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IEM 55th Annual General Meeting and Annual Dinner and Awards Night 2014

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55th IEM Annual General Meeting & Annual Dinner and Awards Night 2014

*by **Ir. Noor Hisham Yahaya***
Organising Chairman,
IEM Annual Dinner 2014

SATURDAY, 19 APRIL 2014. IEM 55th Annual General Meeting. IEM 55th Annual Dinner and Awards Night. Two major events in the Institution's annual calendar.

A.M. The morning started bright and early with a scrumptious Malaysian breakfast served at Wisma IEM prior to the start of the AGM. Members slowly trickled in and, by the time the AGM was called to order at 9.00 a.m., there were approximately 380 in the halls – Malakoff Auditorium, C&S and TUS Lecture Rooms and Tan Sri Prof. Chin Fung Kee Auditorium.

The Annual Report for Session 2013/2014 was presented to the members. This was followed by the reports by the Hon. Secretary and Hon. Treasurer. The IEM BEST Technical Paper Presentation Awards 2013 Awards were also presented during the AGM. The AGM ended with Dato' Ir. Lim Chow Hock presenting his Presidential Address 2014/2015 titled "Engineering In Transformation" (powerpoint slides on pages 12-13).

With the end of the AGM, preparations commenced for the next grand event – the IEM Annual Dinner and Awards Night.

P.M. The foyer of the Imperial Ballroom at One World Hotel, Bandar Utama, Petaling Jaya was abuzz with chatter, laughter and music from the string quartet. Despite the heavy rain, the members and guests walked into the foyer with hair coiffed and looking their best.

Once again the Mechanical Engineering Technical Division (METD) was given the honour of organising the Annual Dinner for the second consecutive year. With the success of last year's event, we had much to live up to and so, the engine started early to identify the venue, the guest of honour and getting support from sponsors. The biggest challenge was to ensure we had enough tables to fulfil our pledge of contributing RM100,000 from the proceeds of the dinner towards the IEM Building Fund. I am delighted to announce that we have reached our target!

As Chairman of the Organising Committee, I would like to say a big Thank You to our sponsors, my fellow METD Committee members, IMG Events Sdn Bhd, the IEM Council and Executive Committee members and last but not least, the IEM Secretariat.

The full report on the dinner and photographs are on pages 6-10. ■

Date: 25 June 2014 (Wednesday)
Venue: Bangi Golf Resort, Bangi, Selangor
Closing date: Sponsorship: 11 June 2014
Registration of participants: 18 June 2014

To register and for more details, please call IEM Secretariat at 03-7968 4001/2 or go to *www.myiem.org.my*.

The IEM 55th Annual General Meeting and Annual Dinner

by Ms. CC Tan

AS is customary by now, the 55th Annual General Meeting of the Institution of Engineers, Malaysia, which took place on 19th April, 2014, was held at Wisma IEM in Petaling Jaya.

One of the most attended and celebrated annual events of the institution, it brought together a huge gathering of engineers from various disciplines.

After a warm welcome address by outgoing IEM president 2013/2014, Ir. Choo Kok Beng, the AGM commenced with the confirmation of the minutes of the 54th AGM, followed by a discussion of some issues of concern that brought about the active participation of the attendees.

Outgoing IEM President 2013/2014 Ir. Choo Kok Beng giving a warm welcome address at the start of the 55th AGM

Then came a presentation of the Annual Report, followed by the presentation of certificates to the fellows of IEM when Ir. Choo announced that as per tradition set in the last two years, he would like to honour the members of IEM who have been transferred to the grade of Fellow for the 2013/2014 session. There were seven of them in this session: Ir. Mohd. Azmi bin Ali, Ir. Gary Tan Yow Hoo, Ir. Ellias bin Saidin, Ir. Arul Hisham bin Abdul Rahim, Ir. Ong Sang Woh, Ir. Dr Tay Choon Jin, and Dato' Ir. Mohamad Husin.

Afterwards, mementoes were presented to 12 retiring Council Members who were present at the AGM, followed by an awards presentation ceremony for IEM's Best Technical Paper 2014 (medal and certificate).

For the Tan Sri Ir. Hj. Yusoff Prize (corporate member) – electrical category, the winner was Ir. Francis Xavier Jacob, for his paper on "Public Sector Policy Initiatives Towards Promoting Energy Efficiency".

The recipient of the same award in the mechanical category was Ir. Dr Tan Chee Fai for his paper on "Engineering Design Thinking Approach for Green Infrastructure Design and Development".

Last but not least, the incoming president of Session 2014/2015, Dato' Ir. Lim Chow Hock presented his Presidential Address on the topic "Challenging Engineers in National Economic Transformation Programme". He talked about the important role that engineers must play in the Government's Transformation agenda to turn Malaysia into a developed nation with a high-income status by 2020.

The meeting was then adjourned to allow participants to retire and freshen up for the highlight of the evening, the 55th Annual IEM Dinner.

Annual Report presented by Ir. Choo Kok Beng

Ir. Dr Tan Chee Fai receiving the Tan Sri Ir. Hj. Yusoff Prize (corporate member) – mechanical category from Ir. Choo Kok Beng

IEM members, guests and VIPs had a lovely time at the cocktail reception of the Annual IEM Dinner in One World Hotel

Incoming President of Session 2014/2015, Dato' Ir. Lim Chow Hock presenting his Presidential Address

Dato' Ir. Lim Chow Hock delivering his welcome speech

Guest of Honour, Dato' Dr Mohd. Ali Mohamad Nor delivering a speech on behalf of Datuk Seri G. Palanivel

THE 55TH ANNUAL IEM DINNER

By 7.30 p.m., the crowd of invited guests and VIPs in their glittering evening attire had filled up the reception area outside the Grand Ballroom of One World Hotel in Bandar Utama, Petaling Jaya.

The mood was merry and lively as the members were treated to a cocktail reception before the official start of the prime event of the night.

At 8.00 p.m., everyone was ushered to the assigned tables and the IEM 55th Annual Dinner and Awards Night 2014 officially began with the arrival of the Guest of Honour, Dato' Dr Mohd. Ali Mohamad Nor, deputy secretary-general I (natural resources management) of the Ministry of Natural Resources and Environment, representing its minister, Datuk Seri G. Palanivel.

A powerful dance performance themed 'Success' was the opening gambit to signify the commencement of the event that night.

The newly appointed president, Ir. Lim, was then invited to present his welcome address for the evening.

He took the opportunity to expound a little more on the topic from his presidential address in the morning, saying that the Economic Transformation Programme depends on a new paradigm shift that demands new ways of thinking, new skills and new methods of doing things – all of which demand no less than a major transformation of the engineer.

"The transformation of engineers and the Institution is a task that we cannot do alone. We have to collaborate with others if we are to succeed and remain relevant. There must be active engagement with the relevant authorities, with the related business community, with other professional groups, with the media and with the public at large, if we want to be heard," he said.

He called on IEM members to take an active interest in matters related to engineering in society and to participate in dialogue with others to address engineering and environmental issues so that our views will be heard and our contribution made known to all.

Following that, the guest of honour, Dato' Dr Mohd. Ali, was invited to give a few words. He took to the rostrum and delivered a speech on behalf of Datuk Seri Palanivel.

In his speech, the Minister took the opportunity to touch on the topic of climate change and called on engineers, "as prime movers of society" and who are "in the best position to do something", to place environmental issues at the core of their concerns – either through their business, day-to-day engineering work or through professional organisations like the IEM.

(Continued on page 9)

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"Climate change is potentially one of the most disastrous outcomes arising from the damage we do to our environment. It is the result of the inability by the natural environment to handle all the changes that have been inflicted on it, so I ask all IEM members to put environmental concerns at the centre of your work and address the issues of climate change.

"You have the knowledge, the ability… and your work can make a positive impact on the environment. Solving this problem is no longer an option, it is an imperative. It is however, not just the moral imperative that will drive us to do something about the environment. There are enormous economic benefits and business opportunities in the environment industries which engineers should not ignore."

Afterwards, a token of appreciation was presented to Dato' Dr Mohd. Ali and guests were then treated to a sumptuous dinner.

Later, there was an awards presentation ceremony. The IEM Gold Medal Awards were given to 24 students, while the Presidential Awards of Excellence were presented to 6 others. This was followed by a mock cheque presentation ceremony where RM100,000 was presented by Ir. Noor Hisham Yahaya to Ir. Lim for the IEM Building Fund.

Yes, we did it! Presentation of a mock cheque for RM100,000 towards the IEM Building Fund

The awards presentation ceremony then continued with the presentation of the Most Supportive Organisation/ Individual Awards, followed by the IEM Outstanding Engineering Award 2013 to Ikhmas Jaya Sdn Bhd for the Design and Innovativeness of the Double-Tracking Swing Bridge in Prai, the IEM Distinguished Member award to Dato' Ir. Teo Chiang Kok, and the IEM Honorary Fellow Awards to Ir. Vincent Chen Kim Kieong, Dato' Ir. Gan Thian Leong, and Allahyarham Dato' Ir. Dr Radin Umar Radin Sohadi.

The finale of the evening was a lucky draw. The top prize was a 3D/2N trip to Bali, followed with a second prize of a 3D/2N trip to Phuket and lastly, a 3D/2N trip to Langkawi. ■

Presentation of the Presidential Awards of Excellence (6 Awards)

1.	Winner	Mechanical Engineering Technical Division	Ir. Fam Yew Hin
2.	1st Runner Up	Civil & Structural Engineering Technical Division	Ir. Ong Sang Woh
3.	2nd Runner Up	Geotechnical Engineering Technical Division	Ir. Liew Shaw Shong
4.	4th Placing	Electrical Engineering Technical Division	Ir. Lam Sing Yew
5.	5th Placing	Chemical Engineering Technical Division	Ir. Prof. Dr Dominic Foo Chwan Yee
6.	Most Improved	Highway and Transportation Engineering Technical Division	Ir. Chin Kar Keong

Recipients of the Presidential Awards of Excellence

Presentation of Most Supportive Organisation/ Individual Awards (5 Awards)

	Category	Name
1.	Graduate Membership for Individual	Ir. Dr Tan Chee Fai
2.	Graduate Membership for Organisation	Universiti Teknikal Malaysia Melaka (UTeM)
3.	Corporate Membership for Individual	Ir. Dr Ahmad Anuar bin Othman
4.	Corporate Membership for Organisation	Jabatan Pengairan dan Saliran (JPS)
5.	Most Active Organisation	Universiti Teknikal Malaysia Melaka (UTeM)

Recipients of the Most Supportive Organisation/Individual Awards

IEM Gold Medal Award Session 2013 (24 Awards)

No	University	Name
1.	Universiti Teknologi PETRONAS (UTP) *Coastal & Offshore Engineering*	Mr. Aaron Lee Hsiu Eik
2.	Universiti Malaysia Sarawak (UNIMAS) *Electronic Computer Engineering*	Cik Amy Sahida binti Soetarman
3.	Curtin University of Technology (Sarawak) Malaysia *Mechanical Engineering*	Mr. Chan Hiang Bin
4.	Monash University Malaysia (Sunway Campus) *Electrical & Computer Systems*	Mr. Chew Weng Chuen
5.	Universiti Tunku Abdul Rahman (UTAR) *Electronic Engineering (EE)*	Mr. Choy Ngai Nam
6.	Asia Pacific University of Technology & Innovation (A.P.U.) *Mechatronic Engineering*	Mr. Chu Yee Chaw
7.	Universiti Pertahanan Nasional Malaysia (UPNM) *Electrical & Electronic Engineering*	Cik Farah Khairunnisa binti Arif
8.	Universiti Tun Hussein Onn Malaysia (UTHM) *Civil Engineering*	Cik Farrah Wahida binti Roslan
9.	Universiti Tenaga Nasional (UNITEN) *Electrical Power Engineering*	Ms. Joanne Chua Kae Jiuan
10.	Taylor's University *Mechanical Engineering*	Mr. Lee Chung Sun
11.	Multimedia University (MMU) (Cyberjaya Campus) *Engineering and Technology*	Ms. Lee Jun Yang
12.	Universiti Kebangsaan Malaysia (UKM) *Chemical Engineering*	Mr. Lee Wei Tat
13.	University of Nottingham (Malaysia Campus) *Civil Engineering*	Mr. Lim Ming Fook
14.	TATI University College (TATIUC) *Manufacturing Engineering Technology (Tooling)*	En. Mohd. Hasyimie bin Merzuki
15.	University College Sedaya International (UCSI) *Engineering Technology & Built Environment*	Mr. Moses Hon Cha Yat
16.	International Islamic University Malaysia (IIUM) *Mechatronics Engineering*	Cik Nor Nadirah binti Abdul Aziz
17.	Universiti Teknikal Malaysia Melaka (UTeM) *Electronic Engineering*	Cik Norezmi binti Md. Jamal
18.	Universiti Malaysia Pahang (UMP) *Chemical & Natural Resources Engineering*	Cik Nurul Fatimah binti Abdul Basir
19.	Universiti Malaysia Sabah (UMS) *Information Technology & Engineering*	Mr. Pang Kien Yeung
20.	Universiti Teknologi Malaysia (UTM) *Mechanical Engineering*	En. Shafeek Ahmad bin Mustafah
21.	Swinburne University of Technology (Sarawak Campus) *Mechanical Engineering*	Mr. Tan Jing Yang
22.	Universiti Putra Malaysia (UPM) *Chemical & Environmental Engineering*	Mr. Tan Kai Jun
23.	Universiti Sains Malaysia (USM) *Mechatronic Engineering*	Mr. Tan Wan Chien
24.	SEGi University *Civil Engineering*	Mr. Tay Chee Yong
25.	Universiti Malaysia Perlis (UniMAP) *Microelectronic*	Ms. Umahwathy a/p Sundraraju
26.	University of Malaya (UM) *Electrical Engineering*	Ms. Yon Hao Ren

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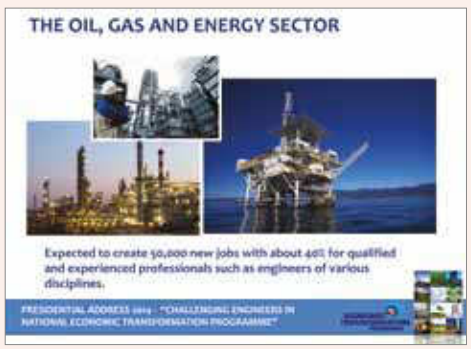

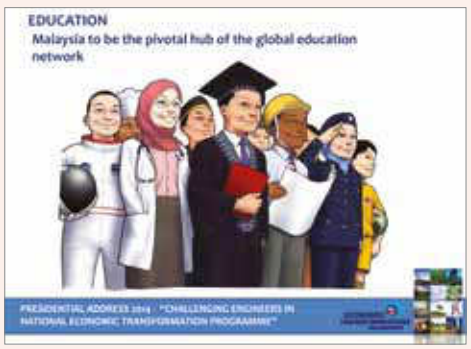


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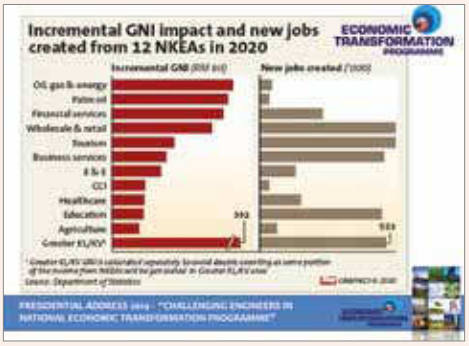
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CHALLENGING ENGINEERS INTO TRANSFORMATION
Red Ocean Strategy
VS
Blue Ocean Strategy


CHALLENGING ENGINEERS INTO TRANSFORMATION
With society becoming more complex and engineering jobs becoming more diverse, the need for engineers from different disciplines to work together will become increasingly necessary.
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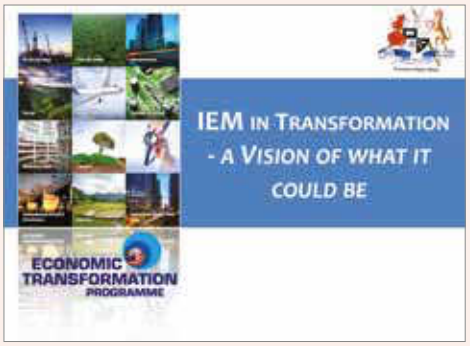
IEM IN TRANSFORMATION
- A VISION OF WHAT IT COULD BE
ECONOMIC TRANSFORMATION PROGRAMME


HUMAN CAPITAL DEVELOPMENT
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NEW TRAINING


RE-ESTABLISH A SPECIAL LINK WITH PEMANDU
PEMANDU
Since the bulk of the Entry Point Projects (ETPs) of most NKEAs are engineering based, it is pertinent that IEM re-establish and rebuild a strong link with PEMANDU with the aim of providing it the necessary professional and technical advice


ACTIVE ENGAGEMENT WITH THE GOVERNMENT
Offer expert advice to all Government levels on matters related to engineering
Project good professional image, be invited to give engineering input esp. during policy formulation/ development
To respond to invitations from the Government in an effective and timely manner


ACTIVE ENGAGEMENT WITH THE GOVERNMENT
To work closely with various related statutory bodies such as the Board of Engineers Malaysia (BEM), the Construction and Industry Development Board (CIDB), the Energy Commission, the Malaysian Communication and Multimedia Commission, etc.
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ENGAGEMENT WITH THE MEDIA
IEM must have a good database of relevant engineering information and position papers on all major engineering issues which define the views and stands of the Institution.
IEM must also have in place, members who have the expertise and credibility to provide the necessary timely input in preparing press statement for the Institution.
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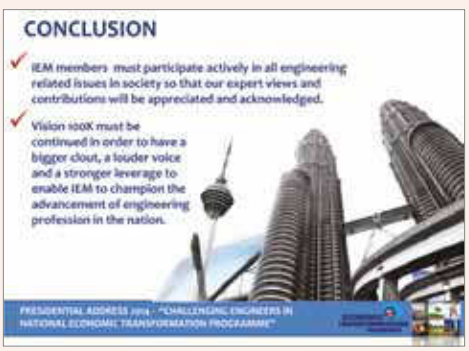
The engineering community must be ready to work in a borderless environment where competition intensifies and opportunities abound.
Engineers will have to adopt a global outlook as potential clients, partners and competitors will come from all corners of the world.
Engineers must have a good understanding of market needs and trends in different regions, to discover what is wanted and to translate them into specific opportunities.
IEM TO CONTINUE OUR CLOSE COLLABORATION WITH
MITI MALAYSIA


CONCLUSION
Malaysia is on its journey towards achieving a developed status with high-income economy.
IEM must fully support the ETP.
Engineers must seize the opportunities available and rise to the challenges for the successful implementation of the ETP.
There must be active engagement with PEMANDU and all relevant Government authorities, statutory bodies, related business communities, the media and ultimately the public if IEM wants to be heard and recognised.


CONCLUSION
IEM members must participate actively in all engineering related issues in society so that our expert views and contributions will be appreciated and acknowledged.
Vision 100X must be continued in order to have a bigger clout, a louder voice and a stronger leverage to enable IEM to champion the advancement of engineering profession in the nation.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Looking Ahead Positively

by Chin Pei Ling

JUST spend a few minutes with newly-elected IEM President Dato' Ir. Lim Chow Hock and you can tell that he is a people person. From past Presidents to ordinary members, the secretariat and even the nation at large, none is left out in his pledges.

That said, the new President for 2014/2015 did not make his pledges without first realising the huge shoes he is about to fill.

"I must say that all the past Presidents have, cumulatively, laid a very strong foundation for the Institution and set it in the right direction," says Dato' Ir. Lim.

However, he is unfazed and says he is indebted to the invaluable contributions that the past presidents have made. He believes he needs to keep up the good work. "Obviously, it is incumbent upon me to continue the good work and take the Institution to greater heights. I pledge to do my best to uplift and maintain the good image of the Institution."

To achieve greater heights, Dato' Ir. Lim believes that IEM must – first of all – remain relevant to the members, the engineering fraternity and the nation. He says IEM should continue to be the sole, powerful and credible voice of the engineering fraternity. He will continue with the task of enlarging its membership, obviously, with the 100K vision in mind.

"To remain relevant, we must continue to represent the nation's engineers. The Institution exists to serve the members," says Dato' Ir. Lim.

"I will continue to look after the welfare of the members and to enhance their high standard of professional competency. We will carry on with aggressive and dynamic programmes to upgrade knowledge and skill and all members should take advantage of the training facilities available."

Dato' Ir. Lim acknowledges the power of social media in today's tech-savvy generation. To ensure that IEM's voice is heard loud and clear, he has pledged to promote greater and wider use of the social media, in particular the print and electronic media.

"As the Institution representing the engineering profession, we must be seen and heard by the public. We are always there at the forefront of nation building and our service must be noticed. That's my central message," says Dato' Ir. Lim.

He is quick to add that he does not mean unnecessary public attention. "No, we are certainly not going to the Press just to make noises. But we will give constructive views and expert opinions – with the aim of addressing the various current issues at local, State and national levels," he says.

Already, IEM has been offering its views and recommendations to address national issues pertaining to environmental protection, natural disasters, engineering infrastructure and more.

At the same time, Dato' Ir. Lim believes it is time for IEM to have a more powerful and effective presence in assisting the government with the Economic Transformation Programme (ETP). Being in the government service himself, he looks forward to seeing IEM members play a pivotal role in the ETP.

"Under the 12 National Key Economic Areas (NKEAs), there are more than 70% entry-point projects which are related to engineering. This is where I think members of IEM, or engineers at large, should explore further opportunities to get involved – either directly or indirectly – in these projects," Dato' Ir. Lim says.

No man is an island and the President of IEM cannot achieve all this without giving due attention to what he calls the "three key *enablers*".

These are a good and committed governing body, a strong and supportive administrative staff (the secretariat) and a sound financial and asset management system.

"The governing body provides the direction and runs after the affairs of the Institution. The IEM council, Executive Committee, Standing Committees, Branches and all Technical Divisions and Special Interest Groups play a very important role to enable things to run smoothly in IEM. And to do so, the governing body must be united and stay focused," Dato' Ir. Lim explains.

He says the IEM secretariat is the backbone of the Institution. "The Institution cannot function effectively and efficiently without it. I will endeavour to create a conducive environment for the administrative staff," he says.

Lastly, a sound financial and asset management system is a necessity – without which the Institution would not be able to function at optimum level.

"While we continue to approve beneficial projects or programmes, we must also remain prudent so that all major expenditures are cost-effective," Dato' Ir. Lim says.

The new President is confident that IEM will continue to grow in strength and wisdom. With such a perspective, it looks like IEM is set for an exciting journey ahead! ■

Dato' Ir. Lim Chow Hock is currently Director of the Division of River Basin and Coastal Zone Management with the Department of Irrigation and Drainage Malaysia. He received the title Dato' in 2008.

Latest Update in Continuing Professional Development Programme for Professional Engineers

by Ir. Khew Swee Lian

1.0 INTRODUCTION

The Board of Engineers Malaysia (BEM) has introduced a policy on Continuing Professional Development (CPD) to further enhance professionalism among the professional engineers since 2003. As engineering is facing rapid changes, the policy enables engineers to instill and uphold a greater level of professionalism and professional expertise in view of globalisation and challenges associated with it in the international services sector.

After 3 years of voluntary implementation, it became mandatory requirement for professional engineers to renew their registration starting 1st January 2006.

The policy is aimed at further improving and broadening the knowledge and skill of engineers in performing their duties in line with current practice and regulations. On the implementation side of this CPD policy, a well-structured organisation backed by strong membership support is crucial in order to provide sufficient and appropriate training programmes for the profession.

At the moment, there are more than 10,000 professional engineers registered with the Board. With its large membership base and the pool of expertise available, the Institution of Engineers, Malaysia (IEM) was appointed by BEM on 2006 as the Certifying Body (CB) in the implementation of the CPD policy and programme.

2.0 CPD'S POLICY AND REQUIREMENT

The BEM CPD requirement is for professional engineers to keep up with knowledge of the field that they are engaged in. This is in line with a global trend requiring engineers to equip themselves with the latest development in their field of specialisation. To ignore the requirements is to the detriment of the engineer as far as renewing the practicing certificate for continued professional practice is concerned. The best bet is to take an active part in activities organised by IEM or other CPD service providers. Becoming an active member of IEM and its technical divisions is a good start.

The Training Board (Training Sub-Committee then) of IEM under the Standing Committee on Admission and Practical Training was given the task to formulate the guideline on eligible CPD activities. The main objective was to standardise and streamline various IEM activities in line with BEM CPD policy and requirements. Under the guidelines, a table with CPD Hours was produced and published in IEM bulletin (October 2005 issue) for member usage/guidance. Based on advice by BEM, the IEM Training Board reviewed the table in which CPD Hours were based the actual contact hour accomplished.

All IEM CPD approved activities as itemised in the Table, are eligible for CPD Hours under BEM's requirement. Members are therefore encouraged to participate in these activities so that they can achieve the annual CPD Hours requirement for renewal of Professional Engineer Registration or application for International/Regional Professional Engineer Registration.

In order to uphold the quality of the programme delivered, IEM has set guidelines for the speakers. As CPD programmes are targeted at Professional Engineers, it is expected that the speakers themselves would be Professional Engineers or of equivalent status. Nonetheless, speakers of certain standing are also able to deliver their programmes in IEM.

3.0 PROOF OF ATTENDANCE

Professional engineers are again reminded that the onus is on them to obtain proof of having attained the annual CPD minimum requirement. As such, it is imperative that an engineer keeps a proper record of the activities that he or she may have taken part in or shall be taking part in. This can be in hardcopy or digital form. It is also to the benefit of engineers to acquire a thorough understanding of the concept of Continuing Professional Development and its implication to his or her professional career, especially the prospects of enjoying continued recognition as a practising professional engineer registered with the Board of Engineers Malaysia.

However, when in doubt, check with IEM about the CPD validity of any activity, especially if it is not organised by IEM, before actually committing to it, as the cost can be substantial in the event it is not CPD relevant.

4.0 IEM ACTIVITIES

CPD Hours have been pre-approved for most activities organised by IEM and the number of CPD Hours would be stated in brochures or flyers. Examples of these are technical visits, technical talks, short courses, conferences and seminars organised by the various committees, technical divisions or branches of IEM. Attending engineering-related activities such as representing IEM at external meetings, attending internal meetings as a committee member,

assisting to organise IEM activities, serving as technical paper reviewers, technical competition judges will qualify for CPD.

In an effort to help members to keep track of CPD achievements, IEM is implementing the following mechanisms for Approved CPD Activities organised by IEM only. They are categorised as follows:

4.1 Endorsements on Brochures or Flyers of Activities

Under this format, participants who attend an activity at IEM will have to bring along the original flyer circulated by IEM for the event. The participant shall sign in under the 'List Of Participants' for the said event at the registration first. The participant may then complete his or her particulars in the flyer and at the end of the event, bring the flyer to the registration counter for endorsement.

This endorsement will only be given to those who attend the full event. Upon endorsement, the participant keeps the flyer as evidence. Endorsement of flyers for technical visits will be done at IEM at the end of the visit. This endorsement will only be given on the day of the event. No fee is required for this endorsement.

4.2 Assistance by Secretariat

Under this mode, a participant who attends the IEM CPD approved activity but has lost the endorsed flyer above can request for a Certificate of Attendance for the event. He or she will have to complete a request form after the event and a fee of RM5 will be imposed. The issuance of the certificate is also on the premise that the participant has attended fully the event and has registered under the 'List Of Participants'. The certificate will be mailed to or collected by the member.

At the end of the year, members who have taken part in IEM activities can request for a complete list of activities participated for the year. A request form has to be completed and submitted with a payment of RM50 as administration fee. The complete list would be mailed to or collected by the member concerned.

4.3 IEM Multicentrix System

IEM has also taken the initiative to keep track of programmes attended by engineers by scanning on membership cards. On registration, the members present their membership cards for clocking in and, at end of program, again for clocking out. An attendance record is generated at the end of the programme. Upon request, IEM can generate a record for programes that the members have attended in a particular year – this is typically done in late December.

5.0 NON-IEM ACTIVITIES

If members attend activities organised by other providers but which are not previously certified for CPD Hours by either BEM or IEM, they can record the equilvalent CPD Hours on their own. However they must be able to justify why these activities are acceptable for CPD if and when they are audited by BEM. Members are advised to keep all documentary evidence of the event, such as details of the event, organisers, contents of the activity, notes and whatever information that can support the case. However, it is recommended that endorsement be sought prior to the event so as to avoid non-CPD-recognition after the eventhas taken place.

CPD Hours may also be allocated for seminars, conferences, short courses, workshops etc. organised by training providers or institutions of higher learning that have been approved to carry out CPD activities. The CPD Hours allocated would also be indicated in their respective brochures prior to commencement of the activity. These functions would have been earlier approved by either BEM or IEM.

Activities such as writing of journal papers that are published in respectable publications, books on engineering subjects, special research reports, specific standards of practice, courses leading to a higher degree, continuing education programmes and activities in other disciplines which have a direct contribution to the development of the engineering profession are also accepted for CPD Hours.

In general, it is to the advantage of the engineer to keep a copy of brochures, announcements, certificates, notes obtained or handouts and a certified document of having participated in any activity as these may be required when seeking approval for CPD Hours later on.

6.0 CONCLUSION

An important reason why the IEM is well-placed to manage BEM's CPD programmes is that IEM is already internationally recognised by many organisations in Mutual Recognisation Agreements (MRAs) and other arrangements within the globalisation framework. IEM is the secretariat for the registration of International Professional Engineers (IntPE) under The Engineers Mobility Forum (EMF) as well as of APEC Engineers (APEC Eng) under APEC arrangement. Under this framework, the IntPE and APEC Eng are already required to prove CPD for reregistration.

All professional engineers are therefore encouraged to actively support the CPD efforts now spearheaded by BEM so as to be on par with international professional standing in meeting the necessary practice benchmarking.

IEM activities are organised to facilitate the implementation of this CPD effort and members should take every opportunity to be a part of this effort to maintain a high standard of engineering in Malaysia. ■

Ir. Khew Swee Lian has more than 20 years' experience in engineering including design and project management, waste management, healthcare-hospital, governmental and construction works. He has been involved directly in producing papers on IAQ standards, OT Guidelines, Air Quality, Waste Management and Professional Development Program for Engineers. He is actively involved in professional-standard organisations including Board of Engineer Malaysia, The Institution of Engineers, Malaysia, Red-R Malaysia, ASHRAE, Malaysia Standard Development Board.

CPD HOURS FOR ACTIVITIES OF IEM

(The numbering is as per BEM's CPD Record Sheet)

No	CPD Programme	Hours	Rationale and Basis
3	**Meetings (no limit)** ***– Time weighted factor = 1***		
3.1	AGM/EGM at HQ	4	AGM/EGM would normally require 4 hours
3.2	AGM/EGM at Branches	4	AGM/EGM would normally require 4 hours
3.3	AGM Technical Division	2	AGM for TD would normally require 2 hours
3.4	Council Meeting	4	Council Meeting normally stretches up to 4 hours
3.5	Excomm Meeting	4	Excomm Meetings normally stretches up to 4 hours
3.6	Branch Committee Meeting	4	Excomm Meetings normally stretches up to 4 hours
3.7	Standing Committee Meeting	3	Stand Com Meetings normally stretches up to 3 hours
3.8	Technical Division Meeting	2	TD Meetings would normally require 2 hours
3.9	Sub-Committee Meeting to Stand Committee	2	Sub-Com Meetings would normally require 2 hours
3.10	Organising Committee Meeting	2	Organising Meetings would normally require 2 hours
3.11	IEM Rep in Outside Bodies Meeting	Actual contact hour	IEM Reps in Committees established by Governmental and Professional Bodies
3.12	Technical Talk	2	Talks would normally require 2 hours
3.13	Seminar: Half Day A Full Day More than One Day	Actual contact hour	Based on actual contact hour after discounting registration, break and non-technical subjects
3.14	Technical Visit: Half Day A Full Day	Actual contact hour	Based on actual contact hour after discounting registration, break and travelling
3.15	Committee for Standards/Code of Practice Writing	Actual contact hour	Based on actual contact hour

4	Presentation and Papers ***– Time weighted factor = 10**** ***– Maximum 30 hrs per year***	Hours	Rationale and Basis
4.1	Speaker – for presentation of papers in: Conference/Seminar* Keynote Speaker* Evening/Saturday Talk	Actual contact hour	Multiply with a time weighted factor of 10 Multiply with a time weighted factor of 10 The speaker normally takes 2 hours to prepare and 1 hour to deliver the talk
4.2	Referee of Papers – per paper (review of technical papers before publication)	4	This gives the referee time to read through and edit the papers
4.3	Publication for paper: – Journal – Bulletin	 20 10	

5	Service Activities ***– Time weighted factor = 1*** ***– Maximum 30 hrs per year***	Hours	Rationale and Basis
5.1	PI Interviewer – Principal	8	Examining submitted reports and drawings: 2 hours. Setting the essay questions and organising the essay writing: 1 hour Interview: 2 hours Marking essays: 2 hours The administrative work: 1 hour
5.2	PI Interviewer – 2nd	6	As above, except for setting essay questions and administrative work done by the Principal Interviewer
5.3	PI Reviewer	4	Review the submitted documents and essays: 4 hours
5.4	Mentor – Per Mentee per year	15	The Mentor normally meets the Mentee for about 1.5 hours per month over ten months a year

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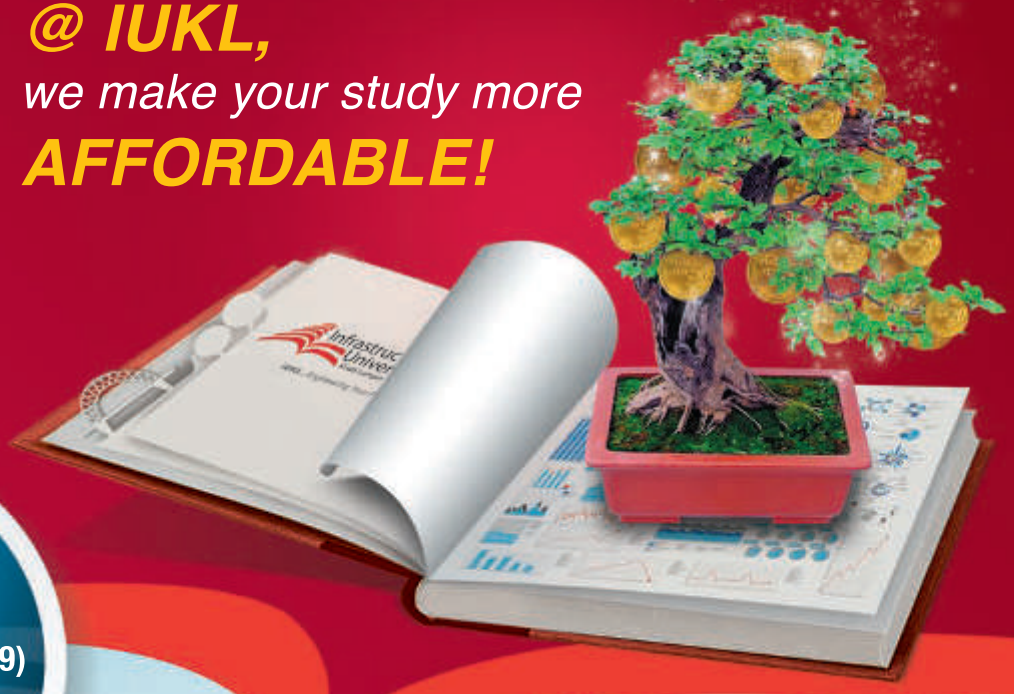

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Revisiting the Use of Rubberised Asphalt Mixtures

by Engr. Suzielah Rahmad, Dr Nur Izzi Md. Yusoff and Prof. Dr Mohd. Rosli Hainin

MODIFIERS currently available in the market fall into various categories, such as naturally occurring materials, industrial by-products and waste materials as well as carefully engineered products. Some of the more common categories include reclaimed rubber products, fillers, fibres, catalysts, polymers (natural and synthetic) and extenders, to name a few [1]. Among these, a blend of asphalt and polymer is the most popular for improving the fundamental characteristics of asphalt, as its characteristics are related to the performance of asphalt mixtures.

Polymer-modified asphalts, commonly abbreviated to PMAs, have been used for many years in road construction. However, recently, waste or recycled PMA is used to reduce modification costs and energy consumption as well as solve environmental problems. Scrap tyres are an example of recycled materials available that can be compounded with asphalt mixtures.

Approximately 900 million tyres are scrapped every year worldwide [2]. In Malaysia, over 2.8 million scrap tyres (approximately 57,391 tonnes) are generated each year. Of these, over 60% are unused and stock piled [3]. Diverting scrap tyres to pavement use is therefore worth the on-going efforts to further ease landfill pressures. In road construction, scrap tyres are used in the form of crumbrubber. The crumbrubber is obtained by reducing scrap tyres or other rubber into uniform granules, while the inherent reinforcing materials such as steel and fibre are removed along with other types of inert contaminants such as dust, glass or rock. In general, the use of crumbrubber in asphalt mixtures has two distinct approaches. One is to dissolve scrap tyres in the asphalt as a binder modifier; the other is to replace a portion of the fine aggregates with ground rubber that is not fully reacted with the asphalt. These are referred to as the wet process and the dry process respectively. The modified binder from the wet process is termed asphalt-rubber; an asphalt mixture made by the dry process is called rubberised asphalt [4].

The use of rubberised asphalt can be traced back to the 1840s, when natural rubber was introduced into asphalt to increase its engineering performance [5]. Since the 1960s, researchers and engineers have used shredded car tyres in asphalt mixtures. In the United Kingdom, the first polymer used in the mid-1800s, was natural polymer latex rubber. It was not until the late 1980s that the use of rubberised asphalt became popular. By 2000, rubberised asphalt was used in more than 40 States worldwide. Malaysia, as a rubber-producing country, is also moving toward this technology in producing road surfacing bituminous materials with improved durability and stability.

Rubberised asphalt offers a beneficial solution to surmount these problems. For example, Clemson University in the United States of America (USA) conducted a study which showed that between 500 and 2,000 scrap tyres can be used in each lane mile (1 mile = 1.609 km) of pavement, depending on the application selected. This means that for a one-mile section of a four-lane highway, between 2,000 and 8,000 scrap tyres can be recycled to create a longer-lasting flexible pavement road. An example of the implementation of a rubberised binder overlay before and after 16 years of performance is shown in Figure 1 [6]. More than 40 years' practical experience in the USA has shown that rubberised asphalt significantly improves properties compared to conventional asphalt mixtures, including increased temperature modulus, viscosity and toughness,

(a) (b)

Figure 1: (a) before and (b) after using rubberised binder overlay after 16 years of performance [6]

increased elasticity, reduced temperature susceptibility and less age hardening [7].

In Malaysia, the responsibility to study the effectiveness of using rubberised asphalt was jointly taken by the Malaysia Public Works Department (PWD) and the Rubber Research Institute of Malaysia (RRIM) via a development project titled "The use of crumbrubber as a bitumen additive". The research on rubber as an additive for flexible pavement roads began as early as the 1930s, when the RRIM conducted research into rubber components in roads. As a result, a highway from Kuala Lumpur to Klang, Selangor, was built in the 1930s using rubber as a component. It was not until the 1950s that this technology became interesting to researchers. Figure 2 shows the chronology of rubberised asphalt research trials on various flexible pavement roads in Malaysia.

In 2003, a full-scale road trial was successfully built on Route 2, Section Nos. 340–345, in Kuantan, Pahang. Harun and Razali [8] found that the presence of crumbrubber in the road surfacing dense material appears to impart an appreciable improvement to the resistance to reflective cracking in the relatively thin overlay with relatively fine aggregate gradation. However, similar improvements could not be ascertained in a thicker overlay with coarser aggregate gradation, as it was observed that the section with crumbrubber performed only slightly better than conventional asphalt mixtures after 52 months. Recently, a group of researchers from the Center for Transportation Research, University of Malaya, conducted a study on crumbrubber and inferred that the usage of rubberised asphalt can significantly enhance resistance to rutting and produce roads with better durability by minimising the distresses caused in flexible pavement. Hence, road users would be ensured safer and smoother roads. Furthermore, the problem of pollution will be reduced and, subsequently, our environment will be protected [9].

Despite real achievements in the formulation, characterisation and use of rubberised asphalt, many challenges and opportunities remain. One problem is storage stability. It is common in the asphalt industry for polymers such as crumbrubber to be blended with base asphalt and stored for weeks at a time. As a result, this

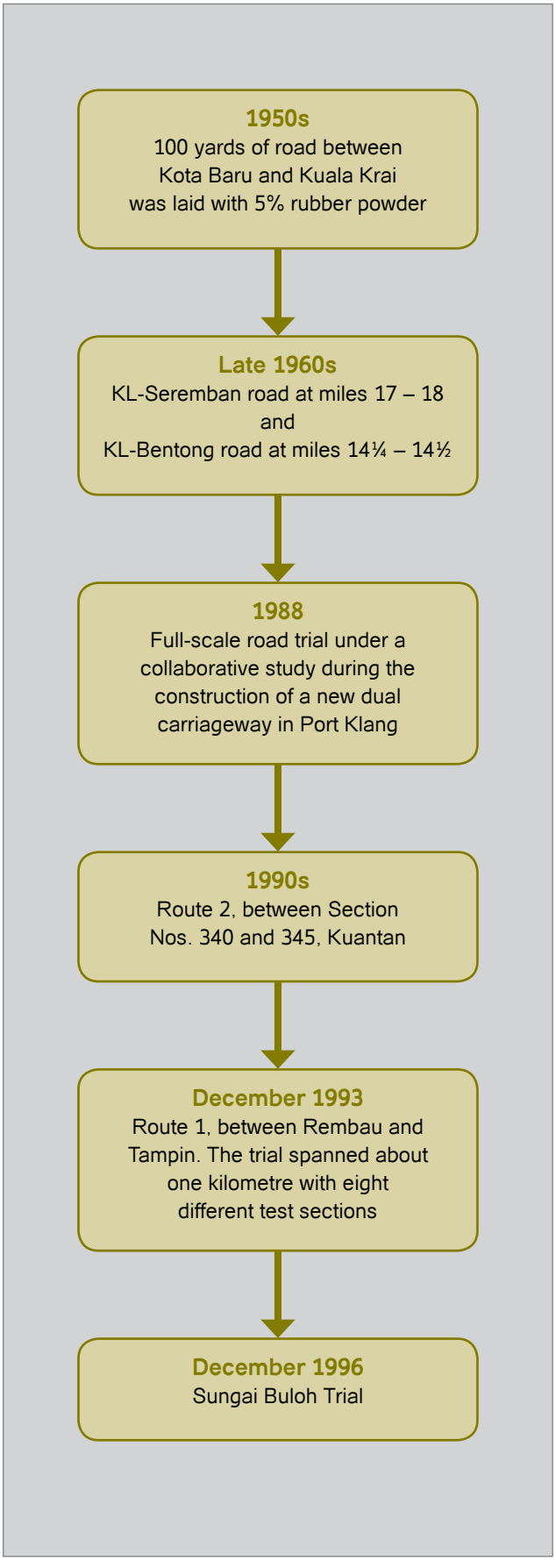

Figure 2: The chronology of rubberised road research trials in Malaysia

short-term ageing of the rubberised asphalt can affect the performance dramatically [10]. There is some polymer breakdown due to the thermal and mechanical action of the mixing process, but this effect is not critical (4-5%). The crumbrubbers are exposed to thermo-oxidative degradation when the modified binder is stored at temperatures exceeding 150°C, but storage conditions are generally milder. Therefore, the major concern is the lack of morphological (physical) stability during long storage. In addition, the mixing and compaction of rubberised asphalt will require a higher temperature compared to the conventional asphalt mixtures, which means it will consume more energy and produce more emissions.

However, at an international level, a continual improvement process is being conducted on the use of asphalt-rubber in road construction. This commitment can be seen vividly through the Asphalt Rubber Conference (ARC). Held every three years, it was first organised in Portugal (2000), followed by Brazil (2003), the USA (2006), China (2009) and, recently, Germany (2012). This conference provides a unique platform for asphalt-rubber experts from around the world to attend and present their studies covering all aspects of asphalt-rubber design, life cycle costs, binder design and construction methods, research, energy and environmental benefits, maintenance, tyre/pavement sound reduction and the production of asphalt-rubber as a binder or used in asphalt mixtures. This marks the beginning of a new era of road construction worldwide, as asphalt-rubber is more widely adopted. Therefore, the construction of roads using asphalt-rubber should be revisited and taken seriously by the Malaysian government to ensure better roads in the future. ■

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Dr Nur Izzi Md. Yusoff is a lecturer in the Department of Civil & Structural Engineering, Universiti Kebangsaan Malaysia. He received his B.Sc. from Universiti Kebangsaan Malaysia, MEng. from Universiti Teknologi Malaysia and PhD from University of Nottingham, UK. His main research interest is pavement engineering and pavement materials, particularly on the rheological properties of bituminous materials.

Prof. Dr Mohd. Rosli Hainin is a Professor in the Faculty of Civil Engineering, Universiti Teknologi Malaysia. He is currently the Head of the Department of Geotechnics and Transportation of the faculty. He received his B.Sc. from Clemson University, USA, M.Sc. from University of Kansas, USA, and PhD from Auburn University, USA. His fields of interest are pavement materials, construction, design and rehabilitation.

OBITUARY

With deep regret, we wish to inform that **Dato' Ir. Kam U Tee** had passed away on 21 March 2014. On behalf of the IEM Council and management, we wish to convey our deepest condolences to the family.

IEM Editorial Board

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David Takes on Goliath in Patent Infringement Battle

by P. Kandiah

THE main shareholder (and Managing Director) of a small construction company which had been in business for over 10 years, realised that the method of building construction was labour intensive and not very productive.

When he saw that there was a lot of room for improvement, he set out to solve the technical problem at hand. His aim was to increase productivity and to lower the cost of construction without compromising on the quality of the buildings. He developed a novel method of constructing and erecting wall panels and a method of producing leak-proof joints and corners of buildings. He applied for and successfully obtained a grant of patent.

Armed with a patent and detailed knowledge of the industry, he approached several potential customers. He later discovered that one project for which he had submitted proposals, was awarded to a bigger company. The appointed contractor used a building construction method that followed the method in the patent, but had refused to obtain a patent licence. The patent owner ("patentee"), wanting to defend his rights, sued the contractor for infringement of the patent.

The building contractor asserted that he merely followed the technical drawings provided by the customer, but the High Court ruled that he had:

i. infringed the Malaysian Patent granted to the patentee and
ii. infringed the copyright subsisting in the technical/architectural drawings of the patentee.

The patentee's Malaysian patent was in respect of a method for constructing a building using pre-cast wall panels and either pre-cast or cast-in-situ columns.

The patentee had informed the customer that the method of construction and the components were the subject of patent applications when he made a presentation of the system to them. A VCD containing technical drawings was also provided to the customer.

The Court's decision was clear: Using a patented technology without the consent of the patentee was an act of patent infringement and it was no defence to state that the "infringer" had merely followed instructions or was using technical drawings provided by the customer who had engaged the contractor.

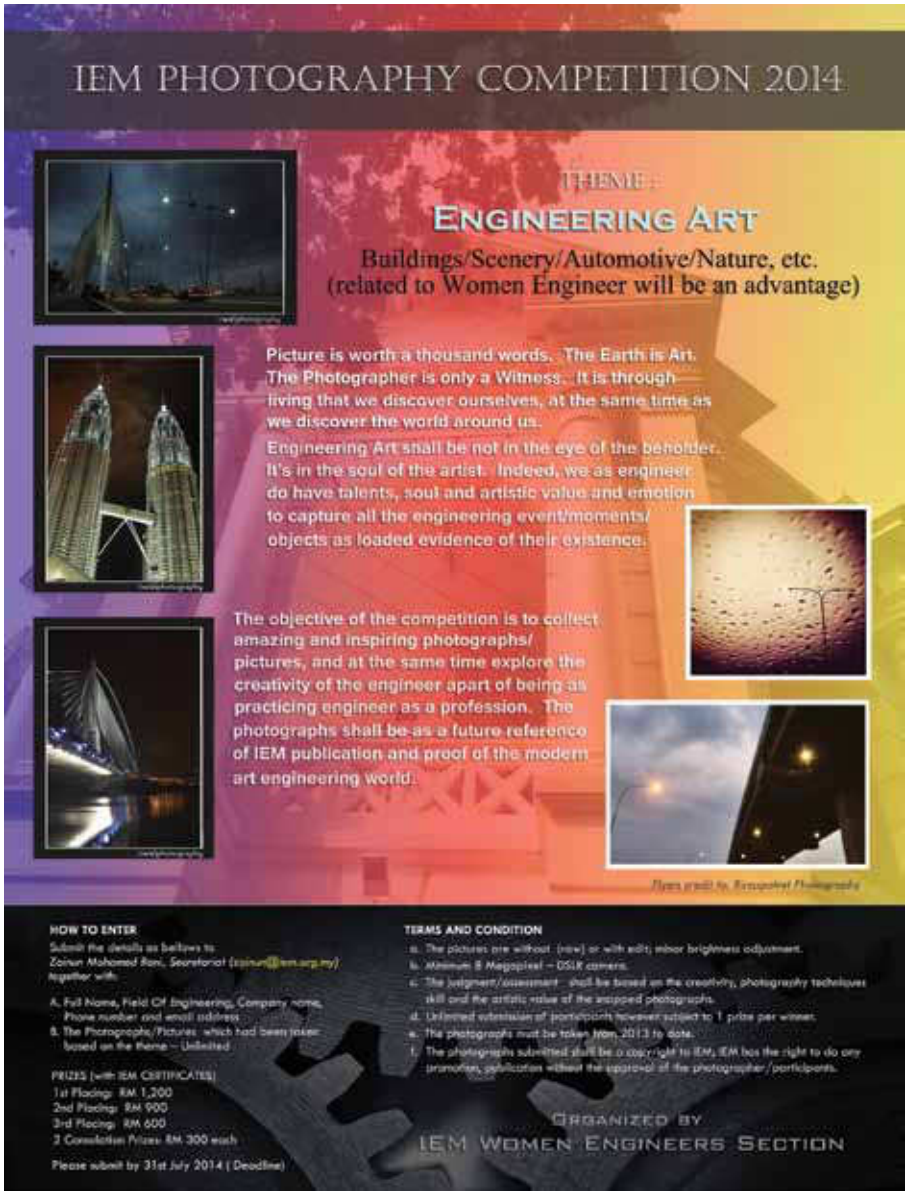
The contractor also attempted to challenge the validity of the patent claims by arguing that the claimed invention lacked novelty and inventiveness, which the Court found was not supported by evidence. The Court found that there were material differences in the patented technology and prior art documents adduced by the infringer. On the issue of copyright infringement the Court found that the contractor had substantially copied the technical drawings which the patentee provided to the customer where the latter adopted the drawings when it prepared the technical drawings that were given in the tender documents. Surprisingly, the patentee did not initiate any copyright infringement action against the customer for reproducing its technical drawings.

EARNING MONEY THROUGH PATENT LICENSING

Now equipped with the patent and the victory in Court, the patentee was ready to fully exploit his patent by way of granting patent licences to other contractors, not only in Malaysia but also in other countries where the Malaysian patent owner had obtained similar patent rights – a classic case of earning money by way of royalty fees without big monetary investment in other countries.

Companies in any industry need to be creative and innovative. If novel methods of making a product are created, then the creativity can be exploited to make money for the creator, for as long as the patent is subsisting and no new technology for solving the same technical problem has evolved. ■

P. Kandiah is the Founder and Director of KASS International, an established intellectual property firm with offices in Malaysia, Singapore and Indonesia. KASS acted for the patentee as its patent agent in drafting and prosecuting the patent application. For more information, visit *www.kass.com.my* or e-mail *kass@kass.com.my*.



Cost Reduction in Building Facility Management

by Ir. Roger Wong

TO achieve a competitive advantage in any enterprise, cost factors and outputs that affect the bottom line must be controlled carefully. Sharply rising energy costs increasingly make energy a cost driver.

One important cost factor is the electricity bill for production, processes, facilities, buildings or infrastructure objects. However, the cost of electricityis only one part – the visible part – of sometimes much higher cost, considering "polluted" and unreliable power. Besides this, the effective usage of production equipment and a reliable energy supply play a major role in cost effectiveness.

The first step in dodging the cost trap for a building facility is to identify the potential cost saving and then to come up with appropriate measures.

HIDDEN COST SAVING POTENTIALS

There are a great number of cost-saving potentials in building facility management. One important cost factor is electricity for plant and equipment, buildings and infrastructure. But the electricity bill is merely the immediately noticeable part of costs, which can be much higher when one considers a 'dirty' and unreliable power supply.

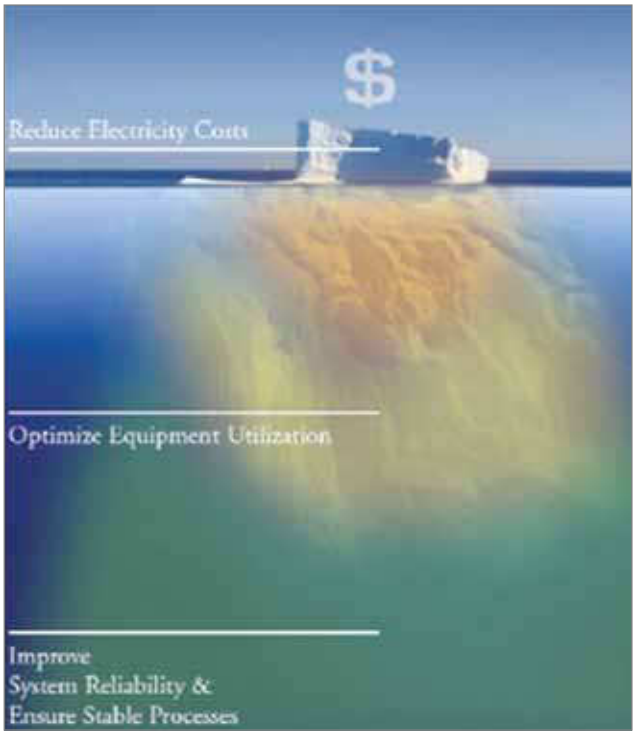
Along with the direct electricity costs, the effective utilisation of power distribution plants and equipment as well as a reliable power supply also play an important role in economic efficiency. As these costs are not as obvious, they are also referred to as 'hidden costs'.

Cost-saving potentials to be achieved from:

- Reducing electricity costs (3-fold):
  - Lowering kWh consumption
  - Reducing reactive power cost (improvement of poor power factor, reduction of penalties)
  - Eliminating demand charges
- Identifying 'energy gluttons'
- Reducing maintenance costs
- Extending the service life of electronic and electrical equipment
- Exact registering of demand per cost centre (e.g. how much electricity is used in which office?)
- Stabilising power supply to prevent computer downtimes
- Taking pro-active measures by means of a higher transparency of the electricity distribution.

REDUCTION OF ELECTRICITY COSTS

Direct, consumption oriented energy costs can be significantly reduced.



Iceberg Analogy

Triple cost saving potential: Hidden cost for under-utilised equipment and unreliable power supply offers tremendous cost-saving potential

1. For property managers, this means improving the precision of the electricity supply sub-billing plus customer-oriented invoicing (cost centre management).
2. Any electrical installation should have a proper energy measurement system. With this in place, any collected data can be used to verify its energy consumption with the power utility. Meanwhile, a good energy management system can also be an excellent tool to forecast energy demand at any time and prevent any installation being penalised by power utility if the energy consumption exceeds its maximum demand.
3. Integrated power management system across the various network levels to help detect uneconomical consumers and energy wastage. Identifying energy wastage is only possible with network transparency and consequently the initiation of corresponding counter-measures.

PEAK LOAD MONITORING HELPS CUT DOWN DEMAND CHARGES

The monitoring of the feeders of incoming transformers of the load profiles and power quality parameters (short-term interruptions, harmonic loading, unbalanced loading, etc…) as well as peak demand supervision is a priority.

By temporarily switching off consumption, e.g. in the canteen kitchen, it is possible to lower the effective power maximum (demand), reduce the demand charges and consequently the electricity bill by up to 20%.

Beside demand charges, peak-load monitoring is helpful in improving the load/utilisation factor of any plant/installation. The load factor of an installation may not be optimised due to an unbalanced or uneven load distribution. Proper or balanced load distribution should be optimised to improve the utilisation of the load.

Knowing the exact power consumption of individual consumers or consumer groups helps in discovering inefficiency electrical loads (consumers) and in initiating counter measures for energy saving.

TRANSPARENCY IN THE DISTRIBUTION SYSTEM HELPS NARROW DOWN ROOT CAUSES

The most important information one gets is due to the achieved transparency of the electricity distribution system. During malfunctions, the selected multi-stage measurement concept across the various network levels proves indispensable in finding the root causes, i.e. for narrowing down the possible sources of faults. For instance, by making a comparison of chronologically synchronised devices, one can find out whether a short-term voltage interruption originated in the network side from the power distribution company or if it is caused by one's own consumers, e.g. through in-rush current caused by capacitor switching or motor start-up or even a short-circuit. ■

Ir. Roger Wong is a technical specialist on the areas of power quality studies, energy audit and electrical energy management. He is currently a Registered Electrical Energy Manager (REEM) registered with Suruhanjaya Tenaga (ST) and he is also a Certified Energy Manager (CEM) registered with ASEAN Energy Management Scheme (AEMAS).

CONGRATULATIONS

The IEM would like to congratulate **Dato' Ir. Muhamad Guntor Mansor Tobeng** for being conferred *"Darjah Setia Diraja Kedah"* which carries the title "Dato" in conjunction with the 86th birthday of the DYMM Sultan of Kedah Al Sultan Almu'tasimu Billahi Muhibbuddin Tuanku Alhaj Abdul Halim Mu'adzam Shah Ibni Almarhum Sultan Badlishah.

Editorial Board, IEM

ERRATA

Errata on Cover Story for the "Need for Energy Efficiency Policy and Master Plan" by Ir. Francis Xavier Jacob in ***JURUTERA*** February 2014 pp. 6-8.

The answer to Question 4 should be read as below:

"As coal replaces natural gas in the electricity generation sector, carbon emissions will increase. The carbon dioxide emission factor for natural gas is about 15.3 tonnes/Tetra Joule, while for coal it is 25.8 tonnes/Tetra Joule. This represents an emission increase of 69% for the same amount of energy extracted from the primary fuel source."

The error is much regretted.

Local Business Landscape Still Vulnerable To Cyber Threats, Says Symantec

The local business landscape is still vulnerable to cyber threats as Malaysia's internet security profile declined last year and ranked 33rd among 157 countries globally compared with 35th in 2012, says Symantec Malaysia Systems Engineering Director, Nigel Tan.

"This is a clear indication that cyber criminals have not slowed down. In fact, they are increasing the efficiency of their campaigns and have their eye on small and medium enterprises," he said at the presentation of Symantec's 2014 Internet Security Threat Report, volume 19.

Tan said non-traditional services were the top targeted attacks with 58.97 per cent, followed by professional services (17.95 per cent), finance, insurance and real estate (15.38 per cent) and retail (2.56 per cent).

Symantec Asia South Region Vice President, Eric Hoh Yau Siong, said the level of sophistication continued to grow among cyber attackers and they were waiting to strike when the rewards were bigger and better.

He said healthcare, education and government sectors accounted for 58 per cent of all data breaches.

Six global key trends that were identified in the report are data breach, targeted attacks, vulnerabilities, ransomware, mobile and social media and internet of things, he said.

(Sourced from BERNAMA, 21 April 2014)

Government Creates Nine Programmes To Brush Up Entrepreneurial Skills Among Youths

The government, through the Malaysian Global Innovation and Creative Centre (MaGIC), has created nine programmes to brush up the entrepreneurial skills among youth, said Finance Ministry Secretary-General Tan Sri Dr Mohd. Irwan Serigar Abdullah.

He said these programmes were aimed at creating the culture of entrepreneurship among the group since they are young until they grow up and develop matured companies.

"The objective is to create an ecosystem whereby the people, especially the youth see the opportunity of having their own business, instead of working with other people.

"This, does not only contribute to the country's growth, but will also bring foreign companies here to invest in their companies," he told the media at a Teh Tarik and discussion session here, hosted by Halal Tech Challenge (HTC).

HTC, which is a four-week intensive bootcamp programme, is one of the nine programmes organised by MaGIC. It aims at building 100 entrepreneurs by providing the necessary support to launch 20 different categories of Halal e-commerce companies.

(Sourced from BERNAMA, 20 April 2014)

Petronas To Upgrade Training Facility

Petroliam Nasional Bhd (Petronas) launched a RM231mil industry scale training facility at its Institut Teknologi Petroleum Petronas (INSTEP) in Batu Rakit to boost training capacity and address the issue of the talent shortage in the oil and gas (O&G) industry.

The 200-acre training centre was built in 1981 and first known as Sekolah Latihan Teknikal Petronas and then Institut Latihan Perindustrian Petroleum.

Starting from a meagre 180-student capacity then, INSTEP now features both upstream and downstream training plants, complete with a drilling rig simulator through its INSTEP Integrated Oil and Gas Training Centre (IIOGTC).

The facility spans some three acres and assumes the actual workings of an oil rig at sea to give trainees a real-world perspective of O&G operations within a safe and contained environment, complete with substitute "minerals" like nitrogen, water and mineral oil for upstream works as well as nitrogen, water and glycol for downstream activities.

Instep chief executive officer Wan Azhar said: "Instead of poaching talent from competitors, Petronas will take the lead in training engineering technicians for the industry.

Its technical training curriculum aims to keep learning concise in order to efficiently bridge students' transition from tertiary education to the workplace, Wan said.

INSTEP has produced some 10,000 certified technical professionals, both local and international, since its inception.

(Sourced from The Star, 1 April 2014)

IJM Corp Bags RM396m PJ Commercial Project

IJM Corporation Bhd has secured a RM396mil contract for a proposed commercial development in Damansara Utama, Petaling Jaya.

The 25-month contract is for the main building works for the proposed commercial development comprising of a five-storey shopping mall with one block of two-storey office, three blocks of one or two-storey commercial pods and a 21-storey hotel block on top of the shopping mall.

IJM Corp said on Monday its unit IJM Construction Sdn Bhd had accepted the letter of acceptance issued by DES Architect on behalf of Damansara Uptown Retail Centre Sdn Bhd.

(Sourced from The Star, 21 April 2014)

Engtex May Get Outsource Job

The three-member consortium that won the first contract to build the Langat 2 water treatment plant, may outsource one-fifth of the job to Engtex Group Bhd.

CIMB Research says Engtex Group Bhd is likely to secure a sub-contract that may be worth up to RM200 million to supply pipes for the Salcon Bhd-MMC Corp Bhd-Ahmad Zaki Resources Bhd consortium, which bagged the RM994 million job to build the Langat 2 plant in Hulu Langat, Selangor.

"There are only two local pipe manufacturers that have the capacity to mass produce up to 500km of pipes with larger specifications. The only listed one is Engtex Group, which has been a supplier to all three winning contractors," said CIMB Research recently.

It said Engtex should command a good chance of winning even if the RM200 million pipe contract is split between the two players. The sub-contract is likely to be awarded in the next three months.

(Sourced from NST, 21 April 2014)

SAFE TEA TIME

Frequent or Severe

by Ir. Shum Keng Yan

Prelude: It is that time of the year when you suddenly have a surge in the Total Recordable Injury Rates.
Boss: "Quick, do something to bring it down. I want to see zero injury!"
Safety and Health Officer: "Hmm, what should I do?

SOUNDS familiar? Let me share a bit of data that I have been collecting for quite some time. I have simplified it for this article. Let's imagine a regular company – not the extremely top performers – that you come across in daily life. I am going to group the incidents into Group A and B.

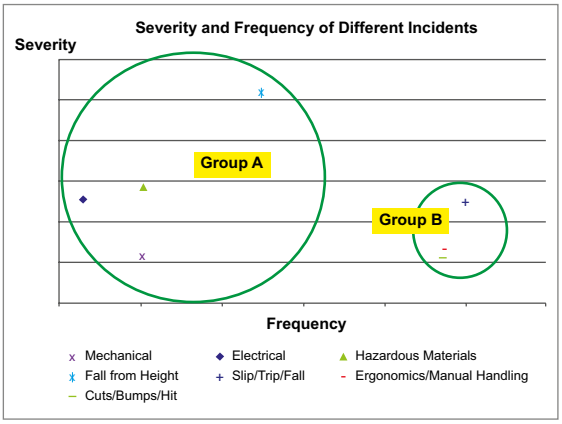
Group A:
1. Hazardous energy/material
2. Fall from Height

Group B:
1. Slip/Trips/Falls (fall at same or very low levels, etc.)
2. Ergonomics/Manual Handling
3. Physical Hazards (bump on the head, sharp edges, etc.)

Group B incidents occur very frequently and are harder to nail down. However, their severity is medium and rarely leads to fatality.

On the other hand, Group A incidents result in extremely severe injuries including loss of limb, disability and even death! However these do not occur as frequently as Group B.

If I am to plot a graph, this is how it will look like. (Note: I have removed the legends).



To compound the complexity, Group A incidents tend to result in "1" or "0" outcomes – i.e. serious injuries or none at all! Thus Group A incidents tend to be out of the radar for most of the year as these occur infrequently.

The paradox is that it is Group B incidents that grab the management's attention, precious time and resources far more than Group A. I will elaborate in greater detail on Group A and Group B in the next article.

Summary:
Group A: Less Frequent – More Severe Impact
Group B: Frequent – Medium Impact

Homework: Try plotting data from your own company for the past few years. A 5-year period will be good as it will smoothen out the outliers. It is not necessary to have an identical definition. The pattern is sufficient. If you want to share your plot, email to ***pub@iem.org.my***. ■

Should you spend more resource to reduce the Frequent Incidents or Severe Impact? Ah, I hear "both" – let's see how we balance things.

Ir. Shum Keng Yan is a chemical engineer and a certified accident prevention and safety practitioner. He advises on EHS in the chemical, fast moving consumer goods, heavy metal manufacturing and building services industries across Asia Pacific and beyond. He regularly delivers talks at conferences, forums and universities.

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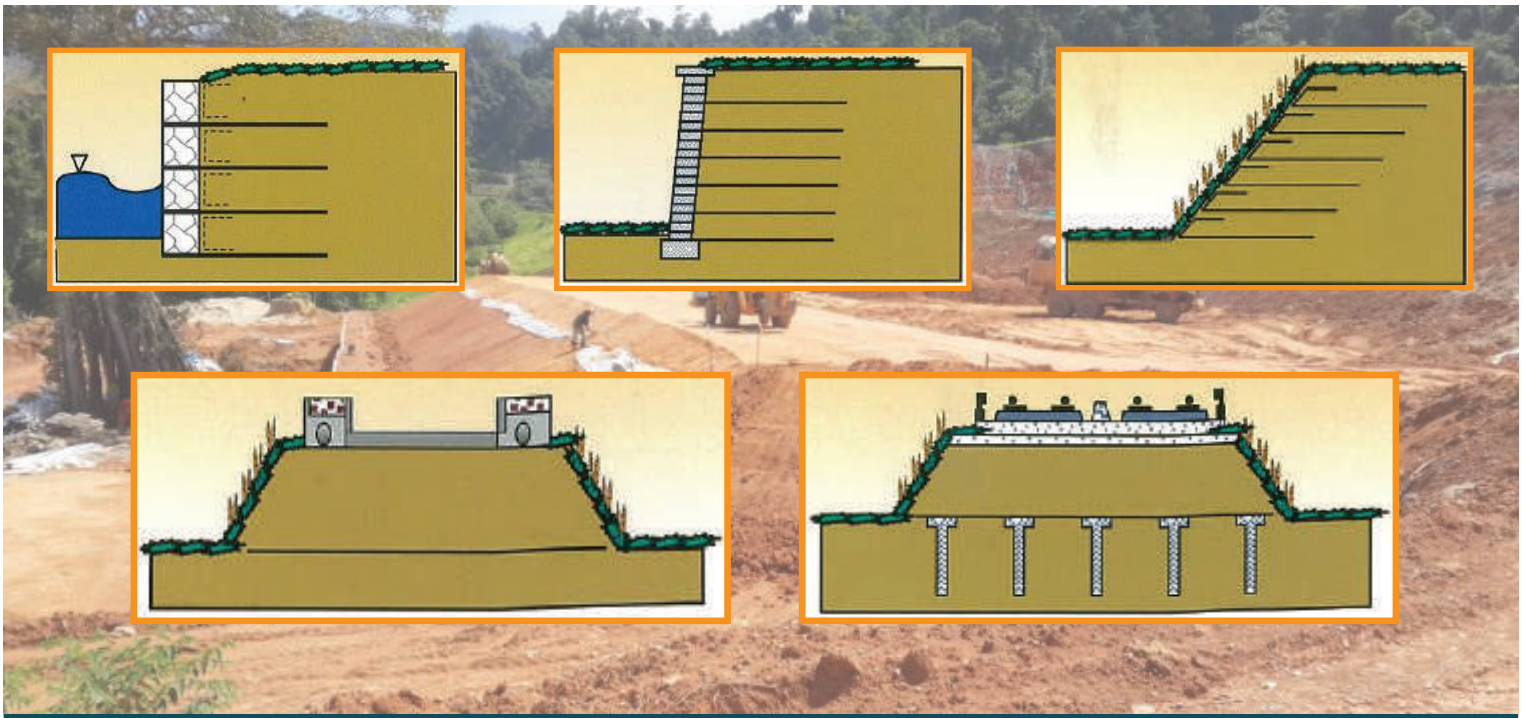

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Talk on "Chartered Professional Engineer and Engineers Australia e-Chartered Assessment System"

ENGINEERING EDUCATION TECHNICAL DIVISION

by Ir. Chew Weng Yuen

THE Engineering Education Technical Division and Engineers Australia Malaysia Chapter co-organised a talk titled "Chartered Professional Engineer and Engineers Australia e-Chartered Assessment System" on 26th September 2013, at the Auditorium Tan Sri Prof. Chin Fung Kee, Wisma IEM. The talk was delivered by Mr. Malcolm Macdonald, a National Assessor with Engineers Australia.

The talk commenced at 5.30 p.m. with 80 participants. First, Mr. Macdonald gave a brief overview of the benefits of being a chartered professional engineer. He said an engineer who wishes to register with Engineers Australia and be a chartered professional engineer, has to go through two (2) competency stages.

The first stage is the Engineers Australia (EA) Stage 1 Competency. Upon successful admission, engineers will become corporate members of The Institution of Engineers, Australia. The criteria for admission is a recognised engineering qualification, possession of fundamental engineering knowledge and skills, at least 3-5 years working experience as an engineer and industry experience, and subscribing to continuing professional development (CPD).

For EA Stage 2 Competency, engineers have to demonstrate that they are technically competent, able to work independently and have been subscribing to CPD before they are admitted to being a chartered professional engineer and are able to register with the National Professional Engineers Register (NPER) of Australia, and the Registered Professional Engineers of Queensland (RPEQ).

Mr. Macdonald then described succinctly the EA e-Chartered process and the four pathways available for enrolment to the programme, namely Engineering Competency Report (ECR), Professional Development Programme (PDP), Mature Experienced Engineer (MEE) or Mutual Recognition Agreement (MRA), and all were elaborated at length.

He explained that the e-Chartered works based on a browser access whereby submissions, verification and assessment are all done online and are supported by online guides, tutorials and examples. Fees payable are apportioned for each stage of the application.

Submissions for the e-Chartered include Engineering Claims of Competency (ECC), Engineering Experience Record (EER), current Curriculum Vitae and continuing professional development log showing a minimum of 150 hours over the last 3 years. For the ECC, applicants are required to write up online approximately 500-700 words on each of the 16 elements of competencies (11 for those taking the MEE route) as follows:

A. Personal Commitment

1. Deal with ethical issues
2. Practices competently
3. Responsibility for engineering activities

B. Obligations to Community

4. Develop safe and sustainable solutions
5. Engage with the relevant community and stakeholders
6. Identify, assess and manage risks
7. Meet legal and regulatory requirements

C. Value in the Workplace

8. Communication
9. Performance
10. Taking action
11. Judgement

D. Technical Proficiency

12. Advance engineering knowledge
13. Local engineering knowledge
14. Problem analysis
15. Creativity and innovation
16. Evaluation

For the EER, applicants are required to write approximately 700-1,000 words online, a detailed and verified statement of work carried out by the applicants over the previous 3 years (5 years for MEE applicants).

Mr. Macdonald advised applicants to carefully read and understand the requirements as stated in the document, "EA Competency Standards Stage 2", and to refer to other resources available on the e-Chartered website. He strongly advised applicants to write on 5 or 6 of their career highlights or episodes. He also gave a comprehensive overview on the ECC and elaborated on the "dos and don'ts" when writing up the same.

On the verification of documents, Mr. Macdonald said applicants should request their supervisor or peer (preferably a chartered professional engineer) who is familiar with their work, to do so for them. The verifier, however, must be a senior engineer with a minimum of 10 years' experience. Statutory Declarations are acceptable for up to 5 ECCs only.

At the end of the talk, there was active discussion and the participants raised questions which Mr. Macdonald answered and clarified. The talk ended with the presentation of a memento to Mr. Macdonald and a round of applause from the participants. ■

Ir. Chew Weng Yuen is a committee member of the Engineering Education Technical Division of IEM. He is currently the Deputy General Manager of Forefront Tiara Sdn. Bhd., a property development company.

Visit to Lynas Advanced Materials Plant

OIL, GAS AND MINING TECHNICAL DIVISION

by Ir. Razmahwata Mohd. Razalli

IEM participants at Lynas LAMP building

THE Oil, Gas and Mining Technical Division organised a visit to Lynas Advanced Materials Plant (LAMP) in Gebeng, Kuantan, on 23rd November, 2013.

The participants left Bangunan Ingenieur at 6.40 a.m. and arrived at LAMP at 11.30 a.m. We were met by Encik Amin Abdullah, Corporate Communications and Prof. Ismail, Safety Advisor. Dato' Mashal Ahmad, Lynas Malaysia Managing Director, subsequently joined the participants.

First, the participants were given a safety briefing. Then Dato' Mashal started the presentation by giving us a synopsis of his career and his experiences in plant operations. He then made a comparison of these experiences against LAMP processes. He mentioned that the current plant operates at ambient temperatures and pressures, compared with the high pressures and temperatures of an ammonia plant. He then went into details of the LAMP process, where the raw material (earth) is sent to a high temperature (800°C in, 200°C out) rotary kiln at vacuum conditions. The output is then cracked and leached with acid and sulfonated kerosene before being separated using solvent extraction.

Dato' Mashal pointed out that the plant was not subjected to CIMAH requirements as it was essentially a material refinery process. However, LAMP has voluntarily installed public monitoring facilities showing air emission and water quality.

Commercial details of the LAMP were next discussed. The plant is an upsizing of the La Rochelle rare earths plant in France. It has 380 employees (mostly chemical engineers) and 200 contractors. It was pointed out that the feasibility of a plant depended on the quantity of raw material, and the percentage of elements in the raw material. LAMP has been designed in two phases, which each phase producing 11,000 metric tonnes of product. The current design life is 20 years.

One potential concern is the amount of uranium and thorium in the waste, as these are typically found in rare earths. An example of the figures provided are from Mount Weld, West Australia, which is 17% rare earth, 32 ppm uranium and 1600 ppm thorium. It was pointed out that this composition was different from the raw materials used by Asia Rare Earth, which was 'amang' (tin tailing).

Participants at the briefing

Dato' Mashal Ahmad

We were told that, of the 3 by-products from the process (Neutralisation Underflow (NUF), Flue Gas Desulfurization (FGD) and Water Leach Purification (WLP)), only WLP had any significant radioactivity. Activity is at 6becquerel/gram. The WLP can be recycled to produce safe and commercial products.

After the presentation, a token of appreciation was presented to Dato' Mashal on behalf of the IEM, before lunch was served.

At 2.30 p.m., the participants boarded a bus to go on a tour of the plant. Major parts of the process such as storage, processing and packaging facilities were highlighted and described.

The visit ended at 3.30 p.m. and the participants arrived back in PJ at 7.00 p.m. ■

Ir. Razmahwata Mohd. Razalli is a Director of Synergy Oil & Gas Engineering Sdn Bhd. He graduated with a BA from Cambridge University. He has over 16 years in the Malaysian Oil & Gas industry, in operation, engineering and consulting roles.

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Report on CIE-HKIE-IEM Tripartite Seminar on The Management and Case Study on Adjacent Underground Construction

by Ir. Liew Shaw Shong

GEOTECHNICAL ENGINEERING TECHNICAL DIVISION

TRIPARTITE Seminar originated as a bilateral institutional collaboration between The Institution of Engineers, Malaysia (IEM) and Chinese Taipei APEC Engineer Monitoring Committee in Chinese Institute of Engineer (CIE). In 2009, The Hong Kong Institution of Engineers (HKIE) and the Hong Kong Geotechnical Society (HKGES) had sent a delegation to attend the CIE-IEM Joint Seminar in Yilan, Taiwan.

The first CIE-IEM-HKIE Tripartite Seminar cum APEC Seminar was held in May, 2011 in Hong Kong and the second Seminar was hosted by IEM GETD on 23 October, 2012, in Kuala Lumpur. Last year, the Tripartite Seminar (Photos 1 to 6) was hosted by CIE in Taipei at Howard Civil Service International House on 15 November, 2013, followed by a technical visit (Photos 7 to 18) to "The Suhua Highway Mountain Section Improvement Project" on 16 November 2013.

Ten members from HKIE and 7 members from IEM attended the seminar. A total of 10 papers (three from IEM, three from HKIE and four from CIE) were presented. A copy of the proceedings has been placed in the IEM library for members' reference.

The aforementioned project for the technical visit consisted of 8 tunnels totalling 23.4km, bridges of 8.5km (balanced cantilever segmented bridges and cable-stayed bridges) and cut-and-fill road works of 6.5km with a total project budget of NT$49.2 billion (RM5.4 billion). Due to increasing pressure from environmental conservationists and growing concern over environmental impact during construction, the project was being executed with a high level of environmental requirements (Photos 14 and 15), construction carbon footprint management, heritage preservation and safety requirements (Photos 16 to 18).

To achieve transparency as promised, the project team engaged with a real time monitoring system and full details of every aspect of the project with immediate updates were made accessible to the general public via its website (*www.suhua.gov.tw*). This benchmark project will serve as a good reference for Malaysian engineers, project clients and contractors for construction in sensitive areas.

CIE extended its hospitality to the delegates by hosting them to two dinners (Photos 19 to 23) and a seafood lunch (Photo 24) during the site visit. Special thanks to Ms. Chuo of the seminar secretariat for arranging the accommodation and transportation for IEM delegates and keeping the entire seminar running smoothly.

The next Tripartite Seminar will be held in Hong Kong next year. Announcements on the details of the seminar will be made progressively after the organising committee from HKIE is formed. ■

Ir. Liew Shaw Shong is currently the Chairman of IEM Geotechnical Engineering Technical Division (GETD). He is the Senior Director of G&P Geotechnics Sdn Bhd.

Photo 1: *Opening speech by Dr John Li Chien-Chung, Vice Chairman of Chinese Taipei APEC Engineer Monitoring Committee, CIE*
Photo 2: *Ir. Liew Shaw Shong presenting a memento to Mr. Yu Ter-Chyuan, Executive Secretary of Chinese Taipei APEC Engineer Monitoring Committee, CIE*
Photo 3: *Group photo of CIE, HKIE and IEM delegates*
Photo 4: *Site visit group photo at The Suhua Highway Mountain Section Improvement Project*
Photo 5: *On-site briefing at Tunnel portal*
Photo 6: *Briefing inside the tunnel*
Photo 7: *Mobile steel frame formworks for tunnel lining construction*
Photo 8: *Reinforcements and water proofing membrane for concrete lining construction*

Photo 9: *Group photo after the dinner hosted by Union of Professional Hydraulic Engineer Associations*
Photo 10: *Ir. Liew Shaw Shong presenting a plague and IEM coffee table book by to Mr. Chen Ming-Hsin, Chairman of Union of Professional Hydraulic Engineer Associations*
Photo 11: *Group photo of delegates attending the dinner hosted by Professional Geotechnical Engineers Association of Taiwan*
Photo 12: *Ir. Liew Shaw Shong presenting a memento to Mr. Chou Kung-Tai, Chairman of Professional Geotechnical Engineers Association of Taiwan*
Photo 13: *Memento presentation by Ir. Liew Shaw Shong to Ir. Terence Chan CF, Chairman of HKIE GETD*
Photo 14: *HKIE and IEM delegates at the seafood lunch organised by the site construction team and CIE*

Pengumuman yang ke-73

SENARAI PENDERMA KEPADA WISMA DANA BANGUNAN IEM

Institusi mengucapkan terima kasih kepada semua yang telah memberikan sumbangan kepada tabung Bangunan Wisma IEM. Ahli-ahli IEM dan pembaca yang ingin memberikan sumbangan boleh berbuat demikian dengan memuat turun borang di laman web IEM *http://www.myiem.org.my* atau menghubungi secretariat di +603-7968 4001/5518 untuk maklumat lanjut. Senarai penyumbang untuk bulan Mac 2014 adalah seperti jadual di bawah.

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54	62007	NIZAR BIN JUSOH
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64	16288	PUAN NOR'IN BT MAN
65	10916	RANI BIN MOHAMAD RAJI
66	08983	SAW POI TEE
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68	07463	SIM TIAN LIANG
69	09828	SOHAIMI BIN SAMAD
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RM 2,351,971.70 from IEM Members and Committees

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(ANOTHER RM 4,852,395.25 IS NEEDED)

The Institution would like to thank all contributors for donating generously towards the IEM Building Fund

HELP US TO PROVIDE BETTER SERVICES TO YOU AND TO THE FUTURE GENERATION

Talk on "The Use of Expert Witnesses in Litigation and Arbitration"

SUB-COMMITTEE ON DISPUTE RESOLUTION PRACTICE

by Ir. Dr Ooi Teik Aun, Hon. FIEM

A talk on "The Use of Expert Witnesses in Litigation and Arbitration" was held at Prof. Chin Fung Kee Auditorium, Wisma IEM, on 13th December, 2013. Despite the heavy thunderstorm that preceded the lecture that evening, it attracted 35 participants.

Ir. Dr Wong presenting his lecture

The lecture was delivered by Ir. Dr Wong Fook Keong, a Professional Civil Engineer registered with the Board of Engineers, Malaysia (BEM), a Chartered Civil Engineer of the Engineering Council of United Kingdom, a Chartered Arbitrator and a BEM Accredited Checker in Geotechnical Works. He is on KLRCA panel of Arbitrators, Adjudicators and Mediators. He has more than 30 years of experience in Consulting Engineering Practice in the field of Geotechnical, Civil and Structural Engineering and is often called upon to give expert opinion evidence on engineering and construction related disputes in litigation and arbitration cases.

"Malaysia engineers generally shy away from giving expert evidence in Court or Arbitration," said Ir. Dr Wong. He proceeded to explain when an expert witness is needed. "Expert evidence is required or admissible when there is a need to furnish the judge or arbitrator with information which is likely to be outside their experience and knowledge" he said, adding that "the arbitrator should decide solely on the basis of the evidence he has heard and not on the basis of his own expertise".

Some of the participants

DUTIES AND RESPONSIBILITIES OF THE EXPERT WITNESS

1. The overriding and primary duty of an expert witness to the tribunal is to explain technical issues to the arbitrator on the matters within his expertise so that the arbitrator can understand the matter and reach a conclusion. This duty overrides any obligation to the person from whom he has received instructions or by whom he is paid.

2. The Chartered Institute of Arbitrators' guidelines of good practice for expert witnesses are as follows:

   "An expert witness:
   Should bear in mind that at the hearing, his first duty will be to assist the tribunal arrive at a just decision, regardless of its effect on the interests of his client. Subject to this, he should assist his client in every possible way. He should not himself seek or advertise for appointments as an expert witness in competition with others. He should have detailed knowledge of the theory, customs and practice of the specialist field in which he is required to give evidence of opinion together with a general knowledge of the law of evidence, of the principles of damages, of professional negligence and breach of contractual duty as well as of practice in relation to the duties of expert witnesses before and during the trial or hearing. He should not refuse to disclose any relevant information known to him concerning the subject matter of his evidence. Should this information be confidential to another client, he should endeavour to obtain the

latter's consent and, at the same time, inform him that disclosure is unavoidable if the tribunal requires it. He should give opinions which are honestly held by him personally and are not merely the opinion of others except as reinforcements of his own."

CHALLENGING EXPERT EVIDENCE

1. Attacks on the expert's credibility and integrity
2. Attacks on the expert's experience
3. Attacks on the expert's competence
4. The 'Are you up-to-date?" attack
5. That the expert witness is biased
6. That the expert witness's evidence is ubiquitous
7. That the logic of the expert evidence is flawed
8. Attacks on the expert's qualifications

In conclusion, Ir. Dr Wong gave his views of what an expert witness should have:

1. A duty to ensure the court or tribunal that he is an expert in the subject matter of the dispute and a duty to communicate this knowledge through the evidence he gives, honestly and fairly.
2. A duty to his profession at all times in order to maintain the high standards that are incumbent upon him to keep.
3. A duty to his client by accepting an appointment only if he holds views which are favourable to that client.
4. A duty to himself by maintaining his personal and professional integrity.

The lecture was very informative and there was active discussion from the floor. The session concluded with the presentation of a certificate of appreciation to the speaker. ■

Ir. Dr Ooi Teik Aun is the current Chairman of Dispute Resolution Practice (DRP) Subcommittee. He is also an Advisor for Consulting Engineering Special Interest Group (CESIG) as well as that of Tunnelling and Underground Space Technical Division (TUSTD). Ir. Dr Ooi is an Honorary Fellow of IEM, Fellow of the Malaysian Institute of Arbitrators and Past President and is ICE Country Representative for Malaysia. He is Organising Chairman of the International Tunnelling and Underground Space Conference in March 2015 in Kuala Lumpur as well as Chairman of the Foundation Course promoted by the International Tunnelling Association (ITA-AITES) to be held in Kuala Lumpur in February 2015. He is President of Southeast Asia Geotechnical Society (2010-2016).

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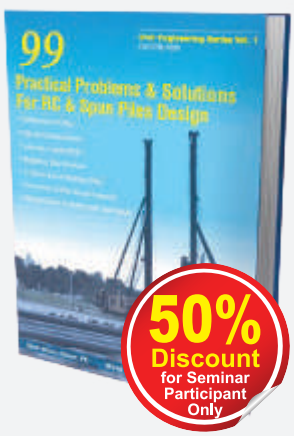
SITE SUPERVISION OF PILING WORKS

Date & Time: **19th July 2014** (Saturday) 9a.m-5.30p.m
Venue: Utara 1, Level 2, Crystal Crown Hotel, Petaling Jaya
Participants: Civil Engineers, Practising Geotechnical & Structural Engineers, Building & Piling Contractors, Consultants, Project Managers, RE, Lecturers, Academics, Resident Engineers & Resident Technical Personnel from Consultants & Government Agencies, Site Engineers, Construction Managers, etc.
Fee: **Normal Price – RM580/person**
Half Price – RM290*/person for 3 or more people
Speaker: **Ir. Neoh Cheng Aik**
K.M.N., BE(Hons), FIEM, FIHT, MICE, MASCE, ASEAN Eng, P.Eng, C.Eng

Hurry!!

COURSE OUTLINE

Pile foundations are very common nowadays for high-rise buildings & heavy structures. Reliability & performance of pile foundations depend crucially on how they are constructed. Proper site supervision to ensure pile foundations are properly constructed according to design & specification is a mandatory requirement by codes of practice. BS 8004 stipulates that "A competent person, properly qualified and experienced, should be appointed to supervise the piling operations. This person should be capable of recognizing and assessing any potential dangers as they arise, e.g. unexpected ground conditions that may require a change in construction technique, or unusual smells which may indicate the presence of noxious or dangerous gases". This one day course is designed to impart the necessary knowledge & guidance to carry out proper site supervision for various common types of pile foundation works to meet the requirements of code of practice. More than 200 slides & elaborated course notes will be presented & given.



Book Size: 16.5 x 24cm
Thickness: 2cm
No. of Pages: 400pages

This reference book is special written for Practising Consultants/Design Engineers & Undergraduates on the Practical Solution for 99 problems for RC and Spun Piles Design. This books has been widely used by over 500 practising Engineers, Consultancy Companies & Universities within Malaysia, Brunei & Singapore.

Normal price: RM238

Book Size: 16.5 x 24cm
Thickness: 2.5cm
No. of Pages: 460pages

This book is compiled with some of the common problems in the design of retaining walls and its solutions, particularly in areas of retaining wall that are relevant in the construction industry. It is an entry level book specially written for practising civil engineers and undergraduates based on basic theories.

Its aim is to provide simple and practical solutions to retaining wall designs and challenges. The solutions are also illustrated with relevant reference charts and tables with a selection of different coefficients and data in solving the problems, providing viable and quick solutions to some of the challenges commonly faced in this area.

Normal price: RM238

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Denmark's Ugly Duckling

by Ir. Chin Mee Poon
www.facebook.com/chinmeepoon

WHEN my wife and I went backpacking through 4 Nordic countries from August to October last year, we did not forget to visit Odense, the birthplace of Hans Christian Andersen.

We all know Andersen. Like millions of people all over the world, we had grown up listening to his evergreen fairytales, and our children and grandchildren too enjoyed those tales as much as we did.

Andersen was not just a very successful story-teller. He was also a prolific writer who wrote many successful plays, novels, poems and travelogues.In fact, his life itself sounded like a fairytale and was much reflected in the widely read "The Ugly Duckling".

Andersen was born on 2nd April, 1805, to a very poor family. His father was a cobbler and his mother, a washer woman. He was, however, able to receive education with the financial support of a kind-hearted gentleman. From a young age, Andersen's ambition was to become a successful opera singer, but he later discovered that he had a greater talent for writing. Many of his plays were accepted for stage performances and his novels won critical acclaim. He also travelled quite widely and published many travelogues.

His greatest success was, of course, in the many fairytales that he wrote and which had become accepted as the embodiment of universal values.However, in his love life, Andersen was a total failure and this might perhaps be attributed to his lack of good looks. Despite trying hard, he never did win the heart of any woman and he died a bachelor on 4th August, 1875.

Today, the H.C. Andersen House in the heart of Odense is a museum that showcases his life and works. Among the exhibits are sculptures, photographs, paintings and narratives. With enough time and patience to go through the exhibits, one will be able to gain quite a profound insight into Andersen's life from the information provided.

I was particularly intrigued by the part about Andersen's meeting with Charles Dickens when the former travelled to England in 1847. Andersen was pleasantly surprised to find that his fairytales and other works had been widely read overseas, and he even was a guest of Prince Albertin Scotland.

Dickens, 7 years his junior and a big admirer of his, invited him to stay with his family. But Andersen was not able to communicate well with Dickens and his family because of his poor command of the English language. He also over-stayed his welcome, much to the chagrin of the hosts.Yet Andersen truly believed that his meeting with Dickens was a great success and, in one of his travelogues, he described his stay in the latter's house in great detail. Dickens, appalled at the over-exposure of his private life, decided to terminate their friendship.

Andersen's fairytales have been translated into more than 155 languages, and his statues and those of the characters that he had created can be seen throughout Denmark and in many parts of the world. The bronze sculpture of The Little Mermaid sitting on a granite boulder at the Copenhagen waterfront for just over a century, is a national icon of Denmark and Andersen's works are now a common heritage of mankind. ■

Ir. Chin Mee Poon is a retired civil engineer who derives a great deal of joy and satisfaction from travelling to different parts of the globe, capturing fascinating insights of the places and people he encounters and sharing his experiences with others through his photographs and writing.

TEMUDUGA PROFESIONAL

Tarikh: 10 April 2014

Kepada Semua Ahli,

SENARAI CALON-CALON YANG LAYAK MENDUDUKI TEMUDUGA PROFESIONAL TAHUN 2014

Berikut adalah senarai calon yang layak untuk menduduki Temuduga Profesional bagi tahun 2014.

Mengikut Undang-Undang Kecil IEM, Seksyen 3.9, nama-nama seperti tersenarai berikut diterbitkan sebagai calon-calon yang layak untuk menjadi Ahli Institusi, dengan syarat bahawa mereka lulus Temuduga Profesional tahun 2014.

Sekiranya terdapat Ahli Korporat yang mempunyai bantahan terhadap mana-mana calon yang didapati tidak sesuai untuk menduduki Temuduga Profesional, surat bantahan boleh dikemukakan kepada Setiausaha Kehormat, IEM. Surat bantahan hendaklah dikemukakan sebulan dari tarikh penerbitan dikeluarkan.

Ir. Prof. Dr Jeffrey Chiang Choong Luin
Setiausaha Kehormat, IEM

PERMOHONAN BARU

Nama	Kelayakan
KEJURUTERAAN AWAM	
AZYANTEE BINTI GHAZALLY	BE HONS (USM) (CIVIL, 1996)
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19386	EE CHENG CHIENG	BE HONS (UTM) (CIVIL, 1998)
35546	JEFFRYL AZNIEL BIN ADZAR	BE HONS (UTM) (CIVIL, 1999) MSC (UTM) (CONSTRUCTION MANAGEMENT, 2012)
36821	LOH KONG YEW	BE HONS (QUEENSLAND) (CIVIL, 2006)
52476	NG KUOK KWANG, MAJOR	BE HONS (WALES) (CIVIL, 2003)
47596	SHAMIN FAHMIN BIN HASSAN	BE HONS (UNISEL) (CIVIL, 08)
9832	ZAINUDDIN BIN YUSOFF	BSC (HARTFORD) (CIVIL, 1986)
KEJURUTERAAN ELEKTRIKAL		
41318	ABI SUFYAN BIN ZAINUDIN	BE HONS (UNITEN) (ELECTRICAL POWER, 2009)
27142	JACQUELINE LUKOSE	PART II (IEM/BEM) (ELECTRICAL, 2000)
35602	MD SHAHILI BIN ABDULLAH	BE HONS (UiTM) (ELECTRICAL, 2000)
38737	SALLEH BIN AHMAD	BE HONS (UKM) (ELECTRICAL & ELECTRONIC, 2007)
29157	TING GUAN KET	BE HONS (USM) (ELECTRICAL, 2006)
49436	WAN AZIHAN BIN WAN AHMAD	BE HONS (UNITEN) (ELECTRICAL POWER, 07)
26444	WAN MOHD ZAMANI BIN WAN ABDULLAH	BE HONS (UTM) (ELECTRICAL, 2003)
51300	WONG YIT SIN	BE HONS (UPM) (ELECTRICAL & ELECTRONICS, 2010)
KEJURUTERAAN ELEKTRONIK		
21403	LIM SOO YONG	BE HONS (MULTIMEDIA) (ELETRONICS - TELECOMMUNICATIONS, 2003) PHD (HAWAI'I) (ELECTRICAL, 2010)
22535	NG HIAN EIK	BE HONS (UKM) (ELECTRICAL & ELECTRONIC, 2006)
69488	SURIAN BIN RASOL	BE HONS (UTM) (ELECTRICAL-MECHATRONICS, 2001)
KEJURUTERAAN KIMIA		
54231	MD NABIL AB ADZIM BIN SAIFUDDIN	BE HONS (USM) (CHEMICAL, 2003)
23295	SITI RAFIDAH AB RASHID	BE HONS (UTM) (CHEMICAL, 2004) MSC (UTP) (PROCESS INTEGRATION, 2007)
KEJURUTERAAN MEKANIKAL		
66529	DING JU LIANG	BE HONS (MONASH) (MECHANICAL, 2008)
23775	HAMIRUL ADLI BIN HASHIM	BE HONS (UiTM) (MECHANICAL, 2005)
48943	LEM YAL MING	BE HONS (UTM) (MECHANICAL-INDUSTRIAL, 2005)
58656	MOHD HAFIZ BIN ABDULLAH	BE HONS (UM) (MECHANICAL,2010)
48848	NG POH KIAT	BE HONS (UKM) (MECHANICAL, 2007) ME (MULTIMEDIA) (ADVANCED MANUFACTURING MANAGEMENT, 2011)
KEJURUTERAAN MEKATRONIK		
54524	TAN CHING SEONG	BE HONS (UM) (MECHANICAL, 98)
KEJURUTERAAN PEMBUATAN		
59105	MOHD HAFIZ BIN HARUN	BE HONS (UTM) (MECHANICAL-AUTOMOTIVE, 2003) MSC (UTEM) (MECHANICAL, 2013)

PEMBETULAN

Adalah dimaklumkan bahawa terdapat satu kesilapan atas calon berikut dalam senarai yang diluluskan untuk menduduki Temuduga Profesional dalam buletin bulan Mac. Beliau adalah calon yang mendaftar sebagai Ahli dan bukan calon untuk menduduki Temuduga Profesional:

Nama	Kelayakan
KEJURUTERAAN AWAM	
IR. MAT HUSSIN BIN GHANI	BE HONS (UTM) (CIVIL, 1981)

THE CONSTRUCTION INDUSTRY PAYMENT AND ADJUDICATION ACT 2012 COMES INTO OPERATION

Kuala Lumpur – The Construction Industry Payment and Adjudication Act (CIPAA) 2012 has come into operation effective 15 April 2014. The Act was passed on 18 June 2012 and gazetted on 22 June 2012. The Construction Industry Payment and Adjudication Regulations 2014 and the Construction Industry Payment and Adjudication (Exemption) Order 2014 have both been approved by the Minister of Works Datuk Haji Fadilah bin Yusof and are operative 15 April 2014 to complement CIPAA 2012.

The CIPAA 2012 and the accompanying Regulations and Exemption Order can be viewed on the website of the Federal Government Gazette at *www.federalgazette.agc.gov.my*.

PERMOHONAN BARU / PEMINDAHAN AHLI

Persidangan Majlis IEM yang ke-391 pada **17 Mac 2014** telah meluluskan sebanyak **1,160** ahli untuk permohonan baru dan permindahan ahli. Berikut adalah senarai ahli mengikut disiplin kejuruteraan:

DISIPLIN	GRED KEAHLIAN									
	FELO	SENIOR	AHLI	COMPANION	SISWAZAH	"INCORPORATED"	"AFFILIATE"	"ASSOCIATE"	SISWA	JUMLAH
Aeronautikal										**0**
Aeroangkasa										**0**
Pertanian										**0**
Automotif					1					**1**
Biokimia										**0**
Bioperubatan			1							**1**
Biosistem										**0**
Perkhidmatan Bangunan										**0**
CAD/CAM										**0**
Kimia			1		27				50	**78**
Awam	1		17	1	93				538	**650**
Komunikasi										**0**
Komputer			1							**1**
Sistem Komputer										**0**
Komputer & Komunikasi										**0**
Pembinaan										**0**
Sistem Kawalan										**0**
Elektrikal & Elektronik									15	**15**
Elektrikal			11		42				88	**141**
Elektronik			10		32	1			38	**81**
Elektronik & Kawalan Instrumentasi										**0**
Elektromekanikal										**0**
Tenaga										**0**
Alam Sekitar					6					**6**
Proses & Makanan										**0**
Geoteknik										**0**
Lebuhraya			2							**2**
Industri										**0**
Sistem Maklumat										**0**
Teknologi Maklumat										**0**
Instrumentasi										**0**
Kawalan & Instrumentasi			3							**3**
Pembuatan			1		4					**5**
Sistem Pembuatan										**0**
Marin			1							**1**
Bahan					5					**5**
Metallurgi										**0**
Mekanikal			24		60	1			75	**160**
Mekatronik					6					**6**
Mikroelektronik										**0**
Mineral										**0**
Sumber Mineral										**0**
Perlombongan										**0**
Arkitek Naval										**0**
Petroleum		2			2					**4**
Polimer										**0**
Pengeluaran										**0**
Struktur										**0**
Telekomunikasi										**0**
Sumber Air										**0**
JUMLAH	**1**	**2**	**72**	**1**	**278**	**2**	**0**	**0**	**804**	**1,160**

Senarai nama ahli dan kelayakan adalah seperti di muka surat 47 – 50. Institusi mengucapkan tahniah kepada ahli yang telah berjaya.

Ir. Prof. Dr Jeffrey Chiang Choong Luin
Setiausaha Kehormat
Institusi Jurutera Malaysia

KEAHLIAN

PEMINDAHAN AHLI KEPADA AHLI FELLOW

No. Ahli	Nama	Kelayakan
KEJURUTERAAN AWAM		
02883	MOHAMAD BIN HUSIN	BSC (SOUTHAMPTON) (CIVIL, 1977) MSC (PITTSBURGH) (CIVIL, 1988)

PEMINDAHAN MENJADI AHLI 'SENIOR'

No. Ahli	Nama	Kelayakan
KEJURUTERAAN PETROLEUM		
19296	TAN CHEE KOAN	BE HONS (UTM) (PETROLEUM, 1996)
13207	TEY KIM CHAW	BSC HONS (HERIOT WATT) (MECHANICAL, 1975)

PEMINDAHAN AHLI KEPADA AHLI KORPORAT

No. Ahli	Nama	Kelayakan
KEJURUTERAAN AWAM		
43954	AWG HAIRIL BENJAMIN BIN AWG BOLHI	BE HONS (UTM) (CIVIL, 2007)
23120	CHONG KEAN YEE	BE HONS (UTM) (CIVIL, 2005) ME (UTM) (CIVIL - STRUCTURE, 2007) MSC (SINGAPORE) (GEOTECHNICAL, 2010)
45278	CHONG YAN VUN, ALBERT	BE HONS (UNISEL) (CIVIL, 2008) MBA (UMS) (2011)
27906	CHOW SOON LEE	BE HONS (USM) (CIVIL, 2007)
33726	DENNIS ANAK ENYANG	BE HONS (UTM) (CIVIL, 2003)
25750	GOH CHOON KAI	BE HONS (UTM) (CIVIL, 2003)
7849	MOHD ANUAR MUSARDAR BIN YUSOFF	BE HONS (UTM) (CIVIL, 1983)
26470	SHIM LIK KUAN	ME HONS (NOTTINGHAM) (CIVIL, 2005)
18806	TEO NGUONG LEONG	BE HONS (RMIT) (CIVIL, 1998)
36286	YEOH SIANG CHUAN	BE HONS (UTHM) (CIVIL, 2005)
KEJURUTERAAN ELEKTRIKAL		
23933	JONG SIE PING, LUCIA	BE HONS (ADELAIDE) (ELECTRICAL & ENGINEERING, 2003)
42477	LIM YEE TIONG	BE HONS (UPM) (ELECTRICAL & ELECTRONICS, 2008)
52386	REDZUAN BIN ZAINAL ABIDIN	BE HONS (UiTM) (ELECTRICAL, 2009)
55871	SHARINDRAN A/L GOPAL	BE HONS (UNITEN) (ELECTRICAL & ELECTRONICS, 2008)
25618	SUHYLEE BIN SOYAT	BE HONS (UNITEN) (ELECTRICAL POWER, 2002)
KEJURUTERAAN ELEKTRONIK		
38792	ARJUN GOPINATHAN	BE HONS (UTM) (ELECTRICAL - ELECTRONICS, 2005)
19579	GOI BOK MIN	BE HONS (UM) (ELECTRICAL, 1998) MSC (MULTIMEDIA) (2002) PHD (MULTIMEDIA) (2006)
54560	KUMERESAN A. DANAPALASINGAM	BE HONS (UTM) (ELECTRICAL-MECHATRONICS, 2003) ME (UTM) (ELECTRICAL-MECHATRONICS & AUTOMATIC CONTROL, 2006) PHD (AALBORG) (2010)
46868	NARENDREN A/L RENGASAMY	BE HONS (UNITEN) (ELECTRICAL & LECTRONICS, 2004) ME (UM) (2010)
31761	TAN HEAN GAY, RODNEY	BSC (ROBERT GORDON) (ELECTRONIC & ELECTRICAL, 1994) MSC (LIVERPOOL JOHN MOORES) (MICROELECTRONIC & INFORMATION SYSTEMS, 1996) PHD (UNITEN)(2013)
53771	TAN LOONG PENG, MICHAEL	BE HONS (UTM) (ELECTRICAL-TELECOMMUNICATIONS, 2003) ME (UTM) (ELECTRICAL, 2007) PHD (CAMBRIDGE) (2011)
37922	TEOW YOK MOOI, MATTHEW	BSC (ROBERT GORDON) (ELECTRONIC & ELECTRICAL, 1994) ME (UTM) (ELECTRICAL, 1999)
39053	YVONNE FERNANDEZ	BE HONS (UTM) (ELECTRICAL-ELECTRONICS, 2005)
KEJURUTERAAN INSTRUMENTASI & KAWALAN		
51296	MOHAMAD AFIF BIN AMIR	BE HONS (UNITEN) (ELECTRICAL POWER, 2007)
62034	MUHAMMAD SYAUQI BIN ALIAS	BSC (ILLINOIS) (ELECTRICAL, 2008)
52317	VIGNESWARAN A/L SUBRAMANIAM	BE HONS (UNITEN) (ELECTRICAL & ELECTRONICS, 2008)
KEJURUTERAAN KIMIA		
45790	LEE WEI CHOEW	BE HONS (UTM) (CHEMICAL, 2005)
KEJURUTERAAN KOMPUTER		
53981	MOHD FAIZAL BIN JAMLOS	BE HONS (UUM) (COMPUTER, 2006) ME (ADELAIDE) (ELECTRICAL & ELECTRONIC, 2008) PHD (UTM) (ELECTRICAL, 2011)
KEJURUTERAAN LEBUHRAYA		
10425	MAHDAN BIN AHMAD	BE (STRATHCLYDE) (CIVIL, 1985)
KEJURUTERAAN MEKANIKAL		
19458	AHMAD FARIS BIN MOHD SALLEH	BE HONS (UiTM) (MECHANICAL, 1998)
17040	AMIR HAMZAH BIN JA'AFAR	BE HONS (UiTM) (MECHANICAL, 1997)
41310	EMI HAFIZZUL BIN JAMALUDDIN	BE HONS (UTM) (MECHANICAL, 2006)
46865	GOH SU KIN	BE HONS (MULTIMEDIA) (MECHANICAL, 2006)
41114	KUAN CHIN JONG	BE HONS (UNIMAS) (MECHANICAL 2006)
50704	MOHAMAD HIRMAN BIN SABAN	BE HONS (UM) (MECHANICAL, 2008)
37944	MOHD HAFIZ BIN MOHD ALI	BE HONS (UTHM) (MECHANICAL, 2006)
37085	MOHD HISAM BIN SA'AT	BE HONS (KUiTTHO) (MECHANICAL,2006)
36962	MOHD SHARUL@ AHMAD KHAIRUL BIN SULIAN	BE HONS (UTM) (MECHANICAL, 2003)
24440	NG CHONG JIN, BENJAMIN	BE HONS (UNITEN) (MECHANICAL, 2003)
30622	OOI YONGSON	BE HONS (USM) (MECHANICAL, 2002) MSC (USM) (MATHEMATICS, 2005)
49234	SUHAIMI BIN RASHID	BE HONS (UTM) (MECHANICAL, 2001)
52478	TAN SUH YONG	BSC (TEXAS TECH) (MECHANICAL, 1993)
KEJURUTERAAN PEMBUATAN		
43756	MOHAMAD ZUBIR BIN ZULFAQAR AHMAD	BE HONS (UKM) (MANUFACTURING, 2004)

PERMOHONAN MENJADI AHLI KORPORAT

Nama	Kelayakan
KEJURUTERAAN AWAM	
LEE ZI SHUN	BE HONS (QUEENSLAND) (CIVIL, 2008)
MAZLAN BIN MUHAMMAD	BE HONS (HATFIELD POLYTECHNIC) (CIVIL, 1988)
MOHAMAD NAZWAN BIN MUSTAFA	BE HONS (QUT) (CIVIL, 2007)
NG HOW CHIANG	BE HONS (UTM) (CIVIL, 2001)
NORAZLAN BIN MOHAMMAD NOR	BE HONS (UTM) (CIVIL, 2006)
RAJA FAIROL FAROUK BIN RAJA ABD ASSISS	BE HONS (UTM) (CIVIL, 2001)
ZUL AMRI BIN ABU BAKAR	BE HONS (UTM) (CIVIL, 2008)
KEJURUTERAAN ELEKTRIKAL	
AHMAD SHAHRIL BIN AHMAD ANUAR	BE HONS (UM) (ELECTRICAL, 1998)
KHAIRUL AZMI BIN ZAMRI	BE HONS (MULTIMEDIA) (ELECTRICAL, 2008)
MOHD GHAZALI BIN SHAARI	BE HONS (UTM) (ELECTRICAL, 2001) ME (UTM) (ELECTRICAL-POWER, 2009)
NOOR AZMAN BIN ALIAS	BE HONS (UNITEN) (ELECTRICAL & ELECTRONICS, 2002)
NORHIZAMI BIN ABU HASAN	BE HONS (UNITEN) (ELECTRICAL POWER, 2008)
KEJURUTERAAN ELEKTRONIK	
LEE LIAN HONG	BE HONS (MMU) (ELECTRONICS-TELECOMMUNICATION, 2005) MSC (MMU) (2011)
YAP KOK YOONG	BE HONS (KUiTTHO) (ELECTRICAL 2003)
KEJURUTERAAN LEBUHRAYA	
AYOB BIN MAT NOOR	BE HONS (UPM) (CIVIL, 1999)
KEJURUTERAAN MARIN	
MOHD FADLY BIN ASMAAI	BE HONS (UTM) (MECHANICAL-MARINE TECHNOLOY, 2000)
KEJURUTERAAN MEKANIKAL	
CHONG KOK HUA	BSC (WICHITA STATE) (MECHANICAL, 1996)
FOO POH LOON	BE HONS (WESTMINSTER) (MECHANICAL, 1997)
FUAD NOR BIN JAPAR	BE HONS (UTM) (MECHANICAL, 2006)
MOHD SABRI BIN CHE JAMIL	BE HONS (UTM) (MECHANICAL - AUTOMOTIVE, 2003) M.ENT (MANCHESTER) (2005) PHD (MANCHESTER) (2012)
MOHD SHUKRI BIN YOB	BE HONS (UTM) (MECHANICAL, 2007) ME (UKM) (MECHANICAL, 2010)
MUHAMAD BIN MURRAD	BE HONS (UTM) (MECHANICAL, 1995) ME (UTM) (MECHANICAL, 2002)
NAZRULHISHAM BIN OSMAN	BE HONS (UTP) (MECHANICAL, 2004)
SOH KWONG CHEAN	BSC (ARKANSAS) (MECHANICAL, 1991)
WILLIAM WERA LUKAM	BE (STRATHCLYDE) (MECHANICAL, 1986)
WONG LEONG HONG	BE HONS (COVENTRY) (MECHANICAL, 1997) MBA (LINCOLN) (2006)

LULUS PPP (BEM)

Nama	Kelayakan
KEJURUTERAAN BIOPERUBATAN	
SYED MUSTAFA KAMAL BIN SYED AMAN	BSE (ABERDEEN) (1986) MSC (DUNDEE) (BIOMEDICAL INSTRUMENT, 1996) PHD (EXETER) (2005)
KEJURUTERAAN ELEKTRIKAL	
MOHD FADZIL BIN HAMZAH	BE HONS (UTM) (ELECTRICAL, 1996)
KEJURUTERAAN MEKANIKAL	
SAIFUL RAHMAN BIN TARSOM	BE HONS (UTM) (MECHANICAL, 2004)

PEMINDAHAN KEPADA 'COMPANION'

No. Ahli	Nama	Kelayakan
KEJURUTERAAN AWAM		
7659	TYE CHUEEN KEAT	BSC (POLYTECHNIC OF SOUTH BANK) (CIVIL, 1982)

PERMOHONAN MENJADI AHLI 'COMPANION'

Nama	Kelayakan
KEJURUTERAAN AWAM	
HOWARD F. FRIES	BSC (CORNELL) (CIVIL, 1994) ME (CORNELL) (CIVIL, 1995)

PEMINDAHAN KEPADA AHLI SISWAZAH

No. Ahli	Nama	Kelayakan
KEJURUTERAAN ALAM SEKITAR		
52686	CHUA WOON KIT	B.E.HONS.(UTAR) (ENVIRONMENTAL, 2014)
44040	KHOO KIN LEONG	B.E.HONS.(UTAR) (ENVIRONMENTAL, 2014)
44080	LIM KEAN YONG	B.E.HONS.(UTAR) (ENVIRONMENTAL, 2014)
44056	TIAN XIANG HOU	B.E.HONS.(UTAR) (ENVIRONMENTAL, 2014)
KEJURUTERAAN AWAM		
44250	ADRIEN ROBERT AK MURAT @ IMSUL	B.E.HONS.(UiTM) (CIVIL, 2011)
42632	AHMAD FADZILI BIN ISMAIL	B.E.HONS.(UTM) (CIVIL, 2010)
42398	HOW WHEE MUN	B.E.HONS.(UNIMAS) (CIVIL, 2012)
53438	KHOR ZHENG YONG	B.E.HONS.(UTAR) (CIVIL, 2014)
37335	LAU CHEE SIANG	B.E.HONS.(UTAR) (CIVIL,2010)
53439	LEE TING SAN	B.E.HONS.(UTAR) (CIVIL, 2014)
53440	LOH JIAN RONG	B.E.HONS.(UTAR) (CIVIL, 2014)
31062	MOHD AZFARUDIN BIN MOHD ADIB	B.E.(UMP)(CIVIL, 2008)
47349	MUHAMMAD FAIZ AIZAT BIN ZAINAL	B.E.HONS.(UTP) (CIVIL- 2013)
47848	NGU KEK WEI, STEVEN	B.E.HONS.(USM) (CIVIL, 2012)
41418	NORSURIANI BINTI ABU BAKAR	B.E.HONS.(UTHM) (CIVIL, 2011)

30172	SERI GANIS KANAPATHY PILLAY A/L KRISHNAN	B.E.HONS.(KLIUC) (CIVIL, 2011)
28330	SHAIKH BADARUDEEN BIN SHAIK ALAUDEEN	B.E.HONS.(UTM)(CIVIL, 2009) M.E.(UTM)(CIVIL-STRUCTUR, 2012)
44505	SITI RAHAYU BINTI ANUAR	B.E.HONS.(UiTM)(CIVIL, 2011) M.SC.(UiTM)(CIVIL-ENVIRONMENTAL, 2012)
28106	TAN KOK LEE	B.E.HONS.(USM) (CIVIL, 2009)
33000	TAN SEEN YEE, CARINE	B.E.HONS.(UTM) (CIVIL, 2011)
54186	TEE EE LONG	B.E.HONS.(UTAR) (CIVIL, 2014)
28297	TEOH PEK LEM	B.E.HONS.(USM) (CIVIL, 2009)
47333	TUAN JAZLAN BIN TUAN MOOD	B.E.HONS.(UTP) (CIVIL, 2013)
54131	YEOH GIM HENG	B.E.HONS.(UTM) (CIVIL, 2013)
28921	ZABIDI BIN MOHAMED @ ISMAIL	B.E.HONS.(UTHM) (CIVIL, 2010)
21176	ZANARIAH BINTI ABD RAHMAN	B.E.HONS.(UTM)(CIVIL, 2004) M.E.(UTM)(CIVIL-TRANSPORTATION & HIGHWAY, 2007)

KEJURUTERAAN BAHAN

30082	TEOH HUI CHIANG	B.E.HONS.(USM) (MATERIALS, 2011)

KEJURUTERAAN ELEKTRIKAL

29259	HAZER BIN MOHAMAD SAYUTI	B.E.(UMP)(ELECTRICAL-POWER SYSTEMS, 2009)
52783	KHAIRUL NA'IM BIN HALIM	B.E.(UMP)(ELECTRICAL-POWER SYSTEMS, 2012)
42566	TG MUHD HUMAIDI BIN TG ABDULLAH	B.E.HONS.(UTEM) (CONTROL, INSTRUMENTATION & AUTOMATION, 2012)
28577	WONG JIANHUI	B.E.HONS.(UTAR) (ELECTRICAL & ELECTRONIC, 2009) M.E.(UTAR)(ENRG. SC., 2012)

KEJURUTERAAN ELEKTRONIK

34836	CHAN YEE HOE	B.E.HONS.(UNISEL) (ELECTRONIC, 2009)
40221	CHONG WEI HOONG	B.E.HONS.(UTM) (ELECTRICAL-ELECTRONICS, 2012)
53221	MOHAMMAD ZAIDI BIN ZAINOL	B.E.HONS.(UNIMAP) (ELECTRONIC, 2012)
50075	MOHD ZAKWAN BIN MOHD MAZLAN	B.E.HONS.(IIUM) (COMMUNICATION, 2013)
51100	MUHAMMAD FAQRIE BIN ROS AZIZI	B.E.HONS.(USM) (ELECTRONIC, 2013)

KEJURUTERAAN KIMIA

34161	AZLINDA BINTI ABD GHANI	B.E.HONS.(UTM) (CHEMICAL, 2009)
34391	ENG KHIM SHENG	B.E.HONS.(UKM) (BIOCHEMICAL, 2012)
47724	KWONG MENG HAN	B.E.HONS.(UTAR) (CHEMICAL, 2014)
59793	LIM YEONG LEONG	B.E.HONS.(TAYLOR'S) (CHEMICAL, 2013)
24681	NOR FAUZIAH BINTI ZAINUDIN	B.E.HONS.(USM) (CHEMICAL, 2007)
56965	PANG WEI XIONG	B.E.HONS.(UTAR) (CHEMICAL, 2013)
31971	PRAGAS A/L PERUMAL	B.E.HONS.(USM) (CHEMICAL, 2011)
57866	WONG DE LING, NINA	B.E.HONS.(UTAR) (CHEMICAL, 2013)

KEJURUTERAAN MEKANIKAL

31175	AHMAD RAFIUDDIN BIN AB GHANI	B.E.(AUCKLAND) (MECHANICAL, 2009)
35482	AMIR REDZUAN BIN MOHD IBRAHIM	B.E.HONS.(UiTM) (MECHANICAL, 2011)
49350	CHIN CHEE SEONG	B.E.HONS.(UTAR) (MECHANICAL, 2014)
43438	CHU SOON HON	B.E.HONS.(MALAYA) (MECHANICAL, 2010)
51572	CHUAH SOON LEE	B.E.HONS.(UTAR) (MECHANICAL, 2014)
22808	DR. RAJA IZAMSHAH BIN RAJA ABDULLAH	B.E.HONS.(UiTM) (MECHANICAL, 2004) M.SC.(BIRMINGHAM) (MANUFACTURING ENGINEERING & MANAGEMENT, 2006) P.HD.(RMIT) (MANUFACTURING, 2012)
50061	KUMARAN A/L GANASH	B.E.HONS.(UNITEN) (MECHANICAL, 2012)
54196	LEE WINSON	B.E.HONS.(UTAR) (MECHANICAL, 2014)
37662	LO CHAU MIN	B.E.HONS.(UTAR) (MECHANICAL, 2012)
26641	M. SHAHRUL NIDZAM BIN ISMAIL	B.E.HONS.(UTM) (MECHANICAL-AERONAUTICS, 2008)
57457	MOHD FAHMI ADLI BIN SALAHUDDIN	B.E.HONS.(UTEM) (MECHANICAL-THERMAL FLUIDS, 2013)
35188	MOHD HAFIZUDDIN BIN HAMDAN	B.E.HONS.(UiTM) (MECHANICAL, 2010)
27763	MOHD SAHRIL BIN MOHD FOUZI	B.E.(UMP)(MECHANICAL-AUTOMOTIVE, 2009)
25933	MUHAMAD AZAHARI BIN ARIS	B.E.HONS.(UTM) (MECHANICAL-AUTOMOTIVE, 2007)
50015	MUHAMAD HAMDI BIN HAMDAN	B.E.HONS.(UPNM) (MECHANICAL, 2013)
54200	PATRICK THILAGARAJ	B.E.HONS.(UTAR) (MECHANICAL, 2014)
26643	UMAR FAROOQ BIN ABDUL AZIZ	B.E.HONS.(UTM) (MECHANICAL-AERONAUTICS, 2008)

KEJURUTERAAN MEKATRONIK

34513	MOHD RAFI BIN RAMLI	B.E.HONS.(UTEM) (MECHATRONICS, 2009)
47812	TAN CHOR ZHENG	B.E.HONS.(UTAR) (MECHATRONICS, 2014)

KEJURUTERAAN PEMBUATAN

44769	ABDUL AZIM BIN JAAFAR	B.E.HONS.(IIUM) (MANUFACTURING, 2012)

PERMOHONAN MENJADI AHLI SISWAZAH

No. Ahli	Nama	Kelayakan

KEJURUTERAAN ALAM SEKITAR

69513	AHMAD FIKRI HADI BIN ABDUL RAHMAN	B.E.HONS.(UNIMAP) (MATERIALS, 2009) M.SC.(UiTM)(CIVIL-ENVIRONMENTAL, 2012)
66714	FOO CHEE HUNG	B.E.HONS.(MALAYA) (ENVIRONMENT, 2006)

KEJURUTERAAN AUTOMOTIF

69512	PAU KAH HO	B.E.(H. ESSLINGEN) (AUTOMOTIVE, 2011) M.E.(H. ESSLINGEN) (AUTOMOTIVE SYSTEMS, 2013)

KEJURUTERAAN AWAM

66741	ABD HADI BIN ABD HALIM	B.E.HONS.(UiTM) (CIVIL, 2010)
69470	ABDUL RAZAK BIN KAMAROLZAMAN	B.E.HONS.(UPNM) (CIVIL, 2011)
66794	AG MUHAMMAD KHAIRUDIN BIN AG TAJUDIN	B.E.HONS.(UTM) (CIVIL, 2013)
69504	AIRUL AZMEER BIN ZAINUDDIN	B.E.HONS.(UKM)(CIVIL & STRUCTURAL, 2005)
66801	ALMIZAN BIN MOHASEN	B.E.HONS.(UiTM) (CIVIL, 2007)
66460	AZMIN ARIFF BIN ABDUL AZIJ	B.E.HONS.(KLIUC) (CIVIL, 2009)
66735	CHAN HON MENG, EDWIN	B.E.HONS.(AUCKLAND) (CIVIL, 2013)
66721	CHIN CHEAT MING	B.E.HONS.(UTAR) (CIVIL, 2013)
66544	CHIN CHEE SENG	B.E.HONS.(UTAR) (CIVIL, 2014)
69495	CHIU PEK SIN	B.E.HONS.(LEEDS) (CIVIL, 2001)
66745	CHONG THER SHERN	B.E.HONS.(MELBOURNE) (CIVIL, 2010) M.E.(MELBOURNE) (ENVIRONMENT, 2011)
66813	CHU WAI LUNE	B.E.HONS.(UKM)(CIVIL & STRUCTURAL, 2008)
66740	CHUAH SIONG THIAM	B.E.HONS.(KLIUC) (CIVIL, 2010)
66811	DAHARI BIN IDRIS	B.E.HONS.(UTM) (CIVIL, 2009)
66700	FADILAH BIN MAMAT	B.E.HONS.(UTM) (CIVIL, 2012)
66744	FAIZAH BINTI ISMAIL	B.E.HONS.(UiTM) (CIVIL, 2006)
69472	FOO SHIN CHIEN	B.E.(QUT)(CIVIL, 2005)
66784	GAN WEI PHANG	B.SC.(PURDUE) (CIVIL, 2012)
66533	GANESH RAJ A/L UTHAYA KUMAR	B.E.HONS.(UTAR) (CIVIL, 2014)
66722	GASIM HAYDER AHMED SALIH	B.SC.(OMDURMAN) (CIVIL, 2000) M.SC.(UPM) (ENVIRONMENTAL, 2005) P.HD.(UTP)(CIVIL, 2013)
66750	GOH KAY YUN	B.E.HONS.(UNITEN) (CIVIL, 2013)
66756	HASEEF IDZLAN BIN ZAHIDI	B.E.HONS.(UNISEL) (CIVIL, 2009) M.SC.(UiTM)(CIVIL, 2013)
66807	HASMUNIR BIN HAMID	B.E.HONS.(UiTM) (CIVIL, 2005)
66725	HASNI BIN ZAINUDIN	B.E.HONS.(UTM) (CIVIL, 2013)
69514	HIEW KOW YUAN	B.E.HONS.(UTM) (CIVIL, 2004)
66716	HOO KOK TUNG	B.E.HONS.(CURTIN)(CIVIL & CONSTRUCTION, 2011)
66829	IRMA NOORAZURAH BINTI MOHAMAD	B.E.HONS.(UTM) (CIVIL, 2007) M.E.(UTM) (CIVIL-HYDRAULICS & HYDROLOGY, 2008)
66815	KUEH SIANG YIE	B.SC.(UTM)(CIVIL, 2002)
66827	LEONG CHORNG YI	B.E.HONS.(UTAR)(CIVIL, 2010) M.SC.(LSBU)(CIVIL-STRUCTURAL DESIGN, 2011)
66682	LI CHIN FUI	B.SC.(MONTANA STATE UNI.)(CIVIL, 1985)
66731	LIM CHEE WEI	B.E.HONS.(UKM)(CIVIL & STRUCTURAL, 2004)
69503	LIM SOO FEEI, SOPHIA	B.E.HONS.(UTM) (CIVIL, 2005)
66737	LIM YAO SHENG	B.E.HONS.(UKM)(CIVIL & STRUCTURAL, 2009)
66805	LINA ANAK CHUHIN	B.E.HONS.(UiTM) (CIVIL, 2007)
66798	MOHAMED KHAIRULLAIL BIN MOHAMED SALIM	B.E.HONS.(UTM) (CIVIL, 2013)
66747	MOHD DZUL-HAKIM BIN MOHD KHALID	B.E.HONS.(UiTM) (CIVIL, 2008)
69501	MOHD HAFIZUN BIN YASIN	B.E.HONS.(UiTM) (CIVIL, 2005)
66806	MOHD HARRIS BIN MOHAMED	B.E.HONS.(UTM) (CIVIL, 2013)
66825	MOHD NOR SIZA BIN DAUD	B.E.HONS.(UTM) (CIVIL, 2012)
66822	MOHD NORAFFANDI BIN AHMAD	B.E.HONS.(UiTM) (CIVIL, 2013)
66713	MOHD ROZI BIN AWANG	B.E.HONS.(UiTM) (CIVIL, 2008)
66789	MOHD SAYUTI BIN MOHD ZAIN	B.E.HONS.(UTM) (CIVIL, 1997)
66469	MUHAMMAD SIDDIQ FAROUQ BIN MD. NOOR	B.E.HONS.(UiTM) (CIVIL, 2013)
66695	MUHAMMAD SYAFIQ BIN MD AKHIR	B.E.HONS.(UPNM) (CIVIL, 2011)
66799	NA KAI LUN	B.E.HONS.(UTP) (CIVIL, 2012)
66732	NAZRI BIN ABDUL RAHMAN	B.E.HONS.(UTM) (CIVIL, 2002)
66465	NORAZWA TANTIYANA BINTI WAN CHIK	B.E.HONS.(UiTM) (CIVIL, 2012)
66678	NUR AKMILAH BINTI MUHAMAD	B.E.HONS.(UTM) (CIVIL, 2010)
66686	NUR ASMALIZA BINTI MOHD NOOR	B.E.HONS.(USM) (CIVIL, 2001)
66679	NUR FADILAH BINTI KAMALUDIN	B.E.HONS.(UTHM) (CIVIL, 2012)
66553	NURUL NAZRA BINTI ZAKARIA	B.E.HONS.(UiTM) (CIVIL, 2010)
69505	PETRYSIANIE LUIN	B.E.HONS.(UiTM) (CIVIL, 2011)
66723	ROSMAWANI INRA BINTI RAMLAN	B.E.HONS.(UTM) (CIVIL, 2005)
66817	SAZNIZAM SAZMEE SINOH	B.E.HONS.(MALAYA) (CIVIL, 2013)
69499	SIM WEI TAT	B.E.HONS.(CURTIN)(CIVIL & CONSTRUCTION, 2013)
66708	SITI SARA SEERA BINTI MUSTAPA KAMIL	B.E.HONS.(MALAYA)(CIVIL, 2008) M.E.(MALAYA) (GEOTECHNICAL, 2013
66692	SITI ZALINA BINTI ALI	B.E.HONS.(UiTM) (CIVIL, 2005)
66691	SOO KAR KIT, GARY	B.E.HONS.(CURTIN)(CIVIL & CONSTRUCTION, 2013)
69475	SUM KAH CHUN	M.E.HONS.(BIRMINGHAM) (CIVIL, 2013)
66541	TAN KEAN SENG	B.E.HONS.(UTAR) (CIVIL, 2014)
66543	TAN WEI YANG	B.E.HONS.(UTAR) (CIVIL, 2014)
66545	TAN YEE KEN, EDWARD	B.E.HONS.(UTAR) (CIVIL, 2014)
66717	TANG SOON TIING	B.E.(QUEENSLAND) (CIVIL, 2009)
69496	THIEN SUNG LIN,ORSON	B.E.HONS.(UNSW) (CIVIL, 2012)
66690	WONG LIONG YIONG, BRYAN	B.E.HONS.(CURTIN)(CIVIL & CONSTRUCTION, 2013)
66689	WONG SI KOON	B.E.(SOUTH AUSTRALIA) (CIVIL & PROJECT MANAGEMENT, 2011)
66542	WONG YEON CIAT	B.E.HONS.(UTAR) (CIVIL, 2014)
66814	YEO PEI PING	B.E.HONS.(UTM) (CIVIL, 2005)
66698	ZAHARAH BINTI ZAINUDIN	B.E.HONS.(UTM) (CIVIL, 2011)
69510	ZAIDI BIN MOHAMED @ AWANG	B.E.HONS.(UTM) (CIVIL, 2002)
69498	ZHEN XIONG LOH, STEVE	B.E.(NUS)(CIVIL, 2011)

KEJURUTERAAN BAHAN

66466	KHAIRUN NADIA BINTI CHE DIN	B.E.HONS.(MALAYA) (MATERIALS, 2013)

66812	LAI MUN KOU	B.E.HONS.(MALAYA) (MATERIALS, 2002)
66704	NG YUEH FANG	B.E.HONS.(USM) (MATERIALS, 2011)
66548	TAN TENG ENG	B.E.HONS.(UTAR) (MATERIALS & MANUFACTURING, 2014)

KEJURUTERAAN ELEKTRIKAL

69516	ABANG NIZAMUDDIN BIN ABANG MOHD KHALID	B.E.HONS.(UTP) (ELECTRICAL & ELECTRONIC, 2013)
69511	ABDULLAH ZUBAIR BIN MOHD RAZALI	M.E.HONS. (SOUTHAMPTON) (ELECTRICAL, 2013)
66830	AHMAD KAMIL BIN FADIR	B.E.(UMP)(ELECTRICAL-POWER SYSTEMS, 2010)
66726	AHMAD NIZAM BIN ABDULLAH	B.E.HONS.(UITM) (ELECTRICAL, 2009)
69502	AMIR RABANI BIN ABD HALIM	B.E.HONS.(UTM) (ELECTRICAL, 2013)
69506	CHANG HEEN LOONG	B.E.HONS.(QUT) (ELECTRICAL & COMPUTER, 2005)
66702	CHE NORLI BINTI CHE NORDIN	B.E.HONS.(UPNM) (ELECTRICAL & ELECTRONIC, 2011)
66697	CHIN WEN LUNG	B.E.HONS.(MMU) (ELECTRICAL, 2007)
69500	ERMA SUFIANA BINTI MOHD SUFFIAN	B.E.HONS.(UMS) (ELECTRICAL & ELECTRONICS, 2011)
66818	FARLISTER GLENN GAINUS	B.E.HONS.(UTEM) (ELECTRICAL-INDUSTRIAL POWER, 2013)
66706	HAFIDZNIZAM BIN PANGAT	B.E.HONS.(UTM) (ELECTRICAL, 2007)
66821	HANA ABDULL HALIM	B.E.HONS.(UTP) (ELECTRICAL & ELECTRONIC, 2009) M.E.(UTM)(ELECTRICAL-POWER, 2010)
66680	HARIBALAN A/L RAMANATHAN	B.E.HONS.(UTEM) (ELECTRICAL- CONTROL, INSRUMENTATION & AUTOMATION, 2010)
69509	HASIMAH BINTI ABDUL RAHMAN	B.SC.(ABERDEEN) (ELECTRICAL & ELECTRONICS,1988)
66675	JAMALUDIN BIN MD LEPI	B.SC.(CASE WESTERN RESERVE UNI.) (ELECTRICAL, 1991)
69515	KHAIRUL BIN MOHD NOOR	B.E.HONS.(UPM) (ELECTRICAL & ELECTRONIC, 2003)
66792	LEE HONG CHUN	B.E.HONS.(UTAR) (ELECTRICAL & ELECTRONIC, 2011)
66788	LIM JIA JIAN	B.E.HONS.(UNITEN) (ELECTRICAL POWER, 2013)
66804	MEMORIA ANAK JANGOH	B.E.HONS.(KUTKM) (ELECTRICAL-INDUSTRIAL POWER, 2006)
66791	MOHAMED AL-HAFIZ BIN ZAINUDDIN	B.E.HONS.(UITM) (ELECTRICAL, 2010)
66526	MOHAMMED REYASUDIN BIN BASIR KHAN	B.E.HONS.(UNITEN) (ELECTRICAL & ELECTRONICS, 2011)
66742	MOHD ASUAD BIN IDRIS	B.E.HONS.(UTEM) (ELECTRICAL-INDUSTRIAL POWER, 2006)
66528	MOHD EZWAN BIN MOHAMAD RAMLI	B.E.HONS.(UTM) (ELECTRICAL, 2010)
66699	MOHD FIRDAUS BIN AUZIR	B.E.HONS.(UiTM) (ELECTRICAL, 2008)
66687	MOHD. FARID BIN HUSIN	B.E.HONS.(UTM) (ELECTRICAL, 2012)
66796	NASRUL HAMIMI BIN HUSSIN	B.E.HONS.(UiTM) (ELECTRICAL, 2011)
66832	NAVANEETARAN A/L NAGALINGAM	B.E.HONS.(MALAYA) (ELECTRICAL, 2011)
66783	NGE FOONG KHENG	B.E.HONS.(UTAR) (ELECTRICAL & ELECTRONIC, 2011)
66757	NOR BAIZURA BINTI MAT ISA	B.E.HONS.(UTM) (ELECTRICAL, 2007)
66727	NORADAWIYAH BINTI HASHIM	B.E.HONS.(UTP) (ELECTRICAL & ELECTRONICS, 2011)
66671	NURUL ASYIKIN BINTI MOHAMED RADZI	B.E.HONS.(UNITEN) (ELECTRICAL & ELECTRONICS, 2008)
66683	OOI WOEI SONG	B.E.HONS.(UKM) (ELECTRICAL & ELECTRONIC, 2012)
66681	RAVEEN KUMAR A/L RAMALINGAM	B.E.HONS.(UTP) (ELECTRICAL & ELECTRONICS, 2010)
66835	SASHIKUMARAN A/L JAYARAMAN	B.E.HONS.(UKM) (ELECTRICAL & ELECTRONIC, 2011)
69489	SITI NURBAYA MOHAMED	M.E.HONS.(IMPERIAL COLL.)(ELECTRICAL & ELECTRONICS, 2009)
66738	SUHAIMI BIN MAAROP	B.E.HONS.(UTM) (ELECTRICAL, 1997)
69471	TAN WEI SIANG	B.E.HONS.(UPM) (ELECTRICAL & ELECTRONIC, 2013)
66837	YAP KUM HON	B.E.HONS.(UCSI) (ELECTRICAL & ELECTRONIC, 2013)

KEJURUTERAAN ELEKTRONIK

66734	ADAM CLEMENT TULAS	B.E.HONS.(UNIMAS) (ELECTRONICS & COMPUTER, 2007)
66710	AHMAD YAZID BIN ABDUL RAHMAN	B.E.HONS.(IIUM) (COMMUNICATION, 2013)
69508	AKMAL ARIF BIN MOHAMMED	B.SC.(TEXAS AT AUSTIN) (ELECTRICAL, 2008)
66720	AZMAN BIN ISMAIL	B.E.HONS.(UKM) (ELECTRICAL, ELECTRONIC & SYSTEMS, 2000) M.E.(UTM) (MECHANICAL-MARINE TECH., 2009)
69476	CHOY NGAI NAM	B.E.HONS.(UTAR) (ELECTRONIC, 2014)
69492	CHU CHIN HUEI	B.E.HONS.(MMU) (ELECTRONICS-NANOTECHNOLOGY, 2011)
66709	CLEOPATHRA DHIEMAH ANAK JAMBAI	B.E.HONS.(UiTM) (ELECTRONICS-INSTRUMENTATION, 2013)
69494	HAFIZAH BINTI ZAINOL ABIDIN	M.E.HONS.(IMPERIAL COLL.)(ELECTRICAL & ELECTRONICS, 2009)
66786	JEEVAN A/L KANESAN @ GANESHAMORTY	B.E.HONS.(UTM) (ELECTRICAL-INSTRUMENTATION & CONTROL, 1999) M.SC. (USM)(MECHANICAL, 2003) P.HD.(USM)(HEAT TRANSFER, 2007)
66468	LESLIE KOK	B.E.HONS.(NOTTINGHAM) (ELECTRICAL & ELECTRONIC,2006) M.SC.(NOTTINGHAM) (ELECTRONICS COMMUNICATIONS & COMPUTER, 2012)
66673	LIEW CHIA WOON	B.E.HONS.(UTHM) (ELECTRICAL, 2009)
66461	MOHAMMAD HAIRRIS AZWAR BIN JOHARI	B.E.HONS.(SALFORD) (ELECTRONIC, 1997)
66464	MOHD AFIQ SAFWAN BIN ZAINAL ABIDIN	B.E.HONS.(UTM) (ELECTRICAL-ELECTRONIC, 2010)
69490	MUHAMMAD FAIZAL BIN AZMI	B.E.HONS.(MMU) (ELECTRONICS-COMPUTER, 2010)
66733	MUHAMMAD FARHAN BIN SHAHROM	B.E.HONS.(UPNM) (ELECTRICAL & ELECTRONIC-COMMUNICATIONS, 2011)
66755	MUHAMMAD FIRDAUS ABDUL MONIR	B.E.(VANDERBILT) (ELECTRICAL, 1999) M.SC.(VANDERBILT) (ELECTRICAL, 2001)
66467	NOOR KHAFIFAH BINTI KHALID	B.E.HONS.(UTM) (ELECTRICAL-MECHATRONICS, 2010)
66674	NORZILAWATI BINTI ABDULLAH	B.E.HONS.(UTHM) (ELECTRICAL, 2009)
69473	ONG JIT CHOON	B.SC.(PURDUE) (ELECTRICAL, 2013)
66546	OOI JIA YEE	B.E.HONS.(UTAR) (ELECTRONIC & COMMUNICATIONS, 2014)
66547	PRAKASH A/L KANASEGRAN	B.E.HONS.(UTAR) (ELECTRONIC & COMMUNICATIONS, 2014)
66754	ROZAINIS BIN MOHD KHIR	B.E.HONS.(UKM) (ELECTRICAL, ELECTRONIC & SYSTEM, 1995)
69493	SITI ZUBAIDAH ABD AZIZ	B.E.HONS.(MMU) (ELECTRONICS-OPTICAL, 2009)
69488	SURIAN BIN RASOL	B.E.HONS.(UTM) (ELECTRICAL-MECHATRONIC, 2001)
69491	VIMALAAKARAN GNANASEGAR	B.E.HONS.(MMU) (ELECTRONICS-MICROWAVE & COMMUNICATIONS,2011)
66753	WAN AHMAD HAMDI BIN WAN JAMIL	B.E.HONS.(UKM) (COMMUNICATION & COMPUTER, 2008)
66672	WAN HAMIDAH BINTI WAN ABAS	B.E.HONS.(KUiTTHO) (ELECTRICAL, 2004)

Note: *Remaining list would be published in the June 2014 issue. For the list of approved "ADMISSION TO THE GRADE OF STUDENT", please refer to IEM web portal at http://www.myiem.org.my.*

Pengumuman yang ke-72

SENARAI PENDERMA KEPADA WISMA DANA BANGUNAN IEM

Berikut adalah sambungan senarai penyumbang untuk bulan Februari 2014 yang diterbitkan di muka surat 28, isu April 2014 .

NO.	NO. AHLI	NAMA
102	20701	MOHAMAD SHOKRI BIN ISMAIL
103	06233	MOHAMAD SOFIAN BIN AHMAD
104	46788	MOHD ADLI BIN ADANAN
105	60622	MOHD NASRUL NIZAM BIN NASRI
106	25174	MOHD RAPHEL AFFENDY BIN MOHAMED NAZAR
107	18916	MOHD RUSLI BIN SAKTI
108	23167	MOK SIEW HENG
109	11599	MUHAMAD GUNTOR MANSOR TOBENG BIN MANSOR TOBENG
110	09016	MUSA BIN OMAR
111	16339	NAZRI BIN HARUN
112	24335	NG CHIU MING @ ROLAND NG
113	03248	NG KIM KEE
114	02333	NG KIN SENG
115	06397	NG KOK HWA
116	13912	NG KOON SENG
117	13245	NORHAMIDI BIN MD. DIN
118	50728	NURSHAHNAWAL BINTI YAACOB
119	43821	NURUL ASYIKIN BINTI ISHAK
120	32266	ONG BOON EE, PATRICIA
121	12544	ONG BOON HAI
122	09852	ONG LYE SIONG
123	12225	OOI HOO KOOI
124	01882	PANG NAM FONG
125	01350	P'NG CHOON NGAN
126	20014	POH HEON KHOON
127	52461	PUAN CHUN YEE
128	15416	ROSLI BIN MOHD TAIB
129	07231	SAM MAN KEONG
130	30572	SAW CHUN LIN
131	09696	SDR. HO SAY HAI
132	13996	SDR. KUHANESWARAN A/L S. GANESHWARAN
133	15639	SDR. ONG CHENG HAI
134	26932	SDR. SHAFULRIZAL BIN ZAINOL
135	13740	SDR. SIOW CHUNG POH
136	50581	SDR. YAZRIN BIN YAHYA
137	54926	SDRI. NOR FALAHIAH BT AB HAKIM
138	14537	SEE CHENG SENG
139	45260	SHAHARUDDIN BIN AHMAD
140	34330	SITI MAZLINAH BINTI ABDUL RAHIM
141	10318	SU LAI TIING, PANTALEON
142	09817	SULAIMAN BIN MOHAMAD TAIB
143	12994	SUZANA BTE DAUT
144	11103	SYED AMIR BIN SYED ALWI SHAHABUDIN
145	03273	SYED ZAIN AL-KUDCY BIN DATO' SYED MAHMOOD
146	08165	TAI FONG NG
147	26917	TAN BOON KHONG
148	00536	TAN HOCK AUN
149	05005	TAN HOO
150	21296	TAN HUA CHUN
151	02609	TAN KOK YEE
152	07242	TAN SEE CHEE
153	42065	TAN SHU NGEE
154	07984	TAN SRI DATO' HAJI OMAR BIN IBRAHIM
155	00312	TAN SRI DATO' TALHA BIN HAJI MOHAMAD HASHIM
156	01265	TAN TEONG HO
157	24789	TAN WEE KOK
158	00042	TAN YORK HING
159	18588	TAY YUH HER
160	05700	TEE SWEE HOCK
161	04077	TEH GEK HUAT
162	21748	TEH HUCK NGI
163	15071	TEH POOI KUANG, ALLEN
164	02548	TEO HOCK YEOW
165	14400	TEO JIN ANN
166	13453	TEOH KENG ENG
167	17519	THAM CHEE MENG
168	06722	TIONG HUO CHIONG
169	43962	VOON FOOK HIN
170	13448	WAN KOA YIT
171	00760	WAN OTHMAN FADZILLAH BIN WAN ABDUL TALIB
172	10599	WONG AH SWANG
173	11921	WONG BOON LIM
174	43103	WONG KIEN WAI
175	18436	WONG KIM HUNG
176	06618	WONG SO LOK, KELVIN
177	17560	WONG SU KEN
178	19258	WONG YANN JEH, STANLEY
179	07039	WONG YII HENG
180	19275	YAH KEM CHUI
181	16342	YAP KIM HONG
182	27551	YASSER ASRUL BIN AHMAD
183	27607	YEN KEN MIN
184	15107	YIP SHUI CHEONG
185	01292	YU CHEN LIM
186	49313	YUZRIAN EFREN YUNUS
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188	43735	ZULKIFLI BIN AHMAD AHTAR

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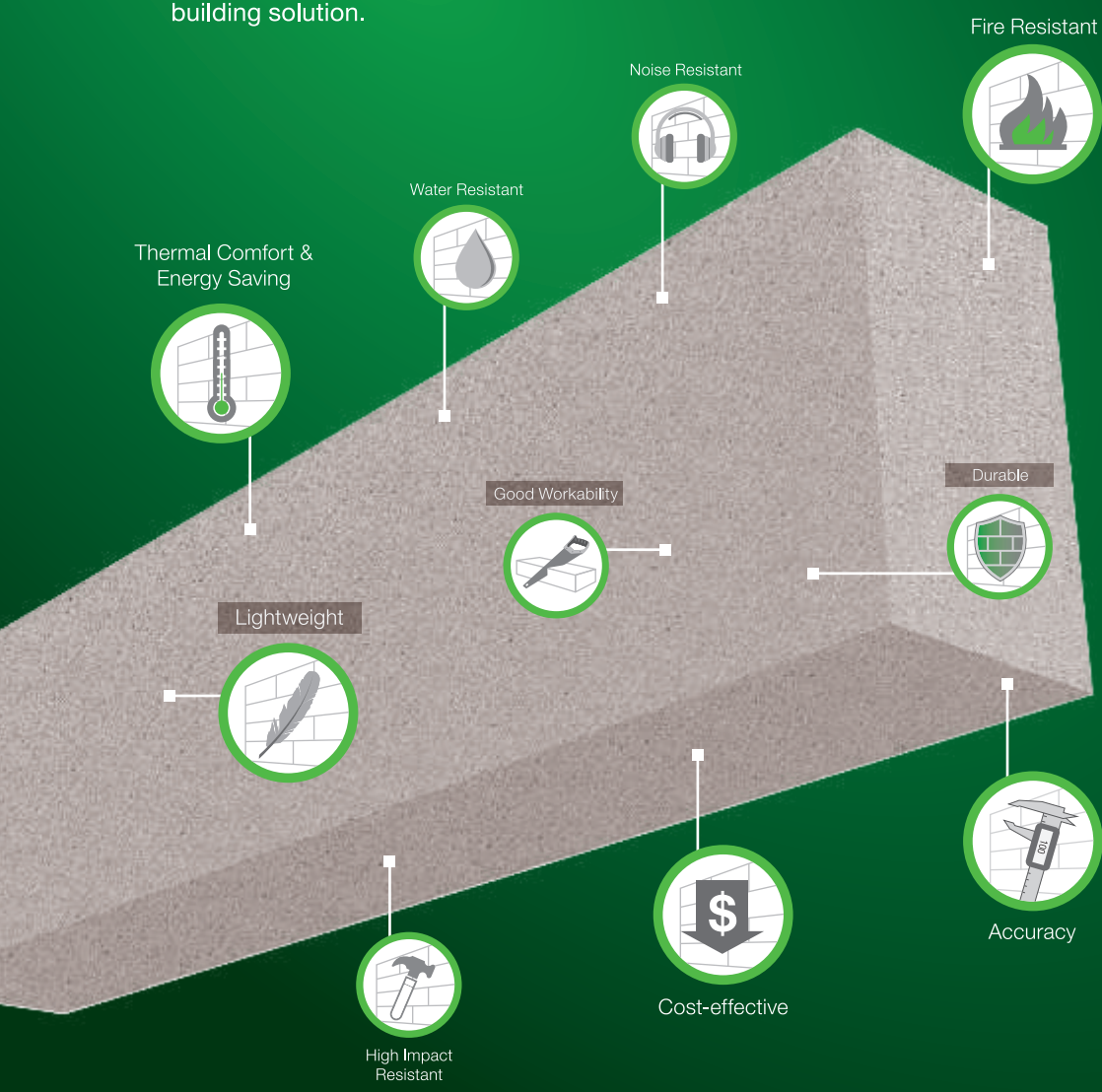

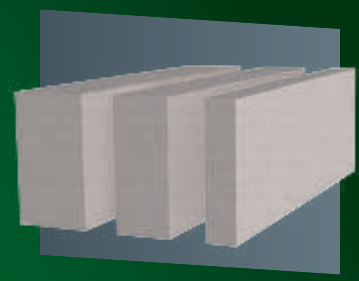

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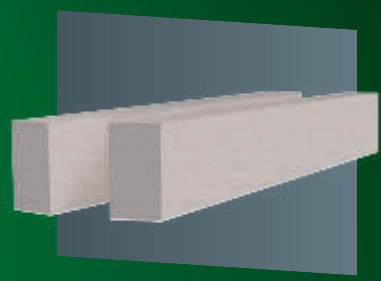

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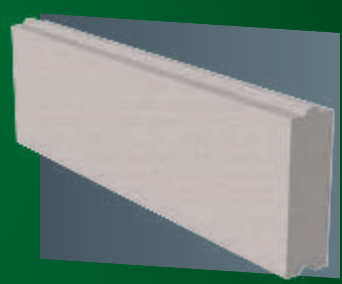

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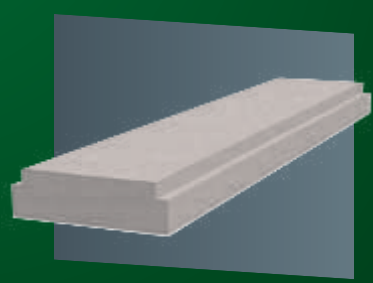

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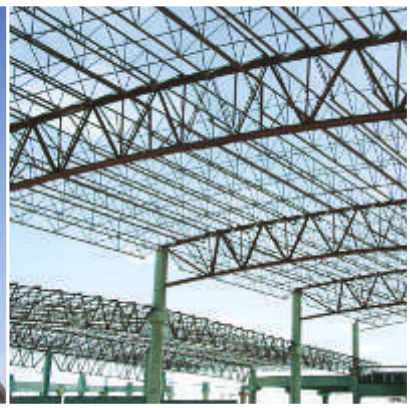
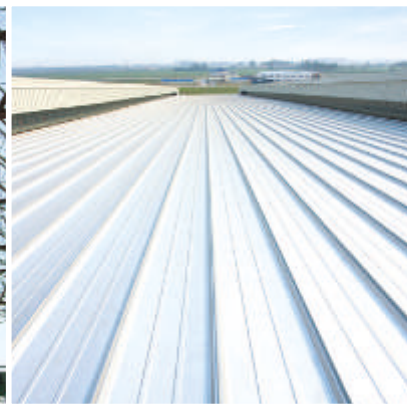

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FLEXJOINT EP / FLEXLINE

HIGH PERFORMANCE WATERPROOF EXPANSION JOINTS AND CONSTRUCTION JOINTS

FLEXJOINT EP is a high-performance expansion joint waterproofing system based on technology developed in Switzerland with a record of application amounting to over 15 years of use. The FLEXJOINT EP range comprises of FLEXJOINT EP 40, 40G, 100, and 240 to accommodate various widths of expansion joints. The FLEXJOINT EP bands are placed over expansion joints and set in epoxy adhesive compatible with concrete, metal, glass, or other construction materials.

Easy Installation
No requirement for raised curbs, loops, U-shaped gutters, or free water flow across the roof.

Simultaneous 3-way Expansion
Can accommodate movements along multiple axes (horizontal, vertical, and shear).

Monolithic Joint
No hand-welding; joined via vulcanisation press, minimising human error.

Reinforced Edges
Strong and stable bonding; unaffected by structural movement.

Elastic Expansion Area
Centrally located expansion area accommodating movement to ±240mm.

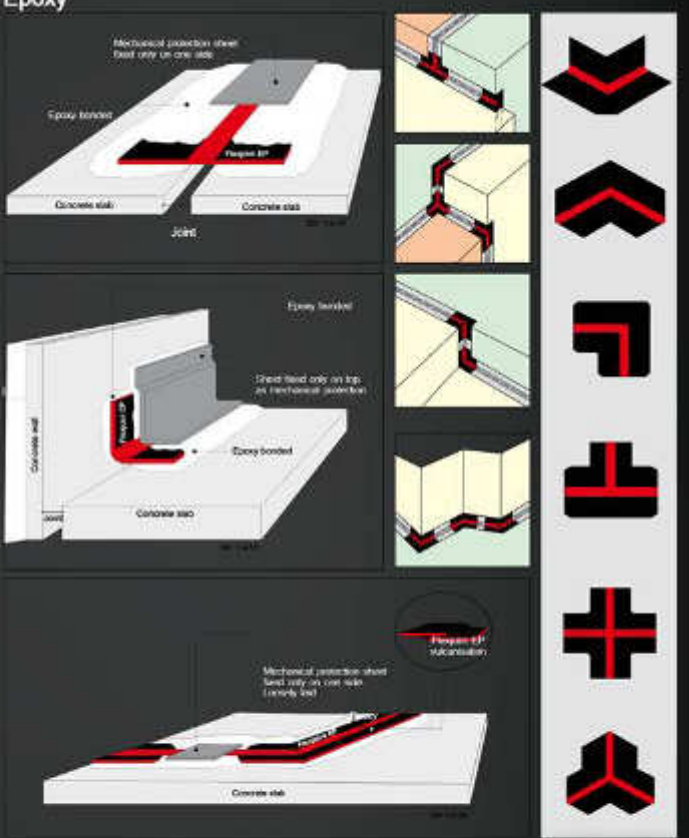
Chemical Compatibility
Compatible with most other waterproofing systems, across various chemical bases.

Fast Installation
Pre-cut rolls to lengths according to site, prefabricated from pieces requiring minimum labour.

Proven Performance
Over 15 years of job references; tested and approved worldwide.

Flexjoint EP — Formpieces

Epoxy



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