BEST PRACTICE

LOCATION:	**Concrete products plant**	**ARTICLE YEAR**	**2016**
ACTIVITY:	**Access & Egress & Working at Height**	**COMPANY:**	**Brett Group**
SUB ACTIVITY:	**N/A**	**COMPANY LOCATION:**	**Brett Landscaping and Building Products**
BEST PRACTICE No:	**BP1950**	**COMPANY TEL:**	**0000**
COUNTRY OF ORIGIN:	**United Kingdom**		

TITLE

Improving access to Penta tumble drum for maintenance works

ARTICLE

DESCRIPTION

The fully automated Penta Line 'ages' concrete block pavers by tumbling the cured blocks inside a rotating steel tumbler drum. The drum has a 1 metre diameter and 4.5m long and fitted with lifter bars. Due to wear and impact damage, the interior must be inspected fortnightly and every month repairs made including hot work such as welding.

The original access to the drum was at height of 3.5m through the feed chute, it was accessed through the interlocked enclosure via narrow walkways and requiring the fitter to climb down 1.5m portable ladder in the feed chute before making their way along the drum. This created multiple problems:

- Narrow route for fitters and equipment to get to drum access point
- Risks from working at height from temporary ladders
- Operator was working in confined space
- Fitter inside the drum could not be directly seen by 'topman'
- No suitable structures to attach necessary rescue equipment
- Poor lighting and forced ventilation required whenever undertaking hot works

Though the task was controlled via SSOW, PTW, confined space entry procedures and there was continuous supervision, the site team still felt it would be hard to get a person quickly out of the drum if there was a need.

The site team identified that the best route would be to enter from the discharge end only 1.2m from ground level. However, there was no access point in the enclosure guard and the steel discharge cowling was so heavy it required 3 men to handle it.

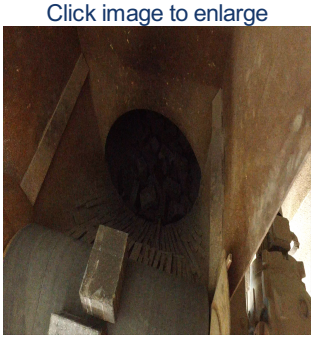
A pair of interlocked sliding doors were fitted to replace the solid enclosure guard at the discharge end. A lightweight aluminium discharge cowl was constructed. Following plant isolation and lock-off, the new cowling can be easily removed by a single fitter and stored safely to the side. Once removed, the tumble drum can be accessed using portable steps and the whole length of the drum can be easily seen by the 'topman' positioned at ground level.

BENEFITS

- Significantly better access route and working conditions
- Operator can be seen at all times
- An individual can be recovered quickly and safely if required
- Ventilation of the drum during hot-work is improved
- Working at height has been reduced from 3.5m to 1.2m
- Easier to get equipment and parts into the drum
- Reduced risk of manual handling or crushing/trapping injuries
- Inspection and repair time has been halved
- Modifications cost £3,700 and completed in 2 days.

ARTICLE IMAGES

Click image to enlarge



Before

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After