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INTERMAT 2006 gives you 3 good reasons to choose Haulotte aerial work platforms



Hanging offence or useful tool

A new European standard for man-baskets suspended from cranes has been published. Phil Bishop explores the implications.

The issue of lifting persons in baskets suspended from cranes has been a hot topic for several years.

There is a strong body of thought that argues that cranes are designed for lifting goods and not people and therefore is contrary to the EU Use of Work Equipment Directive 95/63/CE 1995.

When crane hire company NMT offered rides in a basket suspended from a crane to visitors to the 2002 SED show, the International Powered Access Federation swiftly called in the Health & Safety Executive. After some discussion the authorities put a stop to the rides (which, it should be added, were merely to raise funds for charity). The basis for stopping NMT was that it was deemed to be using the crane and basket as a fairground ride rather than as industrial equipment.



It is, in fact, perfectly legal in the UK to ride in a man-basket suspended from a crane, although some crane owners feel that clearer guidance is required from the HSE.

The HSE says that its attitude to riding in baskets suspended from



This large gondola is fitted to an Australian canopy crane, sadly driver Dick Cooper (far Right) fell to his death earlier this year.

cranes is very similar to its attitude to the use of work platforms attached to forklifts. In each case, LOLER says that it may be done only in "exceptional circumstances".

In effect, this means where a risk assessment has demonstrated that there is not a more appropriate, safer alternative readily available. This is also in line with the Work at Height Regulations' hierarchy of risk.

There is also a requirement that the basket is designed for the purpose, firm guidance on the design and use of man-baskets suspended from cranes comes with the publication of EN 14502-1 Cranes - Equipment for lifting persons - Part 1: Suspended Baskets. This European Standard was approved by CEN on 25 May 2005 and will be published by BSI within the next few weeks.

The new standard has not been mandated under the Machinery Directive, which means that it takes the form of guidance rather than a legally binding document. However, anyone facing a law suit will be in a



weak position if they have not adhered to published best practice, which the standard represents.

Nor does the standard take precedence over national laws governing the use of man-baskets on cranes (France, for example, takes a much stronger line than the UK against the practice).

Among the demands of EN 14502-1 for the design of baskets are the following key points:

Suspended baskets shall be incombustible and protected against corrosion.

The basket shall have a minimum free standing height of two metres.

When the suspended basket is designed to be used in situations where falling objects may be a hazard, the basket shall have a roof, able to withstand the impact of a steel ball weighing 7kg, falling from a height of two metres.

When calculating the rated capacity, the weight of each person shall be taken as at least 80kg plus at least 40kg of equipment for each person. A safety factor of at least two must



Installations such as this platform fitted to a Locatelli city crane, is governed by EN280 and not the new suspended platform standard

be used in design calculations.

The basket must be attached to the crane hook with either steel wire rope slings according to EN 13414-1 or chains according to EN 818-4 with a safety factor of at least: eight for chains, and 10 for wire ropes, including the end termination.

The slings shall be fitted to the basket in such a way that they can only be removed with tools.

The vertical distance between the floor of the basket and the crane hook shall be no more that three metres.

The floor of the basket shall be secured to the frame by welding or some other equally effective means. The floor must be slip resistant and have drainage.

Free space on the floor shall be at least 600mm x 600mm for one person, and at least 400mm x 400mm more for each additional person.

Suspended baskets must be designed so that if a load 1.5 times the rated capacity is applied at the worst position on the floor, any resulting inclination shall not exceed 20°.

Any gate shall not open outwards and shall have an automatic catch to prevent it from being opened inadvertently.

Baskets shall have anchorage points in accordance with EN 795 for personal protective equipment and people in the basket shall wear a harness with lanyard.

The standard also sets out detailed requirements for hand rails and contents of the instruction manual.

The manual must state that the suspended basket shall only be used in combination with cranes which are designed for the lifting of persons. The only clue as to which cranes are considered "designed for the lifting of persons" comes with the proviso that cranes must have powered lowering and not free-fall winches.

The manual must also state that:
The crane and the suspended basket shall only be operated by people trained in the safe use of the combination, including the operating procedures for egress in case of power sup-

ply failure or control failure.

for the record

The lifting and supporting should be made under controlled conditions and under the direction of one appointed person.



Suspended baskets are used in conjunction with tower cranes for forest canopy research.

A crane driver should always be present at the normal crane control station when the basket is occupied.

Visible and audible communication should exist between the persons in the basket and the crane driver at all times during the lifting operation.

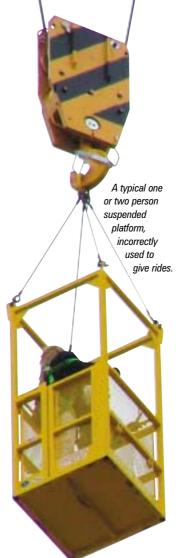
The required equipment necessary to perform an emergency rescue shall be available throughout the lifting operation.

During operation the employer should not require the crane driver and signaller to do other work at the same time, or direct a second crane and/or Basket.

Lifting slings for suspended baskets should not be used for any other purpose. Suspended baskets should not be used in wind in excess of 7m/s (25km/h), electric storms, ice, snow, fog, sleet, or other adverse weather conditions that could affect the safety of personnel.

Machines which can be operated simultaneously in the same place with risks of collision should be stopped.

Unintended movement of the basket should, where possible, be prevented e.g. by means of guide ropes or anchoring.



The suspended baskets, hook, catch, and fixed load lifting attachment should be inspected prior to each use.

The hook must have a safety catch.

The basket shall be positioned on a firm surface when entering or exiting.

Although many in the powered access industry would doubtless like to see a ban on the use of cranes for lifting people, Peter Oram, the UK's representative on the crane committee that produced the standard, says such a step would be madness. "I'm a realist," he says. "You'd grind industry to a halt. You'd have no Channel Tunnel for a start and you'd have no imports because you wouldn't be allowed to have anyone on spreader beams on containers.

Oram does say, however, that industrial machines like cranes should not be used to lift people for entertainment purposes. This suggests that all those who use cranes to offer bungee jumping may soon find themselves targeted by the HSE.



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