

## MEWP Shield Assessment

Practical Engineering Australia had been engaged to conduct a safety assessment, as an independent third party, of the 'Protective' secondary guarding system the 'MEWP Shield' with reference to the following standards and guidelines.

- Secondary Guarding on MEWPs – Elevating Work Platform Association of Australia – Version 3
- MEWPs – Guidance on secondary guarding devices available to reduce the risk of entrapment injury - IPAF
- AS 1418.10-2011 Cranes hoists and winches, Part 10 - Mobile elevating work platforms
- AS 2550.10-2006 Cranes hoists and winches- Safe use, Part 10 - Mobile elevating work platforms
- AS NZS 4024 (Series) Safety of machinery

The product is a secondary guarding system designed for use in boom lifts and scissor lifts to further protect the operators from collision, overhead and shearing hazards. It utilises ultrasonic proximity sensors to detect the hazards and stop the plant movement through an interlock with the deadman switch or E-stop. Typically the MEWP Shield is installed with one sensor at the control position but can incorporate up to eight ultrasonic proximity sensors which can be placed at various locations on the plant to detect hazards from any direction. The MEWP Shield system comprises of three (3) components and simply integrates in the MEWP basket/ platform controller's E-stop or deadman switch without the need to interface with the OEM control system.

The ultrasonic proximity sensor detects objects up to 4500mm away and the warning alarm and cut out points are configurable through the use of an authorised password from 500mm up to 4500mm. Once the unit has stopped the movement of the plant, the operator is required to actuate an override button on the operator interface to continue plant movement. Protective have also include a data logging system which stores MEWP Shield system data for three (3) days which would be valuable in the event of an incident or fault diagnosis.

Practical Engineering reviewed the manufacturers documentation including product datasheets, installation and operation manuals and risk assessments. A desktop safety assessment was conducted of the system and then Practical Engineering representatives witnessed field testing of the unit. It was found that the MEWP Shield significantly reduced the risk of overhead collisions and an operator crush injury, even with only one sensor installed, while if multiple sensors are installed in appropriate locations around the plant deck the risk is further decreased. Furthermore, if sensors were installed along the side of the plant deck at the appropriate angle it also decreases the risk of operator shearing injuries.

Practical Engineering concludes that the system complies with the definition of a secondary guarding system and meets the standards set by the Elevating Work Platform Association of Australia (EWPA).

Kind Regards,



**Jai Rice**

Director

BEng(Mech), MIEAust, NER, RPEQ, CPPM, DipPM, MAIPM, Cert IV WH&S