



Fall Protection Manufacturers Association of Australia
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TECHNICAL BRIEFING NOTE

SUBJECT	DATE ISSUED	REVISION NUMBER
Horizontal Lifelines Installation & Maintenance	July 2008	1

Requirements

The responsibility for the provision of systems for safe work on industrial and commercial roofs lies in a number of areas.

The regulations place responsibilities on the building designer and the construction company for safe systems for working during construction, operation and maintenance as well as the eventual demolishing of the building. Working at height on roofs is a serious business and risk minimisation is essential.

The building owner has a duty of care to provide a safe working environment for anybody required to work on the roof by preventing the risk of a fall or, if this is not possible, ensuring fall protection procedures are in place that will minimise the risk of injury should a fall occur. Horizontal Lifeline Systems provide a much safer, effective and consistently reliable method of operator protection than the lower cost but higher risk method of using multiple anchor points where there is high dependence on clearly defined work methods as well as operator competency.

System Design Criteria

Building designers and owners should specify the installation of a “proprietary system” – a system which is made up from components that are designed and tested both individually and as a *System*. The system will be designed to act in highly predictable way, to minimise the risk of injury in the event of a fall. These components can be configured by the manufacturer or accredited installer to suit the specific requirements of the user – including the number of workers operating simultaneously on the system.

The proprietary system will be configured to suit the types of work to be undertaken. It will include safe access connection and disconnection points, “pass through” intermediate support brackets, a connection traveller and an inline cable shock absorber to limit end loadings transferred to the building structure.

The correct style of full body harnesses together with shock absorbing lanyards of the specific length for the system design will also be provided – ensuring total system compatibility.

Anyone expected to operate on the system should already have been certified as competent to work at height and will be trained by the installer on the correct method of use. A safe work method document should also provide for the ongoing induction and training of new employees. The use of the “proprietary system” will ensure conformance with the fall protection and safety goals of AS/NZS1891.

Other Systems

Building owners should be wary of low cost “prescribed systems” – systems made up from various rigging components that are assembled to form a type of Horizontal Life Line. These systems usually result in a tightly restricted method of use as they usually do not have “pass through” intermediate support brackets, requiring the operator to manually pass the supports with a level of skill. These systems also require the building structure to sustain far greater impact loads than most proprietary systems, (frequently in the order of 40 kN - or 4 tonnes - on the end termination anchors as opposed to a peak of less than 10 kN - or 1 tonne - on most proprietary systems). These limitations frequently make these systems impractical for the user and the building owner.

Similarly, the use of multiple anchor points – while occasionally providing a “compliant” solution – rarely offers an acceptable level of safety, especially to all but highly trained safe working at height experts. Horizontal Lifeline systems can be designed to ensure the operator is always in restraint – eliminating the possibility of a fall - this cannot be guaranteed with a system of anchor points used in series.

System Certification

All horizontal lifeline systems should carry compliance labelling - on tamper resistant material that will ensure the legibility of the information for the expected life of the system - at the entry point to the system. It should show the following data:-

- Manufacturer and Installer’s name and the installation date.
- A unique identification number.
- Instruction on the need to use personal energy absorber or fall arrest device with energy absorbing capability.
- Special instructions on use including the maximum number of users allowed on the system or on any one span.
- Service requirements and instructions together with servicing intervals and due dates.
- The month and year when the system shall be taken out of service unless it has been recertified by a competent person to the manufacturer’s instruction.

System Inspection

Horizontal Lifelines – like all height safety equipment - should be visually inspected immediately before and after use. The visual inspection should include unacceptable sag in the line between the intermediate supports, distortion of intermediate brackets, partial deployment of the inline shock absorber, deployment of any Fall Indicator in the system and kinks in the cable.

If there is any doubt, the manufacturer or accredited installer should be contacted before further use.

Recertification should be arranged in accordance with the manufacturer’s instructions and should be carried out by their accredited installer. The recertification must include detailed inspection of the line, its components, connection equipment, and its supports. This will also include the complete walking of the system using the approved traveller as well as appropriate updating of the system compliance label.

Where the employer has equal concern for the safety of operators and the efficiency of operations on the roof, the installation and correct ongoing recertification of proprietary horizontal lifelines provides a dramatically greater level of safety and comfort for the operators than the use of prescribed systems or individual roof anchor points.