

# Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust.



## Level 1: Combustible Dust Hazard Awareness Course – 4<sup>th</sup> Run

\*UTAP Funding Only\*

Supported by:



### Introduction

Awareness of Dust hazards, identifying, prevention potential hazards. How to store properly in accordance to requirement, understanding system designs and safety management systems. Participants will be equipped with the knowledge and understanding of the requirements of the SS and WSH requirements at the end of the course.

### Objectives

Participants will understand the requirements of the SS667:2020, which is now an ACoP, on the handling, storage, and processing of combustible dust to prevent and mitigate fires and dust explosions in facilities handling such materials

### Target Audience

Building owners, landlords, facility managers and company management who may need to understand the importance of proper management of combustible dust hazard and measures required for their company.

#### Details

**Date:** 26<sup>h</sup> Jan 2024, (Friday)

**Time:** 9am – 5.30pm

**Duration:** 7 hours

**Delivery Mode:** IES Academy @ Jurong East

**CPD** : 4 STU (Safety)  
7 PDU (PEB) (CEng)  
7 SDU  
**To be Confirmed**

**Course Fee (Include 8% GST):**  
IES Member: \$324.00  
Non-member: \$378.00  
**Subject to prevailing GST**

**Notes will be E-Copy, do bring along own Laptop/Tablet.**

E-certificate of Attendance will be awarded to **Paid** participants who have completed course survey with **100% Attendance**.

**IES Academy @ Jurong East**  
80 Jurong East Street 21, #04-10  
Devan Nair Institute for Employment and Employability  
Singapore 609607

Contact Person: Jerine Peh (Ms)  
DID: 6460 4237 | Main Line: 6463 9211  
E-mail: [jerine.peh@iesnet.org.sg](mailto:jerine.peh@iesnet.org.sg)

## **Speaker Profile**



**Mr. Felipe Ong** is the Head of Asia Pacific, Industrial Explosion Protection Division with BS&B Safety Systems with vast experience in combustible dust risk management!

He has over 33 years of industrial experiences with the past 20 years focusing on Dust Explosion Prevention & Protection Technologies. His experience covers a wide variety of industry segments including Food & Beverage, Electronics, Automotive, aerospace, Specialty Chemical, Pharmaceutical, Grains, Animal feeds, Olé chemicals, Tobacco, Cement, Sugar, Milk Powder, Wood Products, Pulp & Paper, Petrol Chemical, Oil & Gas & Power Generation Industries.

Felipe travels extensively across Asia Pacific Regions as well as Europe & have extensive knowledge on the latest Codes & Standards, best engineering practices driven by both USA (NFPA) & European Standard (ATEX) as well as China (Chinese GB) & Australia & NZ (AS/NZS). He has conducted many Dusts Explosion Risk Assessment and have assisted several customers in actual incident finding and have provided practical Solution to many of his customers in this area.

He is an active member of IES, IChemE, Society of loss Prevention (SLP, Singapore), and have been conducting many public seminar & trainings for many MNCs, Government institution, Insurance Industries, Fire Departments, Universities, Trade associations, Safety bodies across Asia Pacific rim to promote safety awareness on this topic with many practical case studies as well as offer practical solution to mitigate this risk! He conducts & presents technical papers regularly in trade shows as well & had presented in many International safety congress as well.

## Course Schedule

### **Module 1**

#### **Local regulations, legal requirements**

- Relevant Act, Regulations & ACoPs
- Current requirements on occupier, employer, manufactures and suppliers' duties, as well requirements on precautions with regard to explosive dust under Reg 26 of WSH (General Provisions) Regulations.

### **Module 2**

#### **Introduction**

- Valuable lesson learnt from Stars Engineering accident case study that sparked and resulted in this course requirement and the reason for participants' attendance will be shared in detail!
- International statistic for combustible dust accident.

### **Module 3**

#### **Hazard Identification and dust hazard analysis (DHA)**

- What is Dust Explosion & why it is so dangerous?
- Dust explosion Pentagon.
- Types of industries with combustible dust risk
- Types of Process equipment vulnerable to dust explosion risk
- OSHA combustible Dust Poster
- Inherent Properties of Powder / Dust (Kst / Pmax / MIE /MEC/ MIT /LIT / LOC)
- DHA (Overview)

### **Module 4**

#### **Hazard Management: Prevention & Mitigation.**

- Type of Ignition sources.
- Explosion Prevention & Protection Techniques
  - a. Oxidant concentration reduction.
  - b. Deflagration Venting
  - c. Deflagration Pressure Containment
  - d. Deflagration Suppression Systems.
  - e. Dilution with non-combustible dust to render the mixture noncombustible.
  - f. Sparks Detection & extinguishing Technology.
  - g. Explosion Isolation Technology (Mechanical Versus Chemical)
- Importance of good housekeeping
- Fugitive Dust Emission control

### **Module 5**

#### **Risk Analysis of Process Equipment at Risk**

- Dust Collectors
- Cyclones
- Bucket Elevators
- Enclosed Conveyors
- Mixers, Blenders
- Dryers
- Milling Equipment
- Application of FIBCs (Flexible Intermediate Bulk Containers) / RIBC (Rigid Intermediate Bulk containers)
- Grounding / Bonding of Equipment

## **Module 6**

### **Storage Requirement**

- Maximum allowable quantities of Powder
- Working storage requirements
- Bulk Storage requirements
- Storage of combustible metal powders
- Solid Alkali meta storage
- Bulk storage enclosures
- Flexible Intermediate Bulk containers (FIBCs)
- Rigid Intermediate Bulk containers (RIBCs)
- Storage of combustible metals for recycling and waste management.

## **Module 7**

### **Facility and System Design**

- Dust Explosion and Flash Fire Hazard area assessment.
- Segregation, separation or detachment of combustible dust handling and process area.
- Building Construction
- Vent closures
- Electrical equipment zoning

## **Module 8**

### **Safety management system (SMS)**

- Aim of SMS
- Key elements of an effective SMS
- Management of Change (MOC)

## REGISTRATION FORM

### Understanding ACoP SS667: 2020 Code of Practice for handling, storage and processing of combustible dust - Level 1: Combustible Dust Hazard Awareness Course – 4<sup>th</sup> Run

**Date:** 26th January 2024 (Friday)

**Time:** 9am to 5.30pm (7 hours)

**Venue:** IES Academy@Jurong East 80 Jurong East Street 21, #04-10, Devan Nair Institute For Employment and Employability, Singapore 609607

**CPD Programme:** 7 PDU (PEB) (CEng) / 7 SDU / 4 STU (Safety) – To be Confirmed

**Fees (inclusive of GST):** IES Member Rate - \$324.00 (Base on 8% GST)

Non-Member Rate - \$378.00 (Base on 8% GST)

**Subject to prevailing GST**

**Registration Closing Date:** 29<sup>th</sup> December 2023 (Friday) / Till Class is full (Whichever comes first)

**Course Coordinator:** (Ms) Jerine Peh | Direct: 6460 4247 | jerine.peh@iesnet.org.sg

Participant's Details				
<b>Name</b> (as per NRIC in BLOCK Letters):		<b>NRIC / FIN:</b>		<b>Gender:</b> M / F
<b>Address</b> (For Invoice):				
	<b>Postal:</b>		<b>Date of Birth:</b>	
<b>Mobile:</b>		<b>Contact:</b>		<b>Fax:</b>
<b>Email</b> (For sending confirmation email):				
<b>Company Name:</b>		<b>UEN No:</b>		<b>Designation:</b>
<b>Please indicate:</b>	<input type="checkbox"/> IES Member <b>Membership No:</b>	<input type="checkbox"/> Non-Member	<input type="checkbox"/> PE/RE/RTO/Safety Officer <b>No:</b>	
	<input type="checkbox"/> Tick here if sponsored by company		<input type="checkbox"/> Tick here if Self-Sponsor	
Contact Person (For Company Sponsor Only)				
<b>Name:</b>		<b>Designation:</b>		
<b>Mailing Address</b> (For invoice):		<b>Tel:</b>	<b>Fax:</b>	
<b>Email:</b>				
<b>Payment:</b>				<b>Amount: \$</b>
<ul style="list-style-type: none"><li>Notes will be E-COPY, do bring along your own Laptop or Tablet.</li><li>E-Certificate of Attendance will be issued to participant with 100% attendance with Full payment made.</li></ul> <b>WITH IMMEDIATE EFFECT, WE ARE NO LONGER ACCEPTING PAYMENT VIA CHEQUE. PLEASE ADOPT BANK TRANSFER/PAYNOW/AXS INSTEAD.</b>				
Acceptance of Terms & Conditions for Registration of IES Academy Courses / Events				
I have read, deemed understood and accept the Terms & Conditions of IES Academy courses and events.				
<b>Name:</b>				
<b>Signature:</b>		<b>Date:</b>		

## TERMS & CONDITIONS COURSE REGISTRATION

### Registration

Any registration, whether on-line or fax will be on a ***first-come-first-served basis*** and will only be confirmed upon receipt of full payment by IES Academy Pte Ltd unless otherwise invoice to company.

All registrations must be submitted with duly completed registration form.

### Closing Date & Payment

The closing date of the event will be 1 week prior to event commencement date or earlier.

### Confirmation of Registration

Confirmation of registration will be given at least 1 week before the commencement date via email. ***If you do not receive the said confirmation email, you are required to contact IESA at 6463 9211 during office hours.***

IESA reserves the right to allow only confirmed registrants to attend the Event.

### Withdrawals/Refunds of Fees

Written notice ***at least 1 week in advance*** before the commencement of the event

Full course fee shall be refunded subjected to **4.5% transaction charge.**

➤ **NO** refund otherwise.

No show of participant would not be accepted as a valid reason for withdrawal/refund.

One time replacement is allowed only if written notice is received by us at least 1 week before the commencement of the event. However, when an IES member is replaced by a non-member, the participant has to pay the difference in the relevant fees.

### Cancellation/Postponement

Changes in Venue, Dates, Time and Speakers for the Events can occur due to unforeseen circumstances. IES reserves the full rights to cancel or postpone the Event under such circumstances without prior reasons. Every effort, however, will be made to inform the participants or contact person of any cancellation or postponement.

Fees will be refunded in FULL if any Event is cancelled by IESA.

**UTAP (Union Training Assistance Programme)** is an individual skills upgrading account especially for NTUC members. As a member, you enjoy UTAP funding at 50% of the unfunded course fee capped at \$250 every year.

Please visit [here](#) for more information on UTAP claim.

**SkillsFuture Credit (SFC)** "All Singaporeans aged 25 and above can use their \$500 SkillsFuture Credit from the government to pay for a wide range of approved skills-related courses. Visit the SkillsFuture Credit website ([www.skillsfuture.sg/credit](http://www.skillsfuture.sg/credit)) to choose from the courses available on the SkillsFuture Credit course directory."

Please click [here](#) for more information on SFC & UTAP claim.

### PERSONAL DATA PROTECTION ACT

I consent to the processing by Institution of Engineers, Singapore of personal data, including sensitive personal data as defined in the Data Protection Act 2014, about me for the proper purposes of Institution of Engineers, Singapore (IES). I undertake to observe the provisions of the Data Protection Act 2014 in relation to any personal data I may myself hold and process as a Members of Institution of Engineers, Singapore, and I agree to indemnify Institution of Engineers, Singapore from liability for any claims or damages that may arise from the processing of this data. For more information kindly refer to: [www.ies.org.sg/PDPA](http://www.ies.org.sg/PDPA).

### Enquiries

For further enquiries, please contact IESA general office at Tel: 6463 9211.