Welcome to the Newsletter of

SAFETY AT HEIGHT

SØLL

Specialists in Fall Protection Solutions

Issue 6

Safety At Height Newsletter

FALL PROTECTION FOCUS

In This Issue:

FOCUS ➤ Hooked Ladder Safety

We look at the misconceptions relating to the safety of hooped vertical access ladder.

David Riches, Safety Consultant, and author the HSE's research report 258 *"Preliminary investigation into the fall-arresting effectiveness of ladder safety hoops"*, talks about caged ladders.

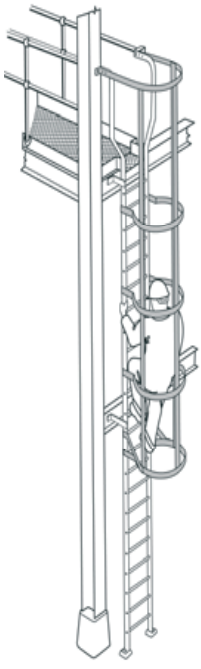
His research, test work and overall conclusions on how safe these ladders are may surprise you.

FOCUS ➤ PivotLoc® Folding Ladders

We look at the unique features and benefits of the PivotLoc® Fall Arrest Ladder System and how it solved the access problems of two key clients in Manchester. Not only does it provide safe and controlled access, it also looks good!

FOCUS » WILL A HOOPED LADDER PROVIDE A SAFE MEANS OF ACCESS?

David Riches, Safety Consultant, and author the HSE's research report 258 "Preliminary investigation into the fall- arresting effectiveness of ladder safety hoops", talks about hooped ladders.



Hooped or caged ladders are fixed ladders that have a circular and vertical bar arrangement which encloses the path of a worker when climbing a ladder.

FINDING OUT

RR 258 is a report on research commissioned by the HSE, the purpose of which was to find out about what hooped ladders are and do. At the time, various documents specified hoops on ladders, and gave the impression that their purpose was to stop a worker's fall.

But a lack of knowledge about hoops, and accidents, were causing questions to be raised by persons conducting risk assessments as to whether hoops could provide any form of fall- arresting capability.

RR 258 ascertained that hoops could not provide the same level of protection compared to fall-arrest systems (FAS), although some documents reviewed tried to put them on a par, by confusing the issues or using vague language.

In addition, indications from evidence in hooped ladder accidents were that falls were being stopped by impacting the platform below the ladder, as opposed to being caught in the cage.

TESTING TESTING TESTING

It was decided to simulate falls discover what might happen in real life. Tests were conducted using a lifelike test dummy. Impacts were recorded on the dummy's spine and fall motion was recorded using high speed video.

In 3 of the tests, the test dummy fell 6m down the cage onto the floor, after first striking the cage several times. The final impacts were around 23g, which in real life would be fatally injurious.

In 4 of the tests the test dummy managed to jam in the cage but at levels of impact that would cause significant injury. In such a case rescue would be extremely difficult.

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CONCLUSIONS

RR 258 concluded that hooped ladders could not stop a fall positively, and unless they could be modified in some way to demonstrate that they could, their use should be abandoned.
Interestingly, when the Working at Height Regulations (WAHR) were published, hooped ladders were not included.

It was also recommended that the impression given that hooped ladders can provide the same level of protection as FAS should be discounted in future documents, and their inability to positively arrest the fall of a worker should be made clear, especially to personnel having duties under legislation. This would include organisations that engage in work at height who have obligations under WAHR and MHSWR and architects and civil engineers who have obligations under CDMR.

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Other tests showed that FAS were able to arrest a fall much more effectively and safely than a hooped ladder could. It should be noted that these tests were far more comprehensive than those in the BSEN 353-1 FAS standard, and are now being adopted by industry in addition to 353-1. These are the so called "HSE 8" tests, which are a response to the findings of RR 258 and a HSE safety warning.

On the positive side, hooped ladders may give a worker psychological reassurance, and a worker may be able to rest half way up a ladder by pivoting about the feet and resting the back against the rear of the cage. The former point may be true, but the latter incurs the risk of falling.

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WAY FORWARD

On new vertical ladders, installed FAS that meet the HSE 8 tests are really the best form of fall protection and the practice of specifying hoops should be discontinued. In existing hooped ladder installations FAS should be installed to give positive fall protection and hence a safe means of access. However these FAS should first be tested in conjunction with a hooped ladder to ensure that any incompatibilities between the two methods do not prevent a fall from being arrested, and do not cause serious injury. This topic is the subject of another HSE report, which is now in the course of being published.
RR 258 can be viewed/downloaded free of charge at:
http://www.hse.gov.uk/research/rrhtm/rr258.htm

ABOUT THE AUTHOR

David practices through his own consultancy, Safety Squared, which provides technical assistance to manufacturing, installation and user companies, standards agencies and architects, as well as advising UK Government.

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SAFETY AT HEIGHT

FOCUS ❯ PivotLoc® FOLDING FALL ARREST LADDERS

Closed

Open

PivotLoc®, the new innovative folding version of the GlideLoc® system offers Architects and Designers safe and controlled access. The side rungs of the PivotLoc®, which are folded together in the closed position, pivot open when released from ground level, producing a fully functional permanent ladder with integrated fall protection.
The PivotLoc® ladder can be padlocked shut to prevent any unauthorised access. When closed it has a very slim and discreet profile, ideal for accessing roofs, plant rooms etc.

PivotLoc® SOLVES ACCESS PROBLEM AT THE GREENQUARTER DEVELOPMENT IN MANCHESTER

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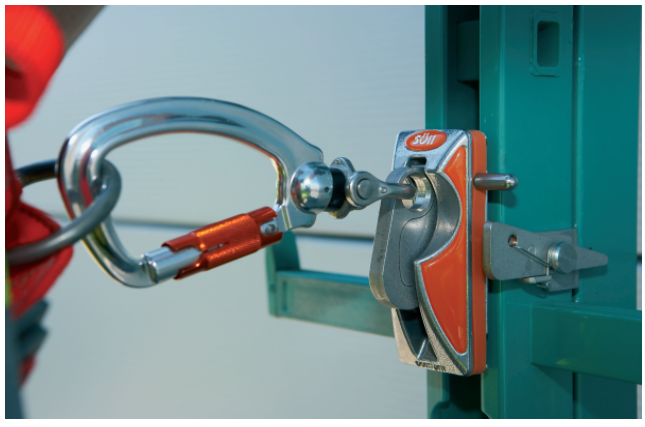

The Comfort Traveller with in-built shock absorption

In 2003 the award winning residential developer, Crosby Lend Lease, launched the Greenquarter development taking almost eight acres of Industrial Manchester wastelands with an ambitious plan to transform them into seven stunning modern apartment blocks.

Powder coated Y Spar and PivotLoc

5 years on, the Greenquarter is now a vibrant new self contained district on the northern edge of the city centre, just a short walk from Victoria Station and Manchester's key retail and leisure zones. The fourth phase of the development Jefferson Place, offers residential accommodation containing 309 apartments over 17 floors.

Creating safe access for maintenance work always creates its own problems for designers working on projects such as this; how to attach a safe and secure ladder system which also looks good on the outside of the building.

Architects, Leach Rhodes Walker solved the problem by commissioning Safety at Height to supply the GlideLoc® system to several of the exterior walls and the roof area of the building. The Installation was completed by specialist installer Eurosafe Solutions Limited.

GlideLoc® is a fall protection system, permanently in buildings or structures. It comprises a guided type fall arrester which glides up and down a steel or aluminium notched guide rail.
The ladders can be powder coated into almost any colour to match up to the building or structure.

Martin Burrows of Leach Rhodes Walker explains: "Due to a range of roof levels within the design, an access system with fall protection was needed to link each level together for building inspections and maintenance. Our aspiration was for a slim line system that could be powder coated to match the surrounding material. The Safety At Height PivotLoc® system provides all of these requirements"

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Safe and secure access

SAFETY AT HEIGHT

FOCUS » PivotLoc® FOLDING FALL ARREST LADDERS

SAFETY AT HEIGHT PROVIDES PIVOTLOC® LADDERS TO ENABLE DISCRETE ACCESS FOR MAINTENANCE TO 340 DEANSGATE

Safety at Height working closely with specialist installers HRS Services have provided an integral fall arrest PivotLoc® ladder system to a prestigious new office building in Central Manchester.

PivotLoc® is a foldable ladder system with incorporated GlideLoc® fall protection rail which offers a cost effective and safe solution. With its unique and award winning design, the ladder can be closed when not in use thus preventing unauthorised access.

Safe Transfer to Roof

PivotLoc® not only provided a discrete and secure solution but the system also fitted in perfectly with the aesthetic appearance of the building. Project Architect, Albert Sutton commented: "What we wanted was a safe means of access to the upper roof area by positioning abseil rails that did not detract from the appearance of the facade.

The PivotLoc® ladders fulfilled this requirement as they fully close and lock when not in use".

Andy Russell, Managing Director of main contractor, Russell Construction added: "This is the first time we have used PivotLoc®. It offered a neat, safe and discreet solution for our client The Building Alliance Group".

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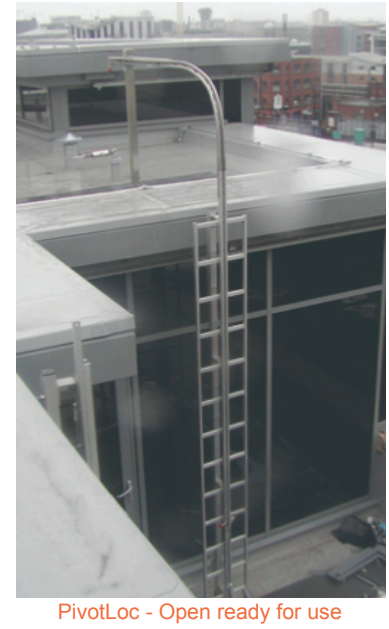

PivotLoc - Open ready for use

FOCUS »

PivotLoc - Discrete closed profile

WEBSITE

Download our full product and technical brochures by visiting our website at www.safety-height.co.uk

CORPORATE BROCHURE NOW AVAILABLE

Request a copy of our corporate brochure by emailing your details to sales@safety-height.co.uk or telephone: 0161 449 5615

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