

BEST PRACTICE

LOCATION:	Cement plant	ARTICLE YEAR	2016
ACTIVITY:	Maintenance & Housekeeping	COMPANY:	Kerneos Ltd
SUB ACTIVITY:	N/A	COMPANY LOCATION:	West Thurrock
BEST PRACTICE No:	BP1952	COMPANY TEL:	00000
COUNTRY OF ORIGIN:	United Kingdom		

TITLE

Mill charging with steel balls

ARTICLE

DESCRIPTION

Charging the mill with steel balls was one of the highest risk activities at Kerneos Ltd. The task involved tipping 204 litres drums of various sized metal balls into the cement or raw material mills. Due to wearing, the mill is topped up with new larger balls on a weekly basis. Around 2-3 times per year, the whole chamber is re-charged with the correct sized balls.

The drum of balls lifted up to a hatch at the top of the mill chamber and tipped in. The risks associated with this task were a potential failure in the drum, slippage whilst lifting and tipping the drum into the hole and the possibility of a spilled ball falling on to people below.

Working with an engineering subcontractor, the site devised a filling system where the drums could be discharged at ground level using a forklift with a rotating attachment. This discharges the balls into a specially designed vessel. Once filled, the vessel can be lifted safely using an electric hoist and chains. It is emptied into a specially designed discharge funnel which is preinstalled into the mill charge door. The funnel connects with the vessel and hinges the vessel downwards, tipping out the balls. The vessel, ramp and funnel are all rubber lined to reduce noise as much as possible.

BENEFITS

- Discharge of balls into vessel at ground level using forklift
- Purpose built vessel will not fail whilst being lifted
- Vessel can be easily and accurately tilted into funnel
- Risk of balls falling removed avoiding potentially fatal injury to operators
- Potential for human error significantly reduced
- Task is now more efficiently completed
- Operators feel confident and safer when carrying out this regular task.
- The system has been shared with other Kerneos sites around the world.

ARTICLE IMAGES

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Before

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