

STAY ALIVE AT HEIGHT!

LHI is very pleased to bring our readers a regular column from the International Powered Access Federation. The first of these by Chris Wraith, IPAF technical & safety executive, looks at the particular dangers associated with working around electricity.

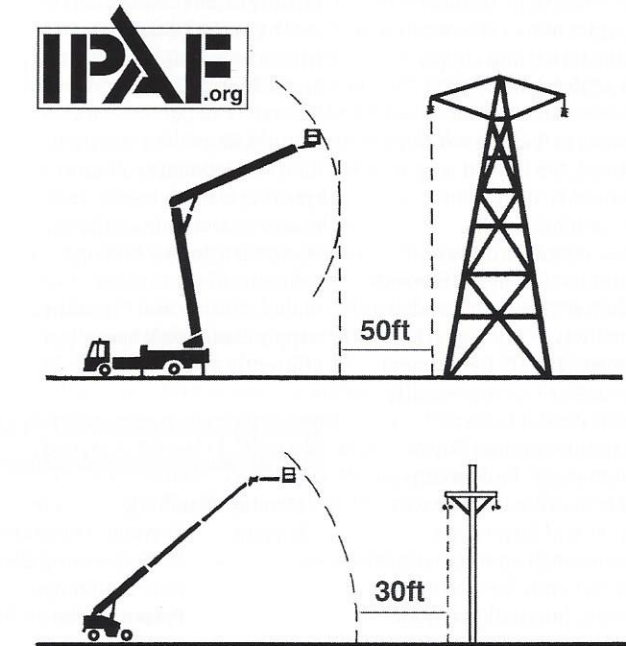
Electricity kills and electrocution is one of the leading causes of death for operators of mobile elevating work platforms (MEWPs). Statistics from IPAF's accident reporting project (www.ipaf.org/accident) reveal an average of nine fatalities per year due to electrocution when operating MEWPs. Yet it is a widely accepted fact that MEWPs are one of the safest ways of performing temporary work at height. Why are these fatalities occurring and what can be done to stop them?

The problem is that operators and those responsible for planning MEWP operations are not always able to recognise potentially dangerous electricity cables. Providers of electricity, television, telephone, street light, traffic signals and other services frequently share poles and structures to distribute their services. This can often lead to confusion and complacency when trying to identify which of these are electricity cables and determining how dangerous they are.

Analysis of fatal MEWP accidents suggests that electrocutions happen due to:

- Operator or boom of MEWP inadvertently coming too close or touching overhead cables
- Lack of awareness of the proximity of overhead power lines
- Complacency or lack of awareness of the voltage running through the cables
- Moving the boom in the wrong direction when close to the overhead cables
- Operating the boom erratically and not stopping when and where expected

Risk assessments and workplace inspections are vitally important in preventing



These safe distances meet and exceed those specified in the US ANSI standards and OSHA requirements. This simple guidance, when followed, can save lives. Should the operator need to work any closer than the 15m or 9m (50ft or 30ft) to power lines, seek expert advice (contact the power supplier) and implement extra safety precautions agreed with those experts to ensure that operator safety and the MAD are never compromised.

MEWPs are designed to provide a safe means of temporary work at height – but they are only a safe option if their use is planned and managed appropriately. Electrocution is one of the leading hazards with the use of MEWPs. Make sure you, and those you are responsible for, apply the '15 and 9m (30 and 50 ft) plus fully extended boom' rule to ensure everyone stays safe.

electrocutions. The golden rule is: Always assume that overhead cables are live and dangerous unless an expert has given different advice.

Each death is one too many and electricity-related accidents are so unnecessary. The sad thing is: electrocutions can be prevented through proper planning, risk assessment and management of work at height, including thorough operator training and familiarisation.

Qualified electrical line workers do receive detailed training before working on or near energy installations. The greater risk is from other workers who have not had that specific training and just happen to have to work near

energised overhead cables.

This includes MEWP operators who are not trained electricians but who have to work in near proximity to overhead cables, performing non-electrical tasks in industrial, commercial, warehouse, shipyard and other environments.

What should you do if you or your employees need to work near power lines?

- Where possible, the overhead cables should be de-energised and tagged before working close to them.
- If de-energising is not an option, protect operators in the platform by using specialist insulated aerial

devices (IAD), which are specifically designed for work near electrical hazards, and taking the precaution of 'shielding' the cables.

- Consider the use of overhead cable proximity indicators when the risk of working near overhead cables is identified.
- Do not go nearer than the minimum approach distance (MAD), which is the safest distance a person (anyone who has not had specific training in avoiding electrical hazards) is permitted to approach 'live' overhead cables.

IPAF's MEWP operator training programme emphasises awareness of the surroundings and the correct use of proportional controls to apply smooth, slow and calculated movements of the boom, ensuring that it moves in the desired direction and stops where intended, and that operators do not encroach past the MAD.

Note: You do not need to touch overhead cables to be in danger, just being close to energised wires will put you at significant risk. The higher the voltage, the more moist the atmosphere, the further electricity can jump/arch. That is why any MAD should be clearly defined using markers on the ground, allowing for maximum boom outreach. Extra supervision should be provided in such circumstances and as always, well-communicated emergency plans must be in place.

IPAF recommends two specific safe distances through its training programmes:

- 15m (50ft) + fully extended boom from electrical pylon
- 9m (30ft) + fully extended boom from cables on wooden poles.

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