GUIDELINES ON REQUIREMENTS FOR SAFETY DEVICES ON MOBILE ELEVATING WORK PLATFORMS (MEWPS) TO BECOME EFFECTIVE AFTER THE PUBLICATION OF AS1418-10 (2010) VERSION AS OF 27 MAY 2010

Purpose

The purpose of this document is to set out the interim requirements for safety devices on new or imported Mobile Elevating Work Platforms (MEWPs) used in Australia.

This document is set out as follows:

- Part A – Requirements for safety devices on MEWPs
- Part B – Implementation phases on safety devices for new MEWPs in Australia
- Part C - Alternative methods to achieve design registration

Part A – Requirements for safety devices on MEWPs

The Safety Related Parts of control systems of MEWPs must be designed in accordance with the requirements of either AS4024 or IEC62061 or ISO13849. In addition MEWPs are required, as a minimum, to be fitted with the relevant safety devices specified in AS1418.10-2010 Table 2.1 and conform to the applicable reliability levels listed.

Application

These requirements as far as they relate to the reliability of safety devices for various safety functions take precedence over the requirements specified in the primary standard used in the design.

Verification of the functional requirements for safety devices:

The functional requirements of safety devices define how the safety device must operate and does not relate to the reliability level.

The functional requirements shall meet or exceed the requirements specified in AS1418.10-2010 and shall be verified by design review and functional test. Such tests shall be documented in a test report.

Verification of the specified reliability levels for safety devices:

For the purpose of Australian design verification, compliance with the specified reliability levels for safety devices can be demonstrated in one of the following ways:

1. CE Certification and EC Type examination certificate issued by an EC Notified Body. For equipment imported into Australia, the CE Certification and EC Type examination certificate must specifically refer to EN280 and include some form of verifiable link to positively identify the imported plant as the same plant items referred to in the certifications. E.g. a letter from the Notified Body to say that they have sighted the specific models that are imported into Australia.

2. An EC declaration of conformity issued by the manufacturer and provision of the EC Homologation file and supporting documentation demonstrating compliance with the above requirements. The design verifier has to examine the manufacturer’s technical documentation and ensure that there is sufficient proof that the manufacturer’s declaration of conformity is adequately supported.

3. Validation according to the requirements specified in AS4024, EN954-1, IEC62061 or ISO 13849.2 as applicable. (Note: These standards only cover the safety control systems and have very little to do with other design aspects of the plant e.g. stability/strength etc.)

For the purpose of Design verification or validation the verifier must satisfy the requirements for design verifiers specified in the relevant OH&S Plant Regulations.

Design Verification to AS1418.10

For new designs or modified designs conformity can be demonstrated in one of the following ways: (See Part C)

1. CE Certification and EC Type examination certificate issued by an EC notified body, and separate verification relating to the unique requirements specified in AS1418.10 (Int) 2004. The certification issued by the EC notified body must specifically refer to EN280.

2. Design verification against AS1418.10 and validation of the requirements for safety devices according to AS4024, EN954-1, IEC62061 or ISO 13849.2 as applicable.

Part C provides illustration of alternative design verification processes.
NOTE: For the purpose of Design verification or validation the verifier must satisfy the requirements for design verifiers specified in the relevant OH&S Plant regulations.

Part B – Implementation phases on safety devices for MEWPs in Australia

These requirements apply no later than the following:

- All relevant safety devices listed in AS1418.10, other than those relating to load sensing and moment sensing, are to be fitted to all MEWPs imported into or manufactured in Australia after 1 June 2010.

- Safety devices associated with load sensing and moment sensing, are to be fitted to:
  
  o Uninsulated MEWPs imported into or manufactured in Australia after 1 March 2011
  
  o Insulated MEWPs imported into or manufactured in Australia after 1 March 2012.

Dates are valid based on assumption that the National Regulators’ Committee for High Risk Plant confirms (in writing and on public forums) the position regarding safety system requirements in May 2010.

Note: Solutions for load sensing and moment sensing can be provided in a number of ways and are specified in AS1418.10.
PART C - Alternative methods to achieve design registration

Combination of Australian Harmonised OH&S Regulations

Australian Design Registration Process using the CE conformity to EN280 route

- CE Type compliance certificate issued by EC Notified Body accepted as a verification of general safety system integrity
- Verification of Australian Variation of functions and additional safety features as described in AS1418-10

Australian Design Registration Process using the Australian Standards AS1418-10 route.

- Verification of structure, functions and safety features in AS1418-10

CE Type compliance certificate issued by EC Notifying Body

As part of the EC Type-Examination process, the Technical File relating to the machine under scrutiny must be verified by an approved body.

Technical File Contents required by EC Notified Body:

- Main technical description including performance capability, power supply, dimensions and weight.
- Overall drawings with main dimensions. Detail drawings of load carrying parts and components. Electrical/Hydraulic/Pneumatic Schematics. Schedule of all drawings related to the type tested.
- Structural and Stability calculations to verify conformity with Essential Health and Safety requirements.
- Copies of reports of tests carried out to validate conformity with requirements including stability, structural and functional tests and validation of the reliability levels for safety devices.
- Certificates related to compliance of bought-out components and parts. Where appropriate certificates demonstrating acceptability of manufacturing processes e.g. welding.

A report which records how essential Health and Safety Requirements have been addressed or developed considering the following documents submitted as a part of the TCF:

- The general hazard analysis spreadsheet
- Individual hazard analyses for other safety functions
- Risk assessment specifically addressing applicable items listed in EN280 section 5.11
- Safety system schematic for each such applicable item
- Safety block diagram for each such applicable item
- Information for these items as applicable (number of machines, time in use, total claims, claims classified as dangerous failures, summary and calculation document)
- Parts Analysis
- Safety function validation plan
- Safety related software control plan
- Electrical and hydraulic controls system schematic
- Summary spreadsheet of each applicable safety function, giving overview description of safety system operation and showing or linking to reliability data demonstrating compliance to the required category
- Noise test report

A comprehensive list of all standards used in the design, manufacture and testing of the machine.

Certificates confirming compliance with any other applicable directive e.g. Electromagnetic Compatibility.

Manual or Manuals containing instructions regarding machine operation and maintenance.

A description of internal quality assurance and control measures operated to ensure consistency with the Type-Examined example.

Verification of compliance with AS1418-10 conducted by 3rd party verifier.

As part of AS1418-10 verification process, the Technical File relating to the machine under scrutiny must be verified by a 3rd party verifier.

Technical File Contents supplied to verifier:

- Main technical description including performance capability, power supply, dimensions and weight.
- Overall drawings with main dimensions. Detail drawings of load carrying parts and components. Electrical/Hydraulic/Pneumatic Schematics. Schedule of all drawings related to the type tested.
- Structural and Stability calculations to verify conformity with AS1418-10 (Int) 2004 requirements.
- Copies of reports of tests carried out to validate conformity with requirements including stability, structural and functional tests and validation of the reliability levels for safety devices. NOTE: guidance on verification methods is provided in AS1418.10
- Certificates related to compliance of bought-out components and parts. Where appropriate certificates demonstrating acceptability of manufacturing processes e.g. welding.

A report which records how essential OH&S Requirements have been addressed. A description of the methods adopted to eliminate hazards presented by the machine.

A comprehensive list of all standards used in the design, manufacture and testing of the machine.

Manual or Manuals containing instructions regarding machine operation and maintenance.

A description of internal quality assurance and control measures operated to ensure consistency with the Type-Examined example.