


BEST PRACTICE

LOCATION:	Concrete products plant	ARTICLE YEAR	2013
ACTIVITY:	Transport & Logistics / Delivery	COMPANY:	Forticrete Ltd
SUB ACTIVITY:	Mobile Plant	COMPANY LOCATION:	All sites
BEST PRACTICE No:	BP852	COMPANY TEL:	07769 886849
COUNTRY OF ORIGIN:	United Kingdom		

TITLE	
Automatic speed reduction system for fork lift trucks	
ARTICLE	
DESCRIPTION <p>Fatalities and series injuries involving pedestrians and mobile plant – both forklift trucks and front end loaders are a common problem. Forticrete and sister company Ibstock Brick contacted fork lift truck suppliers to determine what automated systems were available to help minimise this risk. They discovered that, whilst there were adequate alarms and sensors available, there were no automatic speed reduction systems available.</p> <p>They worked with a manufacturer, Linke, to develop a safer fork lift truck and introduced other measures to minimise the risks.</p> <p>General specification for the system:</p> <ul style="list-style-type: none">• Speed limited to 5kph in reverse and 16kph moving forwards• 2 sets of rear facing ultrasonic sensors (6 units in each) mounted within the (specially designed) counter-balance weight for protection – to provide zonal coverage behind the truck• Left and right side ultrasonic sensors (2 units in each) mounted on vertical cab cage - to provide additional coverage over the rear wheels and to extend rear end coverage.• Audible and visible warnings for the driver inside the cab. Frequency of light and sounds intensifies as the truck gets closer to an object or person when reversing.• Vehicle rate of acceleration reduced in both forward and reverse modes. <p>Operation:</p> <p>When reversing, the sensors detect persons or objects at approx. 3-4m, alert the driver through the audible and visible signals in the cab and then automatically reduce the vehicle speed, through the transmission, to a crawl speed of 1kph. In this way, the vehicle speed will be automatically reduced to 1kph at a distance of about 1m from the object or person. This allows the driver to get close to objects in a tight working area but limited to a very slow speed.</p> <p>Other measures</p> <p>At some sites product stacking was altered to eliminate the need for large fork lifts. Drivers, pedestrians and managers were educated before delivery about the vehicles capabilities and the benefits of the technology. One-way systems and Pedestrian-Vehicle Separation through barriers, walkways or line separation were reviewed and enhanced. Making pedestrians more visible by the incorporation of high-visibility clothing into all work wear</p> BENEFITS <ul style="list-style-type: none">• Driver behaviour has changed as a result of driving the adapted vehicles• Less damage, extended truck life and perhaps lower costs.• A safer working environment for all• Cooperation with suppliers in developing the safety systems• At start of a process that hopefully will see wider adoption by other manufacturers	
ARTICLE IMAGES	