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SHEQual Bulletin

“False” Engagement of Tipping Hooks on “Builders” Skips

The HSE have notified MWH of an incident involving skip containers. This incident did not occur on an MWH site or involve MWH personnel.

1. Introduction:



Photograph 1: Typical lorry borne skip tipping-out process

Skip containers are widely used across the waste and recycling industry. An investigation into a fatality, which occurred whilst tipping-out a 'builders' skip, identified a potential danger whereby fabrication of the skip can result in a lip on which tipping hooks may 'falsely' engage. This alert highlights this potential danger and provides advice on corrective actions.

2. Background:

It is a common arrangement for skips to be suspended by four chains attached in pairs to two loading arms on the lorry which straddle the skip. The loading arms are hydraulically actuated such that they either rotate forwards to lift the skip onto the lorry or backwards to off-load the skip onto the ground.

To tip-out a skip, the process is similar to off-loading except that a pair of tipping hooks, which are mounted towards the rear of the bed of the lorry, are raised and as the skip is pulled over them they engage on the tipping bar on the end of the skip near its base. As the lifting arms continue to rotate, the hooks hold the front end of the skip such that it begins to rotate and eventually reaches a near vertical position causing the load to slide out of the skip (see photograph 1).

There are no nationally established standards (e.g. British Standards) for the manufacture of this type of skip which are generally fabricated from steel plate. Often the base plate extends beyond the end plates producing a lip. A hazardous situation can occur if the tipping hooks fail to engage with the tipping bar but instead 'snag' on the lip (see photograph 2).

This false engagement of the hooks is not necessarily visible from the operating position and, superficially, will behave like a proper engagement until an angle of tipping is reached whereby the hooks are pushed off the lip. When the skip is no longer restrained it will swing-out over the back of the lorry, the momentum of which could lift the front of the lorry off the ground.

The potential for the lorry to overbalance is increased where there are shortcomings in the deployment, positioning or function of the stabilisers.



Photograph 2: Tipping hook snagged on base plate lip

The immediate risk is to the operator because of their close proximity due to the controls being typically positioned at one side of the lorry. Although there is not a nationally established standard, the Container Handling Equipment Manufacturers (CHEM) Association have produced a technical standard TS14 "Standard Specification for Skip Containers" which manufacturers should find useful. In Section 4.6.3 it states: "There must be no projection of the base plate in the area of the tipping hook engagement with the tipping bar thus preventing inadvertent hooking on the skip."

3. Action required:

Site based management are to ensure that:

- This bulletin is briefed out to employees and subcontractors within their area of control.
- Delivery and collection of the skips comply with this HSE notification.
- Driver-operators are instructed to perform a visual check to ensure the proper engagement of the hooks on the catch bar during tipping-out.
- Driver-operators are instructed to routinely check skips and skip loader vehicles and to report any defects.