

# MALAYSIA BRANCH QUARTERLY NEWSLETTER

January 2016  
Malaysia Branch

Institution of  
**MECHANICAL  
ENGINEERS**

Dear Fellow Members,

Happy New Year to all of our fellow members! We wish that Year 2016 will be a great year to you.

In the past December, we had our great annual dinner. The Best Student Chapter Award was presented during the dinner. Congratulations to Monash University Malaysia Student Chapter for emerging as the winner.

As knowledge sharing in this issue of newsletter, we are pleased to share an article contributed by our member, Ir. Danaraj Chandrasegaran. Thanks to Ir. Danaraj. We wish to have more information sharing from other members in the future issues.

Besides, we would also like to share some update on IMechE Virtual Library, as per IMechE World Bulletin.

**Ir. C.C. Chow**

## ARTICLE

### WELLHEAD PLATFORMS IN THE OIL AND GAS INDUSTRY

by Ir. Danaraj Chandrasegaran

Wellhead platform generally is a type of oil platform that houses personnel and machineries to extract oil and natural gas through wells in the ocean bed. A wellhead platform (WHP) includes an integrated deck, utility systems, wellhead systems, living quarters, a helideck and drilling facilities. At times, it could be linked to Floating, Production, Storage and Offloading (FPSO) vessel or central production platforms. WHPs are normally unmanned. They are designed to be operated remotely and visited during routine inspection and maintenance activities.

Most times, WHPs would be four legged platforms; consisting of 4 decks. The decks would be spider deck, cellar deck, main deck and heli-deck. It may have 3 to 32 well, depending on the size of WHPs. These wells are usually drilled by jack-up rigs that docks with the WHPs.

Currently market is moving towards minimum facilities installation, whereby minimal engineering activities envisaged and standardization between fields. Schedule and cost savings can be anticipated by decreasing man-hours, fabrication time, streamlining designs and equipment selections. Also, expandable platforms helps on future field development strategies. Facilities could also be designed to accommodate wider design needs. Standardization and streamlining of design also offers improved operational requirements e.g. better spare parts management and decrease manned intervention.

Therefore, WHPs design and technology development should be interesting to watch in coming years especially in the current market trends that's cost conscious.



RasGas Al Khaleej Gas Project - WHP (Photo from McDermott-Photos)

#### ABOUT THE AUTHOR



Ir. Danaraj Chandrasegaran has published in international journals and conferences in the past. His career spans a diverse aspect of project execution in industries such as building construction, marine, mining and energy.

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## IMECHE'S VIRTUAL LIBRARY EXPANDS

### New search functionality improves access to books and journals as usage increases

by World Bulletin Team  
December 15, 2015

The IMechE has made accessing the extensive contents of its online virtual library and archives easier with new search functionality.

The contents of the virtual library and archives are increasingly be made available to those members unable to visit the physical library at One Bird Cage Walk, London. Accessible here, the library contains more than 40,000 online books, journals, guides, records and databases.

Sarah Rogers, manager of information and library services at the IMechE, said: "The virtual library contains everything from subscriptions with the key scientific publishers to the latest business and trade journals, exclusively to IMechE members. In many cases you can get a free book.

"But, the more content from different sources we had, the more confusing it was becoming to get what you wanted. The global search functionality has made it much easier, and we're expecting a real increase in users."

This year there has seen almost 300,000 'visits' to the virtual library, and more than 175,000 downloads of books and journals. Around 60% of users came from the UK, while the other top regions included the Netherlands, Germany, US, Hong Kong, UAE, Malaysia, Australia and India.

Next year will also see the library team expand access to its [archive and historical collections](http://www.imeche.org/knowledge/library/archive/collections/virtual-archive) (<http://www.imeche.org/knowledge/library/archive/collections/virtual-archive>) online for international members. The latest software will be used to render historical items in the archive in 3D online, while vital documents, such as the minutes of the first meeting of the Institution, will be made searchable.

Visit the Institution's [Virtual Library](http://www.imeche.org/knowledge/library/virtuallibrary) (<http://www.imeche.org/knowledge/library/virtuallibrary>) today to find out more.

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## Past Events

### 1.0 Technical Talks

Three Technical Talks were jointly organized with The Institution of Engineers Malaysia (IEM) and Engineers Australia Malaysia Chapter (EAMC) as below:

- **"Contamination and Filtration in Hydraulics and Lubrication System"** on 26<sup>th</sup> October 2015, delivered by Mr. Pascal Eric Vitte.
- **"Artificial Intelligence Techniques for Hydrological Modelling: Advantages, challenges, future prospect"** by Dr. Amin Talei on 19<sup>th</sup> November 2015.

- **"The National Engineering Register of Australia"** on 10<sup>th</sup> December 2015, delivered by Mr. Glen Crawly.

### 2.0 Technical Visit

A technical visit was held on 24<sup>th</sup> October 2015 to Bridge Simulator at **Universiti Pertahanan Nasional Malaysia (UPNM)**.

### 3.0 Seminar

Co-organized by IMechE Malaysia Branch, Taylor's University hosted a seminar, **"UK-Malaysia Research Seminar for Restoring and Improving Resilience of Built Environments"** on 25<sup>th</sup> November 2015.

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Ir. Mathew Thomas presents a token of appreciation to Mr. Pascal Eric Vitte after the talk on "Contamination and Filtration in Hydraulics and Lubrication System".

## 4.0 Membership Drives

The branch continued the membership drive activities in the past quarter. The Chairman, Ir. Mathew Thomas visited several organizations, as below, to promote IMechE membership:

- **Technip Malaysia** on 28<sup>th</sup> October 2015.
- **Tunku Abdul Rahman University College (TAR UC)** on 3<sup>rd</sup> November 2015.
- **Motorola Solutions** on 23<sup>rd</sup> November 2015.
- **Seagate** on 26<sup>th</sup> November 2015.

## 5.0 Student Chapter Launch in Tunku Abdul Rahman University College (TAR UC)

The TAR UC Student Chapter was launched on 8<sup>th</sup> December 2015, in the presence of Assoc. Prof. Dr. Yip Mum Wai, Dean of the Faculty of Engineering and Built Environment, IMechE Malaysia Branch Chairman, Ir. Mathew Thomas, and Young Member Section (YMS) Chairman, Mr. Chin Khin Fai.

The event was well attended by about 20 staffs and more than 80 students from the Department of Mechanical Engineering.

Ir. Mathew Thomas presented the Student Chapter Launch Certificate to Dr. Yip. as a symbol of the official launching of the student chapter. Two IMechE pull-up banners were also presented by IMechE Malaysia Branch to the Academic Liason Officer, Miss Lim Joo Eng and the Protem Chairman, Miss Mandy Ng, respectively.



Ir. Mathew Thomas presents official launch certificate to AP Dr. Yip Mum Wai.



Ir. Mathew and Mr. Chen present IMechE pull-up banners to Miss Lim Joo Eng and Miss Mandy Ng.



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A technical talk was also held in conjunction with the student chapter launch. The talk, titled **"Corrosion management is part of the overall management system, which is concerned with the development, implementation, review and maintenance of the corrosion policy."**, was presented by TAR UC invited speaker, Dr K. Murali Kumaraguru. Dr. Murali is a Fellow Member of IMechE with more than 17 years of experiences in the field of material, corrosion and integrity.



Technical talk presented by industrial guest speaker, Dr. K. Murali Kumaraguru.

## 6.0 Annual Dinner

The IMechE Malaysia Branch Annual Dinner was held on 12<sup>th</sup> December 2015 in Royal Lake Club, Kuala Lumpur. The dinner was well attended by our members.

The Best Student Chapter Award was also presented during the dinner. Being very active student chapter with very well presented report, Monash University Malaysia Student Chapter has emerged as the winner. The IMechE South East Asia Regional Chairman, Ir. PE Chong was invited to present the award.



Ir. PE Chong presents the Best Student Chapter Award to Monash University Malaysia Student Chapter.

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## Coming Events

### 1.0 Technical Talks and Industrial Visits

A series of technical talks and industrial visits will be organized. We look forward for your participation.

### 2.0 Networkings

A series of Networking sessions will be held in Klang Valley and Ipoh. Please look out for notices. We look forward to meeting up with you.

### 3.0 Annual General Meeting

Venue: Royal Lake Club Kuala Lumpur  
Date: March 2016  
Please look up for notice.

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## Contact Us

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