



Welding/Cutting Processes and Safety in Confined Space

2nd Edition

7th Run

By Mr Sze Thiam Siong & Er. Winson Lee

Date: 27 & 28 September 2023, Wednesday & Thursday

Time: 27 Sept 2023: Virtual via Zoom from 2.00pm to 5.15pm

28 Sept 2023: Physical course from 9.00am to 5.45pm at Orchard Hotel Singapore

Address of Orchard Hotel Singapore (28 Sept 2023): 442 Orchard Road, Singapore 238879

CPD Programme: 2 STU(Safety) , 6 STU(Structural) & 5 SDU - Confirmed
10 PDU(PE & CEng) - Confirmed

Fees: \$378.00 (IES Member) \$432.00 (Non-Member)

- **Actual venue (hotel) will be stated in the confirmation email which will be sent to paid participant 2 weeks prior to event date**
- **Please note that attendance for both the courses are compulsory, Certificate of Attendance will be issued to participants with 100% attendance for both courses.**
- **This is a blended course comprising 3 hours of zoom session and 7 hours of physical course at hotel.**
- **This course is UTAP Supported**
- **This course is SFC Funded TGS-202100596**

- 2 Coffee Breaks (Halal)
- 1 Buffet Lunch at Orchard Cafe (subject to Government's regulation at time of event)
- Food at Orchard Cafe is NO Pork NO Lard, Halal Food can be arranged with prior notice.
- **1 Complimentary Car Park coupon at Orchard Hotel if sign up between 7 Aug 2023 to 25 Aug 2023**

Part 1: Welding and Cutting Processes

Objectives

The course discuss the different types of welding and cutting processes. The course will covers the principle and advantages/limitations of each welding and cutting process.

It is essential that the Resident Engineer (RE) and Resident Technical Officer (RTO) who are involved in construction should be familiarise with different welding and cutting processes available to the fabricators. Increasingly, more fabricators are seeking to adopt innovative welding technology to enhance efficiency and productivity. Participants will be briefed on some upcoming welding technology which may be used in the Prefabricated Pre-Volumetric Construction.

Course Outline:

1. Shielded metal arc welding
2. Gas metal arc welding
3. Flux cored arc welding
4. Gas tungsten arc welding
5. Submerged arc welding
6. Plasma arc welding/cutting
7. Resistance welding
8. Electroslag welding
9. Stud welding
10. Oxyacetylene welding
11. Oxyfuel cutting
12. Air carbon arc cutting
13. Plasma arc cutting

Profile of speaker 1

Mr Sze Thiam Siong is the Director/General Manager of SETSCO, an established testing, calibration, inspection, training, certification and consultancy firm. He holds a Bachelor of Engineering (B.Eng) Degree and is a qualified trainer for the American Welding Society (AWS) Certified Welding Inspector (CWI) Program. He had been awarded the International Institute of Welding (IIW) diploma as a "Certified International

Welding Engineer". He is the Immediate Past President of the Singapore Welding Society (SWS). He is an alternate Member in the Singapore Accreditation Council (SAC), Member of Council Committee for Inspection Bodies (CCIB), Chairman of the Technical Committee on Proficiency and Non-Destructive Testing (NDT) and Member of Technical Committee (TC) for Structural Steelwork. He is a Member of Technical Committee on Building Structure and Sub-structure, Workplace Safety & Health and National Mirror Committee (NMC) ISO/TC 254 on Safety of Amusement Rides and Amusement Devices. He is a fellow member of Nondestructive Testing Society Singapore (NDTSS) and Singapore Welding Society(SWS). He is the President of the Asia Pacific Conference for NDT 2017 and Vice President of Asian Welding Federation (AWF). He is a member of the Advisory Committee on Nuclear Science and Radiation Protection, National Environment Agency (NEA). He has extensive experience in the field of welding inspection involving pipelines, pressure vessels, structural steelworks and equipment. He lectures regularly at the various professional organizations such as Singapore Structural Steel Society (SSSS), Singapore Welding Society (SWS), Institution of Engineers, Singapore (IES) and BCA Academy.

Part II: Safe Entry & Work in Confined Spaces Entry & Work – 2nd Edition

Objective

Confined space work is one of the most serious of all workplace hazards but is also one that is often underestimated. The unfortunate reality is that many stakeholders and workers do not fully understand the hazards and the risks that are “hidden” in confined spaces until actual entry and work needs to be performed in them. The objective of this module is to inculcate and raise awareness in participants (especially Resident Engineers, Resident Technical Officers and Resident Architects) on the hazards of confined space entry and work that are present in construction sites. This will enable them to understand the control measures that are implemented onsite to mitigate confined space hazards. Their perspectives will be enhanced through the sharing of legal and other requirements on confined space entry and work as well as accident case studies.

Course Outline/Outcomes

This module will equip RE/RTOs (QSS) with the necessary WSH knowledge (including legal and other requirements for their course of work.

1. Definitions of confined spaces and examples of confined spaces
2. Common confined space hazards onsite
3. Lessons learnt from past confined space accidents / case studies
4. Legal and other requirements relevant to confined space entry and work
5. Good practices and control measures for confined space entry and work
6. Risk management and risk assessment
7. Permit to work system for confined space entry and work

Profile of Speaker 2

Er. Winson Lee is a Principal Engineer at the Building Plans and Management Group of the Building and Construction Authority. He graduated with a Bachelor's degree in Mechanical Engineering from the National University of Singapore in 2005. After graduation, he joined the Occupational Safety and Health Division, Ministry of Manpower (MOM) where he subsequently obtained a Master's degree in Safety, Health and Environmental Technology from his alma mater in 2009.

Er. Lee had served the Ministry of Manpower from 2006 where he led inspectors in conducting workplace safety and health inspections and audits, conducting investigations into serious and fatal industrial accidents, prosecuting culpable parties under the WSH Act and its Regulations. Having joined the Building and Construction Authority in 2012 after serving a brief stint as a Senior Workplace Safety and Health (WSH) Manager in the private sector, he assumes regulatory role by enforcing the Amusement Rides Safety Act.

Er. Lee obtained his Professional Engineer status in 2012 under the new Professional Engineer registration framework since 2006. He had passed the Fundamentals of Engineering Examinations, the Practice of Professional Engineering Examinations and the Professional Engineers Board interview panel all in one sitting. He subsequently obtained his Specialist Professional Engineer status in Amusement Rides Engineering in 2013.

As an MOM Authorised Examiner in lifting equipment, Er. Lee's interest lies in lifting and hoisting operations as well as WSH risk management. He previously conducts presentations to the industry on WSH matters and currently conducts in-house training courses in WSH. Er. Lee is a member of the Working Group for SS595, Singapore Standard for Steel Wire Ropes for hoisting (formerly known as CP 35 and SS297) and for Singapore Standard SS343, Specifications for Lifting Gears.

Pre-requisites for Zoom session on 27 September 2023 from 2.00pm to 5.30pm

Prior to attending this course, you should:

- Have a PC / laptop / tablet / smart phone with built-in or external webcam.
- Installed the Zoom client.
- Have Wi-Fi / high speed internet connection available.
- Receive an email with a link for you to submit a registration for webinar 1 week prior to the commencement.
- Receive an email with a link and password for you to join the webinar session after your registration is successful.
- ***It is recommended that participants join the course on a 12-inch or larger screen in order to view clearly the text and photos in the presentation materials.***
- ***ALL PARTICIPANTS ARE REQUIRED TO KEEP WEBCAM OR CAMERA TURNED ON DURING 3-hours of zoom, FAILING OF WHICH THE E-CERTIFICATE OF ATTENDANCE WILL NOT BE ISSUED***

Target Audience

Consultant engineers & supervisors; Developers; Resident Engineer & Resident Technical Officer; Contractor PM, CM, site engineers & supervisors.

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(Please note Res/RTOs are registrars of IES but NOT members of IES)

Please register online/email in the completed form by 12 Sept 2023 to:

Karen Phua, karen@iesnet.org.sg

IES Academy@Jurong East, 80 Jurong East Street 21 #04-10

Devan Nair Institute For Employment and Employability, Singapore 609607

Participant Details

Name: _____ NRIC: _____

Company: _____ Designation: _____

Address 1: _____
(For mailing of invoice and receipt)

Address 2: _____
(For mailing of Certificate)

Tel: _____

Email: _____

Please indicate: ☐ IES members IES M'ship No.: _____ P.E. No.: _____ (if applicable)

☐ Non-members ☐ Sponsored by company

Contact Person Details (if different from participant)

Name: _____ Designation: _____

Tel: _____ Fax: _____

Email: _____

Payment Details

Bank / Cheque No.: _____ Amount(\$): _____

* All Fees are inclusive of 8% GST* Cheque should be made payable to: **IES Academy Pte Ltd**

Acceptance of Terms and Conditions for Registrations of IES Academy's Events

I agree to abide by the Terms and Conditions for Registration of IES Academy's Events.

Name : _____ Signature: _____

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 Engineers Singapore 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 2 week prior to event commencement date or earlier. Cheques should be crossed 'A/C payee only' and made payable to **'IES Academy Pte Ltd'**, with the ***Title of The Event indicated clearly written on the back of the cheques***, and submitted with the duly completed registration forms to:

IES Academy@Jurong East

Devan Nair Institute for Employment and Employability,

80 Jurong East Street 21, #04-10

Singapore 609607

Confirmation of Registration

Confirmation of registration will be given at least 2 weeks 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 2 weeks 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.

Please visit [HERE](#) for more information on SFC & UTAP claim

UTAP (Union Training Assistance Programme) is an individual skill 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.

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 [here](#).

Enquiries

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