Chemical Engineering Technical Division (CETD), IEM

The Institution of Engineers, Malaysia

2 HALF-DAYS COURSE ON

PALM BIOMASS MANAGEMENT AND OPTIMISATION

Registration Fees - Subject to 6% SST

For Online Rate, Register via IEM Website

ONLINE | NORMAL

IEM STUDENT MEMBER :
RM 75 | RM 90

IEM GRADUATE MEMBER :
RM 125 | RM 150

IEM CORPORATE MEMBER :
RM 200 | RM 225

NON-IEM MEMBER :
RM 480 | RM 540

BEM Approved CPD Hours: 8.0
Ref no: IEM21/HQ/224/C (w)

17 - 18 AUGUST 2021

1:30 PM - 5:30 PM

GoToWebinar

Speaker:

Ir. Hor Kok Luen & Ir. Prof. Dr. Dominic Foo

e-Certificate provided !

HRDF MALAYSIA REGISTERED TRAINING PROVIDER

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SYNOPSIS

Conventionally the oil palm empty fruit bunch (EFB) was treated as biomass waste in the palm oil mill. In recent years, with matured engineering & technology innovations, the palm biomass waste is further processed into value-added products. These products include the dried long palm fiber, short loose fiber and the pressed EFB liquor. The dried long palm fiber is a good alternative to replace coconut fiber as mattress fiber and cushion production in the furniture industries. The short loose fiber may be used as fuel in the solid fuel boiler. On the other hand, the pressed EFB liquor is the main source for chemical oxygen demand (COD) enhancement on boosting methane gas formation, which may be captured for renewable energy and power generation.

This course will outline the full picture of EFB treatment flow and its role as a significant new milestone for monetizing the conventional palm oil mill processing. An optimization model will also be delivered in second half of the course.The optimization model aims to determine the optimum allocation of palm biomass among its suppliers and clients in a palm biomass supply chain. Different objective may be set in the model, depending on the goal of the different stake holders, e.g. supplier, clients, government agency, etc. Participants will be guided to solve the model using MS Excel spreadsheet.

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SPEAKER'S PROFILE

Ir. Hor Kok Luen (P.Eng, PEPC, MIEM, First Grade Competent Steam Engineer, ASEAN Engineer, APEC Engineer, 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 20 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. The speaker is a corporate member of The Institutions of Engineers Malaysia (IEM) in Mechanical Discipline. He is also a Registered Professional Engineer with Practicing Certificate (PEPC) with the Board of Engineers Malaysia (BEM). He is a qualified ASEAN Engineer (AE), APEC Engineer and International Professional Engineer MY_E_00573. Currently he is the Chairman of Agricultural & Food Engineering Technical Division (AFETD), The Institutions of Engineers Malaysia, IEM.

Professor Ir. Dr. Dominic Foo is a Professor of Process Design and Integration at the University of Nottingham Malaysia, and is the Founding Director for the Centre of Excellence for Green Technologies. He is a Fellow of the Institution of Chemical Engineers (IChemE), a Fellow of the Academy of Sciences Malaysia (ASM), a Chartered Engineer (CEng) with the Engineering Council UK, a Professional Engineer (PEng) with the Board of Engineer Malaysia (BEM), as well as the President for the Asia Pacific Confederation of Chemical Engineering (APCChE). He is a world-renowned scholar in process integration, focusing on resource conservation and CO2 reduction. He collaborates with more than 50 research scholars and industrial practitioners over Asia, Europe, North America and Africa. Professor Foo is an active author, with more than 170 journal papers and made more than 230 conference presentations, with more than 30 keynote/plenary speeches. He published eight books, including one on green technologies for oil palm industry.He served as International Scientific Committees for many important international conferences. Professor Foo is the Editor-in-Chief for Process Integration and Optimization for Sustainability (Springer Nature), Subject Editor for Process Safety & Environmental Protection (Elsevier), and editorial board members for several other renowned journals. He is the winners of the Innovator of the Year Award 2009 of IChemE, Young Engineer Award 2010 of IEM, Outstanding Young Malaysian Award 2012 of Junior Chamber International (JCI), Outstanding Asian Researcher and Engineer 2013 (Society of Chemical Engineers, Japan), Vice-Chancellor's Achievement Award 2014 (University of Nottingham) and Top Research Scientist Malaysia 2016 (ASM). He conducted close to 100 professional workshops to academics and industrial practitioners worldwide, including those in the UK, Australia, South Korea, South Africa, etc.

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AGENDA

17 AUGUST 2021, TUESDAY

01:30 PM - 02:30 PM - ENVIRONMENTAL IMPACT OF MISHANDLING
02:30 PM - 03:30 PM - THE TREATMENT OF EFB- THE TYPICAL PROCESS FLOW & CONDITION SOLID PHASE AND LIQUID PHASE FROM EFB
03:30 PM - 04:30 PM - WASTE MANAGEMENT- EXPLORING
04:30 PM - 05:30 PM - PRODUCE VALUE ADDED PRODUCTS FROM THE LIQUID PHASE AND SOLID PHASE

18 AUGUST 2021, WEDNESDAY

01:30 PM - 02:00 PM - INTRODUCTION OF OPTIMISATION
02:00 PM - 03:00 PM - SUPERSTRUCTURAL-BASED APPROACH
03:00 PM - 04:45 PM - BIOMASS SUPPLY CHAIN OPTIMIZATION
04:45 PM - 05:30 PM - Q&A

Cancellation Policy

No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with 7 days prior notification and substitute will be charged according to membership status.

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"IEM reserves the right to alter or cancel the programme due to unforeseen circumstances at its discretion'.

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