Heightened awareness

Falls from height remain the most common cause of fatal injury in the workplace and duty-holders are being warned to take their legal obligations seriously. Brian Wall reports

Pointers

- Plant engineers must follow Regulation 6 of the Work at Height Regulations, selecting equipment in accordance with the prescribed hierarchy
- Collective protection, such as guard rails, comes before individual protection, such as personal fall arrest equipment
- The majority of working at height accidents happen at below two metres
- Consequential injury, due to falls and drops, is just as important in risk assessments
- Invest in your staff, invest in robust equipment and maintain that equipment properly

Last year alone, 45 workers died following falls from height, while 3,409 were seriously injured. And while recent years have shown a downward trend, falls from height remain the most common cause of fatal injury in the workplace.

Legislation, as enshrined in the Work at Height Regulations 2005, was introduced to bear down on the problem, but the truth is regulations are only half the battle. As Nick Wilson, former inspector with the HSE and now a chartered safety practitioner with law firm Weightmans, says: "There is some doubt as to whether duty holders fully understand their legal obligations – even the basic preventive measures that can be taken to reduce accidents."

So first let's examine the regulations and where they are intended to operate. Wilson makes it clear that they apply to all work at any height where there is an identifiable risk of a fall liable to cause injury. That is a very wide definition, and duties are placed on employers, the self-employed, and any person that controls the work of others, to do all that is 'reasonably practicable' to prevent anyone falling.

Measures that must be taken include:

- Ensuring that all work at height is properly planned and organised
- All work at height takes account of weather conditions that could endanger health and safety
- Those involved are trained and competent
- The place where work at height is done is safe

Getting in the groove

Using grooved pipe-joining systems, rather than open flame methods, is one area where operations engineers can make a measurable difference when working at height is involved, says Fred Matyiku, Victaulic country manager.

"The safety advantages that grooved systems provide over welding are numerous and these are magnified when working at height," he insists. "First, grooved end piping systems require no flame for joining and no exposure to fumes. Instead, the joining method consists of roll or cut grooved pipe, a gasket, and housings tightened by nuts and bolts.

"Grooved end piping systems do not require the use of volatiles tanks or open torches; there are no lead lines to trail down and trip over; nor is there any need for fire watch personnel. Also, grooved pipe joining systems pose little danger to those working below, so construction can continue."

- Equipment is appropriately inspected
- Risks from fragile surfaces are properly controlled
- Risks from falling objects are properly controlled.

"When planning work at height, a risk assessment needs to be carried out to identify the controls it is reasonably practicable to take to prevent a fall," advises Wilson. "Regulation 6 sets out a simple hierarchy for managing and selecting equipment for work at height, and this must be followed systematically. Only when one level is not reasonably practicable may the next level down be considered."

Wilson insists it is just not acceptable simply to select work equipment from lower down the hierarchy – for example, personal fall arrest kit, such as harnesses and lanyards – without first assessing the practicality of higher level equipment. And he makes it clear that failures in this regard will carry consequences, in the event of an accident.

"Such measures only offer protection to the individual. Collective protection, in the form of working platforms, scaffolds, tower systems and elevating work platforms, for example, should be considered first," he says. And he adds that duration of work is another consideration. "Ladders, for example, aren't banned, but should only be regarded as suitable for tasks with time periods measurable in minutes, as opposed to hours."

The first two metres

But there's another point: working at height doesn't only mean at great height. Of the 3,409 people seriously injured in falls from height last year, 68% fell less than two metres. Also, it's worth noting that the legislation extends to protect site staff who are not themselves working at height: consequential injury due to falls and drops is also relevant.

According to Rick Statham, operations director at safety training firm Safety & Access, best practice is the 'Hierarchy for Safe Work at Height', contained in the Work at Height regulations 2005. "Step one in preventing falls is to avoid the risk by preventing working at height wherever possible. Step two is to make a risk assessment to determine the right safety method. Step three is to mitigate the consequences of a fall – for example, by reducing distances. And step four is collective protection – guard rails are invariably more important than personal protective equipment."

His emphasis on collective protection makes perfect sense. As he says: "Remembering the saying 'you can take a horse to water', an employer can provide safety harnesses and train workers to use them, but, without constant policing, it is impossible to ensure that the equipment is being used properly. On the other hand, if a guard rail is in place, then it is there protecting all workers, regardless of personal conduct."

Permanent protective installations are even more important, if plant emergency response is a consideration – particularly in the process industries, where the ability to reach critical plant or equipment, such as valves, can be a matter of life and death. Where this is an issue, companies ought to be looking at installing permanent walkways, stairs and similar, as part of their next maintenance programme.

"That said, the HSE is keen to point out that it is not against the use of ladders for one-off, short duration work at height tasks – just that there needs to be a sensible assessment of risk," adds Statham. "If access is prolonged or repeated, an alternative should be sought. Technology is catching up with the legislation. Small access platforms are available and should be used wherever appropriate."

The key here is for engineers and managers to recognise their work at height responsibilities. On which note, it's worth paying attention to some simple rules from plant rental firm HSS Hire's national health, safety, environment and quality manager David Wilson. "For any pre-fabricated access equipment, operations managers should be sourcing products manufactured to BS EN 1004:2004 standards. When hiring plant equipment, you should also always look for industry-recognised accreditation. Work at height requires due care and attention. No plant manager should ever forget that."

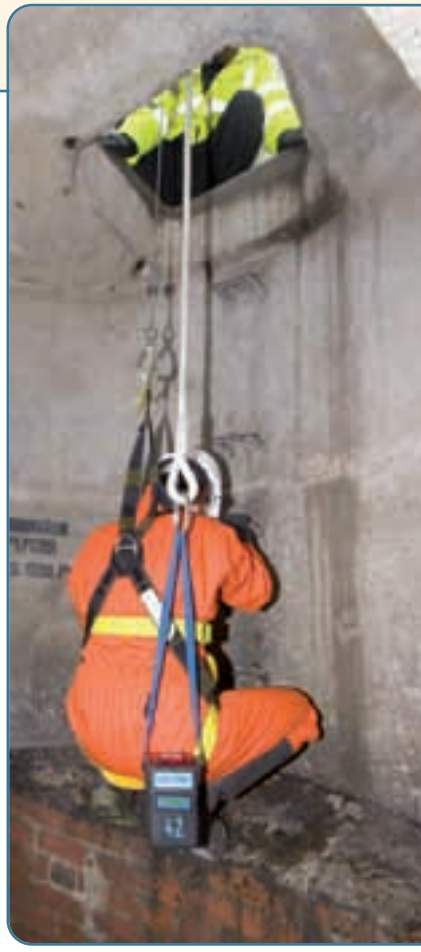
The bottom line: when it comes to working at height, it's all our responsibilities to ensure a proficient, well trained workforce, fully backed by high quality, well maintained equipment. Get that right and it should translate into a secure working environment – and health and safety statistics that better stand the test of time. PE

Confined thinking

The Work at Height Regulations 2005 aren't just about … well, height. Access to confined space is also specifically covered. Access shafts, for example, might well be equipped with ladders or step irons as the primary means of access and egress. They might also have winch-based, man-riding systems.

Either way, both modes of entry require a secondary system, providing protection by a recovery block, with fall arrest and winch. "Also, in both cases, a full body harness is essential equipment," says Robert Weeks, business manager, CSTS, a specialist provider of health, safety and environmental risk education and support. "Waist belts can be used for work restraint or positioning, but under no circumstances must they be used for fall arrest."

Meanwhile, full body harnesses for fall arrest must also be fitted with a rear D attachment point. "This must be above the centre of gravity of the wearer and should be adjusted to lie between the shoulder blades or slightly higher," explains Weeks.



A secondary protection system must be used for situations involving work in confined spaces