

Biofuels storage can expect to grow considerably in the next decade and so it is increasingly important to manage health and safety risks in the workplace

# Working on tankers: Safety in storage

The biofuels industry is full of risks. There are risks associated with handling products and risks connected with using and repairing equipment. Loadtec Engineered Systems was set up almost 20 years ago primarily to sell loading arms, but increasingly, the company is supplying total solutions that make a difference to the whole working environment.

In 1999 the Chemical Industries Association (CIA) issued a publication called 'Working on top of chemical tankers' (last updated in 2012). This went on to form

an important part of the Work at Heights Regulations introduced in 2005.

Section three of the publication states addressed key themes including accident prevention, hierarchy of control measures and 'safety as an efficiency'.

## Accident prevention

Where working on top of tankers or tank containers is deemed necessary, the risks to consider will include falls from a height, access and egress, contact with product and exposure to fumes.



The multi-modal system has become the gold standard in ensuring operator safety when accessing tanker tops, providing complete ease of movement on top of the tanker with very little risk of falling

To prevent falls from tankers, the following hierarchy of control measures need to be considered:

- Eliminate the need to access tops of tankers.
- Provision of a loading/unloading gantry.
- Consideration of tanker design features such as ladders, walkways and collapsible handrails.
- Portable ladders with platforms.
- Installation of fall arrest systems.

## Hierarchy of control measures

Hierarchy of control measures – Four simple words that tell you how you need to prioritise your thinking. The hierarchy works on the basis that if no method of preventing the fall exists in the first category, you proceed to the next category and then on to the next and finally, when there is nothing that can be done to prevent the fall; you can,

with a clear conscience, install a fall arrest system.

Let's be clear. Fall prevention does just that: it prevents the fall from taking place. Fall arrest hopes to minimise the consequence of the fall that has already taken place.

The harness and wire systems of fall arrest are totally reliant on the competence or willingness of the operator to fit the harness correctly. The consequence of not doing that is very serious.

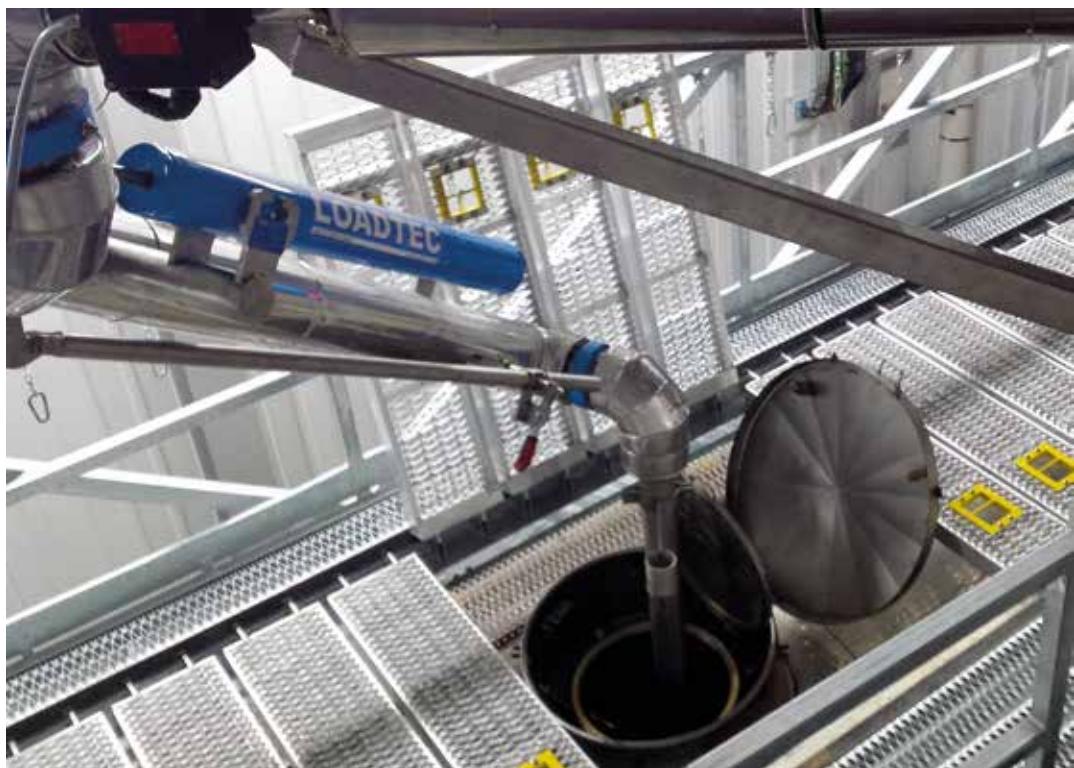
As the director of a terminal or plant operator, your primary corporate aim is to provide a safe and clean working environment for your operators and the public. To do this your obligation is to employ the best technology and working practices. All companies need to understand that safety is not necessarily a cost.

## Safety as an efficiency

A safe and clean working environment promotes loyalty, a sense of worth – the



Example of how Loadtec supplies a complete solution



The bulk fluid transfer and fall prevention systems Loadtec supplies together as a complete solution is becoming more popular as operator safety becomes an increasingly important issue

company is actually looking after me – and, consequently the operator looks at how he can return that investment in him. A safe system can also reduce the manpower needed to undertake some tasks.

Safety is not about constraint. Done correctly, it provides a working environment where choice is restricted, but movement is not.

The operator, faced with a repetitive task that involves manual input, will always try to find short cuts; ways of saving their precious time; reducing their inconvenience and generally making their lives easier.

The layout for a fall arrest system may seem cheapest in the short term. However, the constant monitoring required ensuring all workers practise as they ought to soon see costs start to escalate immediately. The long-term cost of a system that needs constant monitoring will, over time, far outweigh the capital savings made in its initial selection.

There are two types of safety system: passive or active.

Active involves the operator

undertaking tasks, before he can do the job he is there to do. These can be key interlocks; closing barriers; moving and positioning mobile access carts; or putting on harnesses and physically climbing up the back end of the tanker. Changing weather conditions and the monotony of the repetitive tasks will soon have your worker looking for easier ways to get the job done quicker.

Passive is where the operator gets out of his truck, walks up an easy staircase, presses a button and walks out onto the tanker top. No harnesses to put on; no slippery tanker barrels to walk on; no constraints; only a secure cage to surround the working area to prevent him falling; time saved is about five or maybe ten minutes. Stress level is zero. He doesn't have to move the tanker because everything has been designed to eliminate that extra risk. He gets the job done quickly, safely and without someone having to watch him with the consequential associated costs.

Of course there are degrees of safety. The more you spend the safer it gets.

But ask yourself this: Which safety system would you rather be on?

The bulk fluid handling industries are very diverse with equally diverse needs; and still have a long way to go. Until safety and efficiency are inextricably linked, then we will continue to have unnecessary accidents. ●



Loading arm tanker enclosure metering skid package in Russia



Loading arm tanker enclosure truck

#### For more information:

This article was written by Alec Keeler, managing director at Loadtec Engineered Systems. Visit: [www.loadtec.co.uk](http://www.loadtec.co.uk)