



FIRE EXPLOSION ENGINEERING: FUNDAMENTAL WITH APPLICATION

**24-26 JUNE 2019,
UTM KUALA LUMPUR**

**HRDF
Claimable
10 DOSH CEP**

INTRODUCTION

Malaysia is among one of the fastest developing nation in the sector of oil and gas as well as petrochemical. There has been a rapid increase in the construction and installation of offshore platforms, terminals, refineries as well as petrochemical plants. Despite of huge economic benefits, oil and gas sector has inherent fire and explosions hazards that are capable to severely damaging people, property and environment. The control of such major hazards is vital and very important from societal, economic, environmental and regulatory viewpoints. This Process Safety Professional Course is aim to enhance knowledge on the fundamental aspect of fire and explosion hazards that provides a better understanding on how major fire and explosion events could occurred at workplace. Then, a correct risk reduction strategy through design and control measures based on Process Safety Hierarchy can be applied to mitigate the fire and explosion hazards.

OBJECTIVE

- » To be aware of and understand the current and future legislation amendments in Malaysia OSH Act 2019.
- » To deliver the fundamental knowledge on fire and explosion hazards and its behavior.
- » To understand and provide reasoning on the fire and explosion prevention and protection systems.
- » To design out, analyzed and mitigated the fire and explosion hazards through systematic Process Safety Hierarchy.

TARGET PARTICIPANT

- CEO
- Managing Director
- Management Committee of NMHI and MHI
- Plant / Utility Managers
- Process Designers / Engineers / Technologies
- Competent Persons
- Safety & Health Officers, Environment Officer
- Other people that interested in PSM

Organized by:



**ONLINE
REGISTRATION**



DAY 1 | 24 JUNE 2019

08:45 - 09:00	Welcoming Safety Briefing Opening Remarks
09:00 - 10:00	Session 1 (DOSH Malaysia) Amendment Act OSHA 2019 <i>-Current Issue and Future of Major Hazard Management in Malaysia</i>
10:00 - 11:00	Session 2 (DOSH Malaysia) Control of Industrial Major Hazard (CIMAH) Regulation 1996 Coffee Break
11:00 - 11:15	
11:15 - 12:00	Session 3 (Dr. Kamarizan Kidam, UTM) <i>-Current Issue in the CPI</i>
12:00 - 01:00	Session 4 (PM Dr. Rafiziana Md Kasmani, UTM) Fire Investigation Case Studies - Lessons Learnt Lunch Break
01:00 - 02:00	
02:00 - 03:00	Session 5 (PM Dr. Rafiziana Md Kasmani, UTM) Heat Transfer, Ignition and Flame Spread
03:00 - 04:00	Session 6 (PM Dr. Rafiziana Md Kasmani, UTM) <i>-Pool fires and jet fires, radiation from flames</i> <i>-Compartment Fires</i>
04:00 - 05:00	Session 7 (PM Dr. Rafiziana Md Kasmani, UTM) Characteristics of gas and dust explosion
5.00	End of Day 1

DAY 2 | 25 JUNE 2019

09:00 - 10:30	Session 8 (PM Dr. Rafiziana Md Kasmani, UTM) <i>-Important Parameters in Turbulent Explosions</i> Coffee Break
10:30 - 11:00	
11:00 - 12:00	Session 9 (PM Dr. Rafiziana Md Kasmani, UTM) <i>-Vapour cloud explosion</i> <i>-Large Scale Explosion With Obstacles</i>
12:00 - 01:00	Session 10 (PM Dr. Rafiziana Md Kasmani, UTM) Explosion Investigation <i>-Estimation of overpressures from structural damage</i> Lunch Break
01:00 - 02:00	
02:00 - 03:30	Session 11 (Dr. Kamarizan Kidam, UTM) Risk Reduction Strategy <i>-Inherently Safer Design, Passive Safety Engineering, Active Safety Engineering, and Procedure</i>
03:30 - 05:00	Session 12 (Tn. Hj. Mohd Arshad Ahmad) <i>-Managing Fire and Explosion Hazard in Oil and Gas Installation</i>
5.00	End of Day 2

DAY 3 | 26 JUNE 2019

09:00 - 10:30	Session 13 (Tn. Hj. Mohd Arshad Ahmad) Safety Requirements to Layout and Arrangement <i>-Escape Routes, Safe Area, Operators Safety Buildings, Utility Area, Emergency Support, Process Areas, Flare Areas.</i> Safety Requirements to Structural Design <i>-Accidental Design Load Protection</i> Coffee Break
10:30 - 11:00	
11:00 - 12:00	Session 14 (Tn. Hj. Mohd Arshad Ahmad) Safety Requirement to Process and Auxiliary Facilities <i>-Safety Systems, Process Safety, Depressurisation, Relief and Venting, Flaring, and Drainage Systems</i>
12:00 - 01:00	Session 15 (Tn. Hj. Mohd Arshad Ahmad) Requirements to Safety and Communications Systems <i>-Fire and Gas Detection, Emergency Shutdown, Ignition Source Control, PA/Alarm System, and Emergency Power</i> Lunch Break
01:00 - 02:00	
02:00 - 04:00	Session 16 (Tn. Hj. Mohd Arshad Ahmad) Requirements for Explosion and Fire Protection <i>-Fire Protection Philosophy, Protection of Pressure Vessels and Process Piping, Passive Fire Protection, Active Fire Protection, and Explosion Protection Philosophy</i>
04:00 - 04:45	Forum
04:45 - 05:00	Closing Ceremony
5.00	End of Day 3



**Associate Prof. Dr.
Rafiziana Md Kasmani**

Rafiziana Md.Kasmani is a Associate Professor at the Department of Energy Engineering, School of Chemical and Energy Engineering, Universiti Teknologi Malaysia (UTM). Born in Muar, Johor and had completed her PhD and Masters education in University of Leeds, UK, specializing in fire and explosion engineering. Known for her innovative, energetic and versatile personality, she is actively involved in researches and consultation on related field, focusing on protection and mitigation measures in process safety and detonation fundamental studies. Her area of research is in fire and explosion engineering with emphasis on developing a series of methodologies for classifying flame acceleration and potential to fire, deflagration and detonation hazard in distribution and transmission pipelines. She has published widely in the special area of explosion hazard in process industries.



**Mohd. Arshad Ahmad
(DOSH OKMH 0037)**

Mohd. Arshad has been served more than 36 years working in various sectors of oil and gas and petrochemicals, upstream and downstream. He has gone through various stages of petroleum phases including design, construction and operation. Much of his time has been devoted in the construction of oil production platforms, pipelines and petrochemicals plants in Malaysia as well as international such as Korea, Iraq, Japan, Singapore and some short stints in the UK and the USA. He has vast experience in the management of contractors HSE and in the field of risk assesment as well as Behavioral Safety (BS). He trained and assisted the BS implementation in various plants in PETRONAS. He has reviewed and prepared more than 25 CIMAH Safety Reports for oil and gas and petrochemical plants since it was gazetted in 1996



Dr. Kamarizan Kidam

He is a senior lecturer at UTM and received his PhD from Plant Design Research Group Aalto University School of Chemical Technology, Finland in 2012. Previously, he is a competent person as Safety and Health Officer and has more than 7 years working experience mainly as HSE Engineer in petrochemical processing facilities. His expertise covers risk management, loss prevention and safe by design. He has been involved in the training and consulting of HSE, and have conducted more than 50 in-house and public training programs.

REGISTRATION FORM

Name 1
Job Title I/C No.
Email No. Phone

Name 2
Job Title I/C No.
Email No. Phone

Name 3
Job Title I/C No.
Email No. Phone

COMPANY INFORMATION

Company
Address
Town
State
Tel Fax

Email

AUTHORISED SIGNATORY (*This registration is invalid without signature from an authorised officer)

Name
Job Title
Tel Fax



**ONLINE
REGISTRATION**

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Signature & Company Stamp

CONTACT

 : +6017-7352303 (En. Radzi)
 : fahrulradzi@utm.my
 : +6011-37193265 (Pn. Rahmah)
 : ctrahmah@utm.my
 : +6017-3970979 (Dr. Kamarizan)
 : kamarizan@utm.my

PAYMENT

Normal **RM 2,000.00**
Early Bird **RM 1,800.00** (Payment before 14th June 2019)
Account Name **Bendahari UTM**
Bank Name **CIMB Bank Berhad**
Account No. **8006053536**
Method Transfer **Electronic Fund Transfer (EFT)**
**kindly send proof of payment to
fahrulradzi@utm.my*