

Safety Systems



The frequency of operators consciously overriding crane safety systems is increasingly concerning ALLMI. Crane safety systems relate to various aspects of the crane, whether it's to prevent unsafe use during operation or to ensure that the crane is safely stowed for travel. The following points highlight the most common abuses and how dangerous the consequences of these actions can be:

allow the operator to move the vehicle with outrigger jacks only partially retracted in order to move more quickly from one part of a site to another. As with the examples given above, this corner-cutting attitude endangers the lives of innocent



Slew range is limited, often by micro switches on the turntable.

1. When a load on the crane exceeds the rated capacity, a crane's Rated Capacity Limiter (RCL) prevents the functions that would increase the overload and cause instability or structural damage. However, with the override activated on

used, as there is a danger of the operator being hit by the boom, unless there is a safety system in place to prevent this. In both of these examples the operator may be tempted to override the motion limiter, allowing the crane to be used over its full range of movement. It is not uncommon for this kind of reckless behaviour to have expensive consequences for the company in terms of damage to equipment and even more serious consequences for the operator should he come into contact with the boom.

3. A Height Warning Device is an in-cab system which warns the driver that the

Obviously these irresponsible actions can result in "Bridge Bashing" and can lead to costs that could put a company out of business (railway bridge repairs are often in excess of £1 million). It also endangers the lives of the driver and the pedestrians in the vicinity of the accident.

4. Another system which is commonly overridden is the device which prevents the handbrake of the lorry being released unless the stabiliser legs are fully up and fully in. The system is fitted to ensure that legs are correctly stowed for travel. This system is sometimes overridden to



Ignoring the stowed height/travel buzzer can kill as well as putting a company out of business.

people and can prove very costly to the operator's employer.

The overriding of safety systems is an ongoing problem for the industry that is difficult to stop completely. There will always be people who will take risks and



Motion limits are built in to cranes with stand up control stations, overriding them can prove fatal.

the RCL dump valve, the crane can be made to extend the load outside the permitted radius because the RCL system cannot drain to tank. Such overloading can stress the crane beyond its design limits, which will shorten its life and increase the risk of structural failure.

2. Motion limiters are used to restrict certain crane functions, such as the slewing range or boom height. For example, if the crane hasn't been tested for use over the cab then the motion limiter will prevent the operator from slewing the crane into that particular position. Motion limiters may also be necessary where stand-up controls are

travelling height stated on the notice in the cab has been exceeded. These devices are sometimes overridden so that the crane can be placed on top of a load, thereby allowing the vehicle to carry more goods. This is more likely to happen with cranes using a brick grab or a clamshell bucket. If the stowed height warning device itself isn't overridden it has been known for operators to stick chewing gum on the in-cab warning buzzers or to remove the bulb from the in-cab warning light so that they can travel with the crane in a raised position without being irritated by the devices that have been put there to warn them.

Contractor fined €100,000 for Lorry loader death

May 12, 2005

The South Midland Construction Company Ltd has been fined €100,000 for breach of health and safety regulations which led to the death of an employee in Blanchardstown in November 2001.

Dublin Circuit Criminal Court heard that Michael Murphy, employed by the company as a truck driver, died from severe brain trauma, after he was hit in the head by the clam shell bucket of the lorry loader crane on his truck.

Investigations into Murphy's death revealed that sensors on the lorry loader that would have stopped the bucket from coming into the vicinity of Murphy had been removed from the machine.

Mr O'Dea said that location of a compactor which he was preparing to unload using the lorry crane also contributed to the accident as it had been too near the control station from which Mr Murphy was operating the crane.

sacrifice safety in order to make the job quicker or easier.

However, the situation can be improved by educating operators as to why these safety systems are in place and what the possible consequences are of overriding them. Operators should also be informed of the fact that they are breaking the law by tampering with safety systems (contravenes the Health & Safety at Work Act 1974). Providing this information is a crucial part of ALLMI operator training.

A two pronged approach

In today's increasingly litigious world, servicing companies should ensure that overridden safety systems are detected and the appropriate action taken. In order to achieve this, service companies should ensure the following points are checked every time a member of its staff works on a crane.

1. The engineer should be familiar with the crane's systems. If they are not, the company should consider whether they should be undertaking work on the crane.
2. Carry out a visual check that all overrides are engaged and check that seals are in place and are functional.
3. Carry out a functional check on the emergency stop system. Document any fault in this system and replace seals

after any necessary repairs have been made if the system is functioning incorrectly

4. Ensure that the paperwork is signed by an employee from the owner's company and inform them of what has been found.

5. Consider attaching a notice to the crane controls advising that under no circumstances should the crane be operated until a repair is effective.

6. If the company/owner shows a tendency to consistently offend and adopts a cavalier attitude to the law and safety, you should consider reporting them to the Health and Safety Executive (HSE). You should also consider whether they are worth working for, as eventually it may be your company in the dock.

7. Make customers aware of companies that are not carrying out inspections properly.



New ALLMI Website

ALLMI has recently launched its new look website. The site contains all the relevant information relating to ALLMI's Instructor and Operator training programmes, as well as details regarding the structure and functions of ALLMI and the publications it produces.



It also includes full details of all accredited training providers and a list of ALLMI members and the services they offer. In addition, a new 'Articles & News' page will include all the editions of ALLMI Focus from Cranes & Access magazine, available for downloading free of charge. Please visit the new ALLMI site today at – www.allmi.com



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