

## RAISING THE ROOF ON SAFETY STANDARDS

As roofing technologies continue to develop alongside new trends in the market for example, the current growth in use of renewable energy technology systems, such as photovoltaic panels (PVs) it is important that the specific requirements for roof access and maintenance are fully understood and that safe work at height must be considered from the outset on any project.

An effective 'personal' fall protection system requires three essential elements – a harness, an interconnecting device (product or assembly e.g. lanyard) and an anchor. Failure in any one element can have catastrophic consequences.



*Collective fall protection of guardrail and walkway with accompanying cable system providing access to restricted areas. Image courtesy of Latchways plc*

To help mitigate such risks, a series of 'trans' European Normative Standards (ENs) have evolved which have been agreed amongst experts representing member states and implemented under the auspices of The Directive on Personal Protective Equipment (PPE) (89/686/EEC). The latter effectively serves to set and validate minimum standards and enable conformity through use of a visible CE mark.

Despite the best intentions, by definition the PPE Directive related to 'personal' protective equipment, that is products that are 'worn or held' and so never *really* applied to permanently fixed anchorages, effectively preventing the application of a CE mark. Recognising that this situation left decision makers in a difficult position, some member states (including the United Kingdom) adopted a 'presumption of conformity' which enabled CE marking (subject to notified body validation) of anchorages against EN795 1997 Class A1, A2, C and D standard(s). Thus many permanently fixed anchorages, including horizontal lifelines (Class C) have been subjected to a basic validation process and are CE marked accordingly.

A subsequent (2010) ruling effectively withdrew the right for this 'presumption of conformity' which coupled with the release of an updated and significantly amended standard (EN795 2012) has caused much confusion. The revised EN795 standard is now limited in scope to single users and to devices that can be removed from the structure. Importantly, a separate Technical Specification document (CEN/ TS 16415: 2012) which addresses the need of multiple users on such systems has been drafted which states that multi-user devices must now be tested to simulate a minimum of two users falling simultaneously.

The revised standard also contains significant technical enhancements including the need to design and test for fall arrest even if the product is offered for fall restraining purposes; enhanced dynamic and static testing and guidance on acceptable minimums in respect of the provision of information by manufacturers and installers.

Some debate remains around definitions of which components or parts of assemblies are structural (permanently fixed) and those which are not (can be removed), as for example, some conforming roof anchors can be removed in full from some types of roof (standing seam - clamped) but are essentially permanent on others (built up membrane – fixed with toggle or fixture and weatherproofed). Both types of roof anchor are essentially the same in form and function – but differ in relation to the fixing substrate and removability.

The EN795 2012 standard together with the forthcoming Technical Sheet (CEN/ TS 16415: 2012), undoubtedly goes some way to address the shortcomings of the preceding standard(s). However, in order to ensure the safety of every worker at height it is critical that manufacturers go one step further and commit to testing on ‘as built’ structures and validate the engineering performance / parameters of their offer.

This is particularly important in relation to the placement of lifelines, anchors and rails onto modern roofs such as trapezoidal built up, standing seam, composites and non-concrete deck membrane. The relationships between the depth of insulation, height of components, halter clips, fixings, purlin specifications and fall protection anchors are notoriously difficult to predict without test evidence support data.

Standards, almost inevitably, set the minimums required rather than the ultimate desired. – worth remembering next time you or your team are attaching a lanyard to anchor adjacent to an exposed drop. As with specifying any safety item, corners should not be cut nor should the process be a tick box exercise. Just like the roof itself, safe access needs to be designed-in, as part of the building, from the start.

The MCRMA Safety Lines Group has been formed to address industry concerns that the specific requirements for safe work at height; that is, access, inspection and maintenance, is still not fully understood in certain sectors of the market place. The members of the Group take an active role in the Advisory Committee for Roofsafety (ACR) and support the aim to make working on roofs safer through involvement on the ACR committee and endorsement of the recommendations contained within the Magenta Book.

Detailed advice on this subject is available from any member of the Safety Lines Group or one of the independent consultants whose details can be found on the MCRMA web site at [www.mcrma.co.uk](http://www.mcrma.co.uk).

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