

Outokumpu

Award: Safety
Category: Workplace Improvement

Material Loading and Unloading Improvements

Challenge

Outokumpu realised that throughout its sites that material loading and unloading was one of its biggest hazards after analysing near misses and serious incidents. The main problem was that all sites vary in the amount of activity and the area allocated to perform the task; therefore one solution to address the issue did not work for all sites. This made the problem more challenging.

Loading and unloading of materials can be performed inside or outside which brings environmental challenges or in purpose built warehouses which also can make the job hazardous however they both require the same questions to be asked.

- Who needs to be in the loading/unloading area – and who doesn't?
- Is there enough space around the bays for loading and unloading to take place safely?
- Is the vehicle loading platform the same height as the loading bay platform?
- What is visibility like for the drivers using the loading bay?
- Could people fall from platforms or bays?
- Have the people using the loading bay been trained to do so safely?

Action

The problem was attacked in more than one way using the hierarchy system or error proofing theory.

- Physical Separation
- Technical aids for the loading vehicle
- Technical aids for the pedestrians
- Safe Operating procedure instructions

By addressing the questions above Outokumpu created new ways of working.

Who needs to be in the loading / unloading area and who doesn't?

Physical separation of pedestrians and vehicles is the best solution therefore sites wherever possible after an area risk analysis erected permanent structures, if this was not possible removable structures were used to protect pedestrians and vehicles coming into contact.

Where physical separation was not possible, technical aids for the loading vehicle were introduced with the implementation of the mobile plant "blue light" standard; this is a simple system which requires all vehicles to have a high intensity blue light fitted to the front and rear of all mobile plants.

The advantage of this system is that there is a visible indication of an approaching vehicle and pedestrians

get an advanced warning, especially around blind corners in warehouses. To complement this system vehicles are fitted with additional aids e.g. warning reversing sirens, parabolic rear view mirrors, anti collision sensors and finally camera systems. Pedestrian protection is controlled by an RFID system which gives direct 2 way communication from the loading vehicle to the pedestrian. This system is completely configurable to give audible and physical alerts and creates a 360 degree coverage around the vehicle giving protection with the ability to automatically slow the vehicle down.

Finally a "truck loading standard" was created after Kaizen workshops were held which were attended by key people in the business. This standard not only covered

- Is there enough space around the bays for loading and unloading to take place safely?
- Is the vehicle loading platform the same height as the loading bay platform?
- What is visibility like for the drivers using the loading bay but the arrival on site, preparation and load securing.

During the loading standard discussions driver safety was observed and the question if drivers

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could fall from bays or platforms was highlighted as a potential risk, therefore Outokumpu now provides driver loading steps as we can guarantee the suitability and integrity of this equipment without having to rely on the transport companies.

Also loading platforms were introduced to create a permanent protection barrier around the truck to prevent the driver falling from height or procedures were introduced which instructed the driver to assemble his horizontal bars in "curtain sided trucks" to prevent falling from height.

Outcome

Outokumpu now has an agreed standard for truck loading and unloading which is being implemented at all sites. This will create a standardised way of working throughout the company.

Pedestrian and vehicle segregation has been addressed and new improved loading areas or re-configured areas have been created to prevent contact between vehicles and pedestrians.

Driver safety has increased with the implementation of working platforms and access steps.

Mobile plant operators have more technical aids on

their vehicles to perform their tasks safely. New site specific procedures which mirror the new standard have been issued and all personnel informed and trained accordingly.

