3RD ARC FLASH & ISOLATION SAFETY CONFERENCE

International Keynote Speaker:

JIM POLLARD

Arc Flash Expert, Arc-Rated PPE, Unlimited PPE Inc.

Canadian Regional Representative, Oberon

WHAT YOU WILL GAIN FROM ATTENDING THIS CONFERENCE:

- Learn about UK, EU and international standards developments in arc flash
- Hear case studies detailing the latest arc flash mitigation strategies and solutions
- Define what personal protective equipment (PPE) is required on your site
- Understand how to achieve a compliant and electrically safe work place
- Learn about the recent updates to NFPA 70E 2012, CSA Z462, BS7671 and IEEE 1584
- Clearly understand what an arc flash is and the potential injuries it can cause
- Learn about electrical safety statistics and the implications for you
- Detail the steps to perform an arc flash hazard analysis
- Understand practical considerations for PPE selection, testing and maintenance
- Learn how to provide arc flash training for your staff
- Network with specialists in the field and your peers
- No sales pitches – non-commercial presentations

WHO SHOULD ATTEND:

- Electrical Technicians, Engineers and Managers
- Engineering Managers
- Risk Assessors
- Design Engineers
- Manufacturers of PPE & Safety Equipment
- Safety Facilitators
- Instrumentation & Control Technicians and Engineers
- Process Safety and Loss Prevention Managers
- Government Safety Regulators/Inspectors
- OHS/Training Managers
- Tradespersons working in potentially explosive areas

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21st & 22nd May 2019

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Manchester, UK

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CONFERENCE DAY ONE – 21st May 2019

8.00am Registration

8.25am Opening Address

8.30am Session 1 **KEY NOTE**

The Human Factor in Electrical Safety – Ways to reduce error and improve performance

Jim Pollard – Arc Flash Expert, Arc-Rated PPE, Unlimited PPE Inc. Canadian Regional Representative, Oberon

The leading cause of arc flash & shock incidents is human error. As the electrical safety industry evolves we're learning that human performance and behaviour must be addressed before we can eliminate fatalities caused by electrical hazards. New requirements have been introduced to both the NFPA 70E and CSA Z462 Standards; when completing a risk assessment employers are required to address the potential for human error and its negative consequences. Our existing safety related work practices involving electrical hazards must be examined to identify deficiencies that could be improved by the implementation of human performance methodologies. Even the simplest of controls such as your existing arc flash and shock Personal Protection Equipment (PPE) must be assessed to determine if you are unnecessarily burdening your workers. By addressing the human factor in electrical safety we can effectively drive down the probability of a workplace electrical incident.

9.30am Session 2 **CASE STUDY**

Arc Flash Risk Assessment from a UK Perspective – What's New?

John Maplesden – Electrical Consultant & Industry Specialist, Covol Engineering Ltd

In 2018 there were updates to several arc flash related standards including: - NFPA 70E "Standard for Electrical Safety in the Workplace", IEEE 1584 "IEEE Guide for Performing Arc-Flash Hazard Calculations" and BS7671 ""Requirements for Electrical Installations. IET Wiring Regulations practitioners have had a lot of new material to assimilate and incorporate into risk assessment methodology. This paper discusses risk assessment, application of the hierarchy of controls and changes to calculated results using the revised IEEE 1584 approach. Case studies drawn from arc flash risk assessments conducted on industrial facilities are used to throughout this paper to illustrate the impact of changes to standards.

Morning Tea – 10.15am

10.45am Session 3

Building and implementing a flame resistant/arc-rated (FR/AR) program for arc flash hazard

Derek Sang – Technical Training Manager, Bulwark Protective Apparel

PPE is the last line of defense, but if the PPE is not correct for the hazard, is not worn properly or maintained correctly it will fail when you need it most. There is still a lot of misleading, inaccurate and incorrect information regarding selecting the proper clothing. Regulations and Standards make it clear that training on PPE is required. How do you train on FR/AR clothing? What is your responsibility for care and maintenance of your FR/AR clothing? Derek will cover what guidance is provided by the standards and review best practices in selecting, using and caring for your PPE to assist in your organization being compliant.

11.30am Session 4 **CASE STUDY**

Arc flash in the maritime industry - Case study of arc flash hazard and mitigation through system design on a new build vessel

Shaun White – Senior Project Manager – Electrical, Atlantic Pacific Marine Ltd

There has been a marked increase in maritime industry awareness and understanding of the hazards and mitigation techniques associated with arc flash. This ongoing discussion has been subjected to a degree of repetition and a lack of detailed examples of how arc flash hazard assessment and mitigations have been implemented in practice. This paper seeks to move the arc flash hazard discussion forward by providing a detailed case study of arc flash hazard and mitigation through system design on a new build vessel. Shaun will share the system design approach to quantify and manage the arc flash risk, highlight the challenges in applying Class Rules and contractual requirements on shipyards and suppliers, reality check the design verification capability of suppliers and show best practice for the arc flash system verification and testing. This paper seeks to further improve the safety, integrity and reliability of arc flash analysis and detection systems and the safety of seafarers.

Lunch – 12.15pm

1.15pm Session 5

Internal arc classification according to IEC 62271-200

Andy Seccombe – Engineering Director, L.C. SWITCHGEAR LIMITED

IEC 62271-200 specifies requirements for prefabricated metal-enclosed switchgear and controlgear for AC voltages above 1 kV and up to and including 52 kV for indoor and outdoor installation. A section within the standard defines the testing and pass criteria in order to verify the Internal Arc Classification (IAC). The testing takes into consideration the accessibility of the equipment; floor mounted authorised person or general public access and also overhead pole mounted equipment. Pass criteria takes into consideration the risk to personnel near the equipment, such as burns due to the arc and risk of being hit by flying debris. In this presentation, Andy will discuss his experience designing and testing equipment in line with the IAC requirements of IEC 62271-200.

2.00pm Session 6

How to make LV switchgear assemblies according to IEC 61439 safer

Lutz Graumann – LV Assemblies Specialist, Germany

LV switchgear assemblies according to IEC 61439 are safe but there is still risk of an arc flash due to a fault inside the panel. The Technical Report TR 61641 "Guide for testing under conditions of arcing due to internal fault" is an agreement between user and manufacturer but operating or maintenance staff are still at high risk to receive injuries or even face death. There are existing technologies available which focus on prevention against the occurrence of arc flashes but they are not mandatory. Here Lutz will discuss why these technologies should be "standard" for certain applications.

Afternoon Tea – 2.45pm

3.15pm Session 7

Gaps in electrical training and the safety implications of this related to arc flash

Kevin Hann – Director, 33kV Limited

The expansion of renewable energy and HV networks in the ownership of others than Distribution Network Operators (DNOs), the National Grid, and railways has meant that there is a demand for high voltage electrical engineers to operate and manage these smaller scale HV networks. Traditionally it was only DNO's that trained engineers and the employment packages offered by DNO's meant that very few would leave the industry and want to continue to work outside of them. This has resulted in a one or two week training course that is supposed to churn out switching engineers. My presentation will consider the safety implications of this related to arc flash.

4.00pm Session 8

ARC Flash PPE – Do you or don't you need it?

Anthony Long – Global Technical Manager – Arc & Flame PPE, Skanwear UK

I've done this a thousand times before, it's never got me before, I've been doing this for 30 years – common phrases used by battle-hardened electricians. Are you protected when you need to be? Anthony will discuss ARC Flash clothing, PPE and electrical safety training advocating the use of "Lock Out-Tag Out" (LOTO), ARC Flash mitigation systems and the correct hierarchy of controls. These are the first steps any company or individual needs to take to ensure safe working conditions before using the last line of defence - PPE.

4.45pm Session 9 **CASE STUDY**

Arc flash risk assessments – A case study from Sweden´s largest nuclear power plant

Tomas Winter – Manager, Peritum Safety Management – Sweden

In Sweden very little has been done when it comes to arc flash risk assessments. It´s like a forgotten hazard and all focus is on handling electric shock. This presentation will explore an arc flash program performed and implemented in Sweden´s largest nuclear power plant Ringhals. This is one of very few arc flash risk assessments performed on a utility in Sweden and Tomas will discuss the huge learning curve it took to make it a prioritised area. The arc flash program consisted of installation analysis, visualisation, safety guidance and implementation. In the absence of an equivalent Swedish or European standard, the Arc Flash hazard analysis was executed in accordance with IEEE 1584.

Closing and Networking Session – 5.30pm to 6.30pm

An hour dedicated for all attendees to meet and socialise with experts and industry peers at the 3rd Arc Flash and Isolation Safety Conference Cocktail Hour

INTRODUCTION TO THE 3RD ARC FLASH AND ISOLATION SAFETY CONFERENCE

The objective of this conference is to provide you with the latest developments and best practice to deal with arc flash hazards and isolation safety issues. You will have a chance to discuss your electrical issues with our speakers, and gain practical applications to improve arc flash and isolation safety in your workplace. The focus throughout is on the experiences of end users. The conference will be attended by those who are interested in technical solutions to their arc flash and isolation issues, industry trends, standards developments and new techniques to handle existing electrical safety threats.

All conference papers are reviewed and selected for their high quality and technical value by our panel of specialists experienced in the theory and practice of arc flash and isolation safety.

CONFERENCE DAY TWO – 22nd May 2019

8.30am

Session 10

HALF DAY WORK SHOP

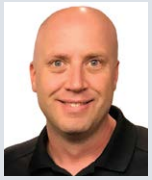
The Anatomy of Arc Flash PPE

Jim Pollard – Arc Flash Expert, Arc-Rated PPE, Unlimited PPE Inc.

This interactive workshop session on Arc Flash PPE that describes how the products are tested, certified, selected and pre-use inspected including care, use and maintenance guidelines to follow. Learn how to build a world class Arc Flash PPE program as part of your safety management system. Take away valuable knowledge to make informed decisions about your Arc Flash PPE to reduce human error, improve worker safety and productivity. Experience first-hand the latest innovations in product development using actual samples of Arc Flash PPE. Practical examples will be used to demonstrate how this protection works and a clear explanation of what Arc Flash PPE pitfalls to avoid.

WORKSHOP PRESENTER

JIM POLLARD



Arc Flash Expert, Arc-Rated PPE, Unlimited PPE Inc. Canadian Regional Representative, Oberon

Jim's goal is to save lives by helping companies be compliant with Arc Flash and Electrical Safety. He believes every workplace electrical fatality was preventable. He is passionate about providing specialised solutions for arc flash and shock compliance adhering with all relevant acts, codes, regulations and applicable best practice Standards. As a subject matter expert on arc flash personal protective equipment (PPE) Jim's experience and technical knowledge has been tapped by technical committees in Canada and the USA including CSA Z462, ASTM F18.15, CAN/ULC-S801, CSC/IEC/TC78 and ULC Live Working.

Lunch – 12.00pm

1.00pm

Session 11

IEEE 1584 Guide for Performing Arc Flash Hazard Calculations – An overview of the changes and how they affect you

Alan O'Kelly – Premium Power Ltd, Ireland

The IEEE published a much-revised IEEE 1584 Guide for Performing Arc Flash Hazard Calculations in November 2018, after a number of years of collaboration with the NFPA involving almost 2000 arc flash tests. The latest publication is a comprehensive overhaul of the Guide which was published in 2002 and last amended in 2011. This paper discusses the new IEEE 1584 approach, the rationale for same, the challenges posed for electrical installation owners and consulting engineers alike in acquiring the extra network survey data and information and, most importantly, the potential for significantly increased calculated levels of prospective arc incident energy for given electrical network configurations.

1.45pm

Session 12

CASE STUDY

Three Case Studies Looking at the Practicality of Arc Flash Risk Assessment in the Workplace

Pat Mynett – Director, HV Training and Consulting, Australia

CASE STUDY 1 – An electrician received second degree burns to his hand while working in an underground mine on 1000volt equipment.

CASE STUDY 2 – How a situation arose where not understanding arc flash hazards could have resulted in a production shut down and how it was resolved.

CASE STUDY 3 – An electrician received minor injuries from an arc flash when a 6.6kV isolation switch flashed over during opening.

Incident energy is calculated as if doors are open, and no allowance is made for enclosure doors unless the enclosure is type tested to contain the arc flash. In this presentation, Pat will discuss the possibility of risk assessing an allowance for doors using three case studies from industry.

Afternoon Tea – 2.30pm

3.00pm

Session 13

Selection of PPE – Practical experience and comparison of different arc assessment methods

Dr.-Ing. Thomas Jordan – Director of Research & Development, BSD – Germany

According to European and worldwide OSHA regulation and existing arc testing standards it is necessary for managers to select appropriate PPE according to the arc energy level at their workplace. Conflicting arc assessment methods often result in managers having to decide which assessment method is the most appropriate. While the arc assessment on the basis of NFPA 70E and IEEE 1584 is most common worldwide, the German based assessment on the DGUV standard 203-077 is beginning to get more attention outside of Germany. Both arc assessment methods are strictly bonded to the associated PPE arc rating method. This paper deals with experience using both assessment methods in utilities and industry. It will compare and discuss the advantages and disadvantages of both methods together with the impacts of the assessment results on the selection of arc protection PPE.

3.45pm

Session 14

Duty holder responsibility - Legal responsibility around electrical maintenance and compliance with the Electricity at Work Regulations

Anthony Smith – CEO, Lantei Compliance Services & The Electrical Safety Network

Anthony's presentation will focus on the legal requirements related to the maintenance of electrical installations, systems and equipment. It will cover issues raised in the IET Code of Practice for Electrical Safety Management, the latest legislation and regulations including the Electricity at Work Regulations 1989 and the Health and Safety at Work Act 1974. The aim of this section is to help duty holder's work towards some element of clarity and simplicity whilst maintaining compliance in the workplace, a must for all those serious about electrical safety in the workplace.

4.30pm **Discussion Panel**

Closing – 5.00pm

Sponsorship Opportunities

Representing your business at the 3rd Arc Flash & Isolation Safety Conference in 2019 will provide you the opportunity to reach key decision makers from a multitude of industries. For more information on sponsorship and exhibition opportunities please contact Sarah Montgomery via email conferences@idc-online.com

REGISTRATION FORM:

3RD ARC FLASH AND ISOLATION SAFETY CONFERENCE

Tuesday 21st & Wednesday 22nd May 2019

Marriott Manchester - Victoria & Albert Hotel, Manchester, UK

Simply complete this form online or return by email to conferences@idc-online.com

EARLY BIRD OFFER:
10% off the conference fee for registrations received on or before 23rd April 2019
– SAVE £75.00

AND /OR

3 FOR 2 OFFER:
Register 3 delegates and only pay for 2
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3. REGISTRATION & PAYMENT DETAILS

Prices shown are inclusive of VAT

PLEASE NOTE: Full payment is required prior to the commencement of the conference.

3RD ARC FLASH AND ISOLATION SAFETY CONFERENCE – 21ST & 22ND MAY 2019

☐ OPTION 1: **Early Bird Discount – 10% OFF**
– Book **on or before** 23rd April (**SAVE £75.00**) £675.00 x _____ delegates = £_____

☐ OPTION 2: **Standard Rate (NO Early Bird Discount)**
– Book **after** 23rd April £750.00 x _____ delegates = £_____

☐ OPTION 3: **3 for 2 Offer AND Early Bird Discount**
– Book **on or before** 23rd April (**SAVE £675.00**) 3 delegates: 2 x £675.00 = £1350.00 = £_____

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GENERAL INFORMATION

Confirmation Details
A confirmation email and invoice will be sent to delegates within 3 days of receiving the registration.

Cancellation Policy
A fee of 20% cancellation will apply for cancellations received 7 – 14 days prior to the start date of the conference. Cancellations received less than 7 days prior to the start date of the conference are not refundable, however substitutes are welcome.

Venue
Marriott Manchester – Victoria & Albert Hotel
Water Street, Manchester, M3 4JQ, UK
Phone: +44 (0) 161 832 1188

Accommodation
The conference venue has accommodation available and they are offering 20% off the best room rate. Once you register to attend we will email you the discount link. You can contact the venue directly on +44 (0)161 838 4110.

Food and Beverages
All lunches, morning and afternoon refreshments are included in the registration fee.

Unable to Attend
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