Agricultural Engineering Technical Division
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REGISTRATION FORM

Name(s)	IEM M'ship No. /Grade	Fees (RM)
SUB TOTAL		
TOTAL PAYABLE		

Company:_____

Address:_____

_____

Mobile:_____ Tel(O):_____ Fax:_____

E-mail:_____
(*Please write clearly as the confirmation/notification will be sent via email*)

Contact Person:_____ Designation:_____

Signature:_____ Date:_____

PAYMENT DETAILS

☐ Cash RM_____

☐ Cheque no._____ for the amount of RM _____
(non-refundable) and made payable to "**THE INSTITUTION OF ENGINEERS, MALAYSIA**" and crossed "**A/C Payee Only**".

Terms & Conditions:

- For ONLINE REGISTRATIONS, only ONLINE PAYMENT is applicable [via Credit Card]
- Payment via CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN will be considered as NORMAL REGISTRATION
- For online registrations, please note that **payment MUST be made on registration.**
- **FULL PAYMENT** must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participants fail to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non refundable. Registration fee includes lecture notes, refreshment and lunches.
- The Organising Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

IEM
The Institution of Engineers, Malaysia

ONE DAY COURSE ON
"ADAPTING THE CHALLENGES AND GO FOR SUSTAINABILITY ON OPTIMUM PROCESS CONTROL. PALM OIL MANUFACTURING INDUSTRY: THE OPTIMIZATION OF CRUDE PALM OIL EXTRACTION THROUGH THE FUNDAMENTAL STAGE OF PROPER STERILIZATION PROCESS BY HAVING PROPER STEAM SUPPLY, THE CONSISTENCY AND PERSISTENCY OF STEAM PRESSURE & STEAM VOLUME CONCERN FROM THE STEAM RECEIVER WHICH RECEIVES EXHAUST STEAM FROM THE BACK PRESSURE TURBINE OR DIFFERENT APPROACH BY USING CONDENSING TURBINE"

SPEAKER : Ir. HOR KOK LUEN & Ir. WENDY OOI MONG LEE

DATE & TIME : 15th December 2018 (Saturday)
8.30am – 5.30pm

VENUE : TUS Room, 2nd Floor, Wisma IEM, Petaling Jaya, Selangor Darul Ehsan

Organised by:
Agricultural and Food Engineering Technical Division,
The Institution of Engineers, Malaysia

Grade	Online Fee	Normal Fee
IEM Student Member	RM 150.00	RM 180.00
IEM Graduate Member	RM 250.00	RM 300.00
Corporate Member	RM 450.00	RM 500.00
Non IEM Member	RM 600.00	RM 650.00

Closing Date: 10th December 2018

BEM Approved CPD/PDP Hours: 7.0 Ref. No: Applying : IEM18/HQ/363/C

PERSONAL DATA PROTECTION ACT
I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at http://www.myiem.org.my and I agree to IEM's use and processing of my personal data as set out in the said notice.

CANCELLATION POLICY
IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund less 30% if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.

POSTPONED UNTIL FURTHER NOTICE

TIME	PROGRAME
08.30am-09.00am	**Registration**
09.00am-10.30am	• Brief Introduction on the palm oil industry • Sterilization process-main function and key concerns • FFB composition and what industry wants to achieve • The design & operation characteristic of the boiler in the industry • Market availability on types of sterilizer/cooking vessels
10.30am-10.45am	**Tea Break**
10.45am-13.00pm	• Type of biomass fuel available and its characteristic • Calculation of fuel availability, consumption and potential steam generation • Practical approach on steam-fuel-power concern in the process • Governing Compliances-JKKP, DOE, BOMBA, Immigration, etc • HIRARC on boiler and steam application
13.00pm-14.00pm	**Lunch**
14.00pm-15.30pm	• Sterilization process: the optimum selection of the devices/instruments • Pneumatic actuator-key design characteristics and market availability • Pneumatic butterfly valve-key design characteristics & market availability • Market requirement on the optimum steam demand and control
15.30pm-15.45pm	**Tea break**
15.45pm-17.15pm	• Case study A: Optimization on the consistency of steam supply (pressure and temperature) to the sterilization process – new practical approach with back pressure turbine • Case study B: Optimization on the consistency of steam supply (pressure and temperature) to the sterilization process – new practical approach with fully condensing steam turbine
17.15pm-17.30pm	**Q & A session**

SYNOPSIS

The issue of achieving optimum and maximum oil extraction rate (OER) is always the hot topic being discussed and concerned most in the Crude Palm Oil (CPO) process in this Agricultural based manufacturing industry. The degree of sterilizer condensate losses as well as un-stripped bunches (USB) are marked as the indicator and bench mark for sterilization efficiency. Beside others upstream factors like weather pattern (El Nino & La Nina) and crops quality (in terms of ripeness and freshness), the most fundamental stage of palm oil recovery and extraction process in the processing stage is of course sterilization stage (cooking stage).

The main function of the sterilization stage is to obtain and achieve the optimum steam penetration on the oil bearing breaking process on the oil palm fruitlets, the consistency of steam supply in terms of working pressure, working temperature and of course the amount of steam (volume) plays vital roles in the proper sterilization. The steam and heating source for sterilization, of course generated and supplied from the solid fuel steam boiler, conventionally is the back pressure steam (exhaust steam) from the back pressure turbine exhaust after the medium high pressure steam applied for power generation.

Simultaneously in order to suit the design features of the application of condensing turbine (fully condensing or condensing with extraction) in the power generation section, the steam source and steam flow control system becomes variance but the steam characteristic and quality still need to be remained unchanged. This is to suit the fundamental of the sterilization process that may cause over sterilization concern (affect production of quality) in order to achieve all the desired working factors and characteristic the optimum design on steam flow control and distribution with practical approach with hygiene concern has become increasing important.

Due to the concern of the challenge on the shortage of skillful and semi-skilled commercial or operator automation of the steam flow control system is vital. This is to reduce dependent on human control make it more operation friendly with well regulated approach. Besides that it can save up the unnecessary cost of fuel burning (steam-fuel-power concern). On the environment aspect the carbon stock (CO_2 through solid fuel burning in the boiler) can be reduced gradually & ultimately.

BRIEF OF SPEAKER

Ir. Hon Kok Liew (P.Eng, PEPC, MIEM, First Grade Competent Steam Engineer, ASEAN Engineer, APEC Engineer, and International Professional Engineer) graduated from University of Science Malaysia (USM) in 2001. He is holding the Bachelor of Degree (Hons.) in Mechanical Engineering. He has more than 18 years of working experience in the palm oil mill & related downstream industries, inclusive of biogas power plant and biomass plant. He has vast experience in palm oil mill design, mill upgrading and mill troubleshooting as well as palm oil waste handling & management. As holding the qualification as Competent First Grade Steam Engineer (JKKP, Malaysia), currently he is performing his professional service by taking the responsibility and challenges (overall mill operation) for a well-established palm oil group of company which owns 100 tons per hour capacity palm oil mills, plantations and subsidiary plants, which aggressively embark involving in palm oil mill processing, long fiber plant, short fiber plant, organic waste water treatment plant design & management ,biomass power plant, biogas capturing plant, CHP plant and of course green energy generation for grid connection (Feed in tariff) besides islanded unit for in-house consumption.

Ir. Wendy Ooi Mong Lee (P.Eng, MIEM) graduated from University of Malaya (UM) in 2005. She is holding Bachelor of Degree (Hons.) in Chemical Engineering. She has 13 years of working experience in related to steam process in palm oil industries, including biomass boiler design, project implementation, and steam process automation control. She also actively involved in calculation for different type of pump sizing and selection for palm oil mill process application.