

Ecobuild SEA 2018 Seminar



Date: 29th March 2018 (Thursday)

Time: 11.00 a.m. - 12.00 p.m.

**Title: Embracing Steel Structure Fabrication 4.0
in a BEAM Service Centre**

Venue: Room 2 KL Convention Centre

Speaker Profile

Ir. Tong Seng Won, a Malaysian aged 55, is the Group Engineering & Manufacturing Director of Ann Yak Siong Hardware Sdn. Bhd. He graduated with a Bachelor of Engineering in Mechanical and Master of Engineering in Manufacturing from University Malaya in 1994. He is a Professional Engineer in Mechanical registered with the Board of Engineers Malaysia and Grade 2 Steam Engineer registered with the Department of Occupational Safety and Health Malaysia. He started his career with Anshin Steel Industries Sdn Bhd in 1988 as a mechanical Engineer and in 1994 he joined Hitachi Plant Construction as an Assistant Project Manager in charge of the project for the construction of beam and section mill in Gurun. In 1995, he joined Petropipe Sdn Bhd as Deputy General Manager and subsequently he worked as an expatriate for setting up a few rolling mills and steel plants in Iran from 2003 to 2010. In 2011, he joined an aluminium smelting plant in Sarawak and in 2013, he joined Perwaja Steel Industries Sdn Bhd as a Chief Operating Officer. In 2016, he resigned from Perwaja Steel Industries Sdn Bhd. With his 25 years of working experience in the steel industry involving upstream and downstream processes, he then joined AYSH as Group Engineering & Manufacturing Director and is responsible for improvement, expansion and development of manufacturing and engineering facilities of the Group. Steel Structure Beam Line is currently one of the main project under the development and this project is design and constructed under concept of Industry 4.0.

Synopsis

Equipment and Machinery used in Steel Structure Fabrication in Malaysia varies from the simplest machine such as manual drill, cutting torch to latest technology of CNC equipment i.e. plate plasma cutting machine, punching and shearing line and beam drilling, cutting and coping machine. The type of equipment used shall determine the productivity, quality and complexity of the job.

With the demand of BIM for the construction industries today and the capability of detailing of a steel structure has made the steel framing become one of the most flexible and easiest automated IBS system out of all the others material.

This talk will focus not only how this process of a fully CNC automated fabrication system is being executed for a fabricator but also take the process to another level by embracing Industry 4.0 into Steel Structure Fabrication. A service centre embracing this technology capable of supplying the pre-process beam, plate that drilled, cut to size and shape according the model generated in the 3D detailing format such as Tekla, Advance Steel and any other software that can output to DSTV, IFC or Tekla-XML format. The service centre equipped with fully automated CNC beam drilling machine, band saw cutting machine and a full material transportation system is used to illustrate the system. This line is also equipped with short blasting and primer coating line which is a mechanised process that conventionally done manually. The most important part of embracing Industry 4.0 is applying SMART software and in this case, is a Product Life Cycle (PLM) software which enable them to carry out partsmanagement, planning, project management and production management over networking. The whole system is capable to Integrate, Manage, Launch and Analyse steel fabrication activities. It will than interfacing with ERP system and which is one of the most important element of Industry 4.0.