Operator’s finger crushed when the light curtains failed.Please read if you have any equipment using light curtains as a safety control device.

WHAT HAPPENED

An employee was putting ID labels on packs of concrete blocks as they came out of the factory, the labels had to be hand fastened to the banding around the blocks which were on a stationary conveyor. As the employee went to apply a label, he used his right hand to try and free some slack on the banding so he could get the label wrapped around it. He heard the conveyor system start up and the pack on his left hand side moved forward, which resulted in his right hand middle finger getting trapped and crushed between the packs. Unfortunately the employee was not wearing gloves.

Key Findings

The light barriers, which are intended to prevent conveyor start up with someone in the area, were not safety rated and were ‘fooled’ by the strip on the high visibility PPE worn by the employee, which reflected the beam back to the receiving sensor.

There was no pre-start up alarm on the conveyor system

No safe system of work (SSOW) was available for the ad-hoc process of labelling packs of concrete blocks

LEARNING POINTS / ACTIONS TAKEN

Key learning for all operations that use light curtains to control access to production equipment.

- In this case, rather than having a light emitter at one end of the curtain and a receiver at the other, the equipment had been incorrectly specified over 10 years ago with an emitter and receiver at the same end and relied on the light being reflected. Unfortunately, the light was **reflected by the high visibility clothing worn by the employee** and therefore the equipment didn't detect that the light curtain had been broken, with the result that the equipment started and caused a colleague to suffer a fractured bone in his finger...in different circumstances the outcome could have been even worse.
- Check that any safety devices such as light guards are properly specified, fit for purpose, in good working order and cannot be defeated.
- Ensure that any changes to production processes are captured, adequately risk assessed and communicated to relevant stakeholders.
- Ensure that any conveyor where there are likely to be operatives in the vicinity have pre-start alarms alerting them of any movement.
- An effective risk assessment would have considered whether the process could be automated and identified the inadequate light guards and the lack of audible conveyor start up warning
- A documented SSOW would have helped ensure the employee was fully aware of the necessary precautions.
- Enforce the wearing of gloves in all operational / production areas, except designated routes and for non-hazardous work that requires touch sensitivity

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LOCATION:	**CONCRETE PRODUCTS PLANT**	**ALERT STATUS:**	**Normal**
ACTIVITY:	**GUARDING AND ISOLATION**	**DATE ISSUED:**	**17/10/2016 21:24:26**
SUB ACTIVITY:	**NO SUB ACTIVITY AVAILABLE**	**INCIDENT No:**	**01441**