The world authority in powered access

IPAF INNOVATE 2019 WORKSHOP RESULTS

MEWP & MCWP Workshop, Challenge & Awards
July 16-17, 2019, Chicago, IL, USA

The aim of IPAF's Innovate event 2019 was to address key industry issues in order to develop potential solutions that would improve the safe and effective use of Mobile Elevating Work Platforms (MEWPs), formerly known as AWPs. At the event, industry stakeholders worked together in small groups to develop achievable solutions which could positively impact the issue at hand. This paper provides a summary of each topic that IPAF offers to the industry to support improved safety.

1. RECOGNIZING AND AVOIDING ELECTROCUTION

Greg Strid, Nathan Crisp, Paul Satti, Matt Brereton

Overview: One of the more notable hazards inherent in work at height is electrocution from contact with overhead conductors – ie powerlines. IPAF's accident reporting data analysis has identified electrocutions as one of the leading causes of fatalities associated with MEWP operations, despite regulations and standards requirements to stay a minimum safe distance from the conductor or to safely depower and isolate sections if it is not possible to observe this minimum safe distance.

Issue being addressed: MEWP operations are too focused on the task to be performed vs the safe operation of the MEWP in the work area. Necessary precautions are not implemented prior to the start of work to identify and prevent access to hazardous areas.

Proposed solution: Risk assessments are the key to hazard avoidance and having a competent person in place to ensure compliance is the assurance that appropriate actions are taken. Training and knowledge of what is supposed to take place is NOT the assurance that it will take place. Monitoring, supervision and evaluation of MEWP operators for compliance is crucial and Having qualified MEWP supervisors is added assurance for compliance. IPAF's new supervisor course is a critical addition to the industry's addressing improved prevention for electrocutions. Raise awareness and promote users to schedule their supervisors training TODAY!

2. QUALIFIED SERVICE TECHNICIANS

Diego Bustamante, Bruce DeFord, Jacques Gilles Bernard, Steve Kenny, David Kesser

Overview: There is growing concern over the ability to attract, develop, replace/hire to ensure adequate capacity of industry-qualified MEWP service technicians to service growing fleets of MEWPs in operation. Parents and schools are not promoting the options of education and encouragement of careers in the MEWP industry. There are no clearly defined requirements and path to become qualified

Issue being addressed: There is a three-tier need to be addressed:

1. Attract new service technicians;
2. Develop qualified service technicians; and
3. Replace/hire qualified service technicians.

Proposed solution:

1. Create an industry standard training program, make it easy for schools to add to their program.
2. Develop an accessible standard in-work training platform, using technologies to allow for learning at a time and pace needed by individual users, ie VR simulators/remote classes/eLearning.
3. Develop an industry-wide standardized test for service technicians with topic-specific segments to assess proficiency.

3. PREVENTING MEWP TIP-OVERS

Ebbe Christensen, Roger Bowden, Brian Courtien, Chris Spier, Euan Youdale

Overview: Tip-overs are a leading cause of fatalities, injuries and property damage associated with MEWP operations. The primary causes are related to ground surface conditions, overloading of the platform and collision with other equipment.

Issue being addressed: Recognizing and understanding various causes or combination of factors that cause tip-overs, it was concluded that the main factor in tip-over accidents is ground conditions and the greatest safety improvement will come from addressing this.

Proposed solution: It was concluded both an engineered solution and training are required to address this.

- **Engineered solution**: Develop an active monitoring system for the terrain in the direction of travel that can detect elevation change within the acceptable range of the manufacturer that will activate warning or cease MEWP operations.
- **Training**: Technology cannot eliminate all human actions and must rely on persons involved to take appropriate actions for their safety. The new requirements in the MEWP safe-use standard includes a safe-use program that incorporates a risk assessment and proper MEWP selection and preparation of the worksite. New training for MEWP supervisors and standardized operator training that include more detailed information on ground conditions, and ongoing evaluation of the operator must be promoted.

4. UNDERSTANDING THE VALUE OF FAMILIARIZATION

Terry Dolan, Luis Aguilar, Jon Hedlund

Overview: MEWP familiarization has long been a requirement for a trained operator to obtain prior to operation. It is also been misunderstood and underdelivered. Too often familiarization was thought to be operator training and only provided by rental companies at the point of delivery. It is a user's responsibility to ensure their trained operators receive unit-specific familiarization prior to authorization to operate.

- Responsibility shifting from rental/dealers MUST provide familiarization to now only "required if requested" by the end user.
- Rental Companies/Dealers drop units off at all hours of the day and often no one is there to receive the unit(s), not all delivery people are company employees
- Familiarization is not operator training but information regarding control functionality, safety devices, and operating characteristics of that model MEWP.

How can we assist users and operators in understanding the need and value of this responsibility?

Issue being addressed: The solution is complex and requires a three-pronged approach:

- Creating broader **awareness** of the requirement and value for user/employer to provide familiarization to their trained operators prior to authorization to operate.

- OEMs and IPAF agree to create tools providing **consistent and easily delivered** familiarization to operators on products.
- **Track and document** that operators have been provided familiarization on each model MEWP being used.

Proposed solution:

Awareness:

- IPAF aligns with other organizations (major trades associations and operator training centers) to create urgency around the requirement to conduct familiarization.
- Rental/dealers require sign-off that the customer has either requested to receive familiarization of the product or declined familiarization.
- If requested, then they should be required to sign-off via a checklist that they understand the unit.

Consistency:

- Manufacturers agree to place safety decal such as those created by IPAF near the operator control area warning "Have you been provided familiarization of this unit?"
- Manufacturers agree to create online and QR codes that link to video placed on all units, developed following a standardized template provided and approved by IPAF.

Documentation:

- Issue codes for operators that have gone through and demonstrated successful awareness through familiarization program.

5. COMPLETING OEM COMPLIANT INSPECTION

Tony Groat, Tony Radke, Tom Smith, Temo Ochoa

Overview:

- OEM compliant inspections are a requirement for owners of MEWPs – to include maintenance, predelivery, frequent and annual inspections.
- OEM compliant inspections also are a requirement for users for daily pre-start inspections.
- OEMs provide manuals that define what is required on each model they provide, but not all owners and users understand & comply with these requirements (i.e. use general checklist)
- Non-compliance can result in increased maintenance cost, lost productivity or incidents that can result in equipment failure and/or harm to users.

Issue being addressed: Awareness, education, communication: Rental companies and dealers are key to industry improvement, as they own or sell most equipment. They are critical to communicating with their customers, i.e. owners and users, and are the channel to ensure awareness of the value of inspections. OEM requirements that must be easy to locate, follow and implement.

Proposed solution:

- Add language in standards to require OEMs to provide complete inspection lists and required guidance for each model.
- OEMs to offer an annual electronic audit on inspections to promote compliance and improvements and incentives when de properly, such as higher % parts discnts.
- Dealers/rental companies to promote the use of electronic inspections with the sale or rental of equipment and offer Incentives such as parts discounts when inspections are completed and submitted online.

6. USER SELECTING THE PROPER MEWP EQUIPMENT?

Ian McGregor, Steve Wozniak, Pat Sharky

Overview:

- Correct machine selection is typically a process that is dependent on the user/rental desk asking/sharing the right information.
- Manufacturers' specification sheets form the bulk of information shared.
- Individual manufacturers or rental companies have apps, but content is limited to their machines.
- Common or comprehensive definitions of each spec aren't readily available and are dependent on the user's background to know how to use them.

Issue being addressed: Users don't always know how or where to access information identified through a risk assessment to apply in the selection of a MEWP that will meet their task, access and specific needs.

Proposed solution: Design and create an application to be used on portable devices that will provide a guide that walks users through the risk assessment and machine selection process through a series of questions that will identify possible MEWPs for their application. The application must be available for any dealer to utilize as a platform and input their own data – including commercial data or additional custom specifications.

Actions:

- Invite industry-wide input into the terms, explanations and questions to be used (via a survey?)
- Obtain both dealer and user input into the platform to ensure that it will get broad usage.
- Build the application and the system/database to give access to relevant information.
- Make the platform available for dealers or manufacturers to input their own data and to host it.

7. HOW CAN INNOVATION BE USED TO IMPROVE OUR INDUSTRY?

Chris Beasley, Brad Boehler, Don Lombardi, John Burcaw

Overview: Technology is changing in many industries and we need to consider how it may be applied to improve the safe and effective use of powered access.

Issue being addressed: Time and productivity are the main concerns on most projects and technology can assist in proactively protecting workers and allow them to work most effectively.

Proposed solutions:

- Lanyard alert device: A lanyard that detects a fall and afterwards shows as used/defective and not to be reused. The lanyard is part of the alert protocol, can help reduce rescue time, can be used to trigger GPS location, and facilitate periodic testing of the device.
- Hazard-avoidance system: Smart watch/phone app trackable on jobsite maps to detect potential issues, utilizing and combining GPS data, work schedules, heart rate and other operator biometrics, notifications of changes (changes in environment, weather, messages from foreman, safety alerts).

8. PREVENTING WORKERS FALLING FROM MEWPS

Tom Trinen, Ron Ciran, Karen Scally, Dan Moss

Overview: Work at height comes with the known hazard of potential falls from height. IPAF accident data reports detail fatal accidents that include falls from heights – in 2015 around 40% of all reported worldwide MEWP related fatalities were the result of falls from height.

Issue being addressed: Despite the requirement for operators to use fall protection in accordance with existing codes and standards, common sense and industry best practice, many users and operators do *not* wear PFP or connect it to the anchorage provided on MEWPs.

Proposed solution:

- Leverage the new MEWP supervisor training requirement in ANSI standards to focus on this known issue and reinforce the ongoing monitoring and evaluation of operators for compliance.
- Eliminate potential fall hazards through proper risk assessment ahead of every MEWP deployment.
- Install engineered devices that disable the function controls on the MEWP if operator PFPE system is not attached to the correct anchorage prior to operation.
- Include an engineered solution to prevent this type of incorrect use a requirement in future MEWP design standard revisions.

9. ARE ALL PERSONS TRAINED/QUALIFIED BEFORE OPERATING A MEWP?

Forrest Hester, Tom McKendree, Arun Patel, Gabe Otgega

Overview: Despite the requirement for operator training, it is generally held that there are a significant number of untrained workers being allowed to operate MEWPs. Time, cost, availability, awareness and a lack of enforcement all result in users not considering proper training as a priority – it is often considered only *after* an accident occurs. Change must be implemented to increase uptake of operator training.

Issue being addressed: How to propel the industry to ensure all workers are trained prior to operation? Use existing technology to identify who is operating MEWPs and if they are trained, and to what standard, and analyze the data gathered to assist in convincing the industry to update the training of all employees. Technology such as telematics offers:

- Key-pad authorization;
- Smart PAL Card-enabled access to machines;
- Employee/equipment tracking;
- Abuse monitoring/user-based maintenance.

Proposed solution: There is no one solution – synergy of the industry is required, including:

- Operator acknowledgment;
- Insurance of training compliance;
- Regulated operator license scheme.

10. USER AWARENESS/UNDERSTANDING OF SUPERVISOR TRAINING REQUIREMENTS

Giles Councell, Melinda Zimmerman-Smith, Rick Cavan, Lindsey Anderson

Overview: A supervisor is defined as an entity assigned by the user to monitor operator performance and supervise their work. The new ANSI A92.22 safe-use standard has introduced new requirements for users to assign a MEWP supervisor to monitor operator performance and supervise their work and the A92.24 training standard introduced supervisor training requirements. ANSI standards are not widely read and understood by industry stakeholders and the standards will go into effect in 2020 and it is likely the majority of users will not be compliant with the new requirements. ANSI standards are not understood to be mandatory and undertaking or delivering compliant training is not a priority in the US.

Issue being addressed: Identify means to raise awareness and better support users in meeting their supervisor requirements.

Proposed solutions:

- Make training a legal requirement by adding current ANSI by reference into OSHA regulations.
- Promote required training through insurance companies, for instance by offering a discount in return for proof of compliance.
- Develop a grass-roots campaign, through magazines, social media, mailings, email campaigns, ad campaigns, pop-ups in rental stores, webinars, and toolbox talks.
- Promote the financial/productivity benefits in addition to the safety benefits.

For more details about IPAF's Innovate events, please visit www.ipaf.org/innovate