 32 packs to 38 packs (+19%)
- No increase in haulage cost
- £267K annualized saving
- Improved aircrete products' security in transit
- Reduced breakages and product damage
- High level of user/driver engagement in process
- Can be applied by other organisations
- Improved safety on both production and customer sites.

ARTICLE IMAGES

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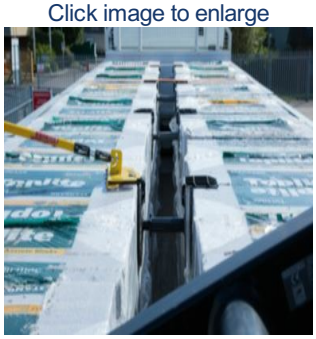
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