

Reports from Discipline Advisory Panels 2008/2009

Biomedical Discipline Advisory Panel

Despite the efforts of the Biomedical Discipline Advisory Panel and Biomedical Division in membership drive, the number of members in the Biomedical Discipline is apparently coming to a standstill and more has to be done to keep it growing. Currently, there are a total of three organisations offering Scheme “A” training programmes in the Biomedical Discipline, namely the Electrical and Mechanical Services Department, the Hong Kong Productivity Council and the Hospital Authority. The Panel is assisting companies from the trade and the industry to set up new Scheme “A” training programmes in the Biomedical Discipline. It is expected that more training places will be made available in due course.

As regards the local biomedical engineering degree courses, the Panel has participated in the accreditation of the Bachelor of Science (Hons) Degree in Biomedical Engineering (Full Time) of the Hong Kong Polytechnic University. The accreditation exercise has not only ensured compliance with the HKIE requirements, it has also provided the Panel with the opportunities to help align the programme design with demands of the real world.

Developments in the field of biomedical engineering continue to be rapid and extensive in scope. The research and development of novel diagnostic technologies in view of pandemic threats such as SARS and Avian flu have galvanised the work for efficient infectious disease control in Hong Kong. With the current threat from the spread of human swine flu (Influenza A H1N1), we look forward to further advancement in evolutions and breakthroughs in biomedical technologies.

Given the Government’s directive to introduce statutory regulation on medical devices with a view to ensuring safety, efficacy and quality, biomedical professionals will continue to play an important role in providing input throughout the legislative process. As demand for qualified biomedical professionals will increase in the transition from the voluntary medical device control regime to statutory regulation, we are looking forward to more degree programmes accredited by the HKIE, and eventually a bigger community of biomedical engineers.

Building Discipline Advisory Panel

The mutual recognition examination was held successfully at the end of last year for members of the Chartered Institute of Building (UK).

Apart from the increase of membership brought along by the mutual recognition examination held in December 2008, there was also a steady growth in membership. During the Session, we have arranged a series of talks to building engineering graduates on the Scheme “A” training and professional assessment.

Visit from the Ministry of Housing and Urban-Rural Development (formerly named Ministry of Construction) and China Association of Engineering Consultants in November 2008 brought us further good news from the Mainland. We were informed that they have activated the mechanism of reciprocal recognition procedure during our re-visit in December 2008. In the meantime, we have carried out a survey through the HKIE on the interest of our members in taking part in the mutual recognition exercise with the Registered Supervising Engineers on the Mainland.

Building Services Discipline Advisory Panel

Session 2008/2009 has turned out to be one of the busiest years for the Panel. Apart from the normal duties to assess membership applications, up-keeping standard for the Discipline and the accreditation of university programmes, the following tasks were performed or continued to progress during the year:

- “Research Study on Hong Kong’s Building Services (BS) Profession – with a View to Enhancing Future Roles and Functions of HK’s Professional BS Engineers”. Final draft report was issued by the Hong Kong Polytechnic University in April 2009 and both the Panel and BS Division are still reviewing this 300-page comprehensive report which may have profound impact on our building services profession.
- “Registered Inspectors (RI) under the Mandatory Building Inspection Scheme” proposed by the Buildings Department (BD). The Panel responded to the BD and requested that members of the BS Discipline should be included in the RI list for this scheme and is awaiting BD’s reply.
- “Registered Fire Engineer (RFE) Scheme for the Implementation of Third Party Fire Safety Certification” proposed by the Fire Services Department (FSD). The Panel has helped the HKIE to give response to the FSD on this scheme and suggested that members of the BS Discipline with suitable fire services experiences be considered to be qualified for application to this RFE scheme in future. The Panel will keep members posted on the progress.
- Comment on the Mandatory Implementation of the Building Energy Codes. Through the support from the HKIE, members of the BS Discipline are now qualified for application as Authorised Engineer under this scheme.
- Continual liaison with our China counterparts on Mutual Recognition Agreement with the Municipal Services Engineers on the Mainland. Preliminary agreement has been reached with the Municipal Services Engineers on the Mainland that our members with suitable design experiences in HVAC, P/D and Power (means boiler or gas power) plus appropriate years of experience can be considered to join this mutual recognition system. A preliminary survey indicated that around 450 members are interested to join this reciprocal scheme. Detailed arrangement is now under review by both parties.

While there is positive progress on the above subjects, the Panel together with the Division and respective task group members would continue to devote substantive work before they could crystallise into concrete results. Our total membership for 2009 stands at 1,317 (with 111 Fellows), up 4.3% compared to last year while Associate Membership is 337 which is 2% behind last year. The Panel is committed to promoting the BS engineering profession to the public and the emerging China market and will continue to pursue this challenge in the future.

Chemical Discipline Advisory Panel

Chemical engineer is considered an engineering specialist because of his/her unique ability in understanding and exploiting energy transfer and chemical change (including energy saving and greenhouse gas emission). Well-trained in the principles of mathematics, physics and chemistry and familiar with all forms of material and energy balance,

chemical engineer is best suited for working in energy and environmental technologies.

Chemical engineering now is applied in energy, environmental, food processing, biotechnology, and pharmaceutical industries. In Hong Kong, chemical engineers work in energy sector, environmental consultancy, training institutes, and firms engaged in research, production, design, process and product developments.

Our activities for Session 2008/2009 included holding of technical seminars about Oil Refinery Plant, Energy and Carbon Audits; career talks for students in the Open University of Hong Kong to explore and gather information about career fields in energy and environmental management, and participating in Distance Run in the Corporate Games 2008 and HK Marathon 2009.

During the Session, the Panel continued to provide advice and support to the Qualification & Membership (Q & M) Board and its associated committees on matters relating to membership qualifications, training and education.

Civil Discipline Advisory Panel

The Civil Discipline Advisory Panel looks after the interest of a significant proportion of HKIE members in terms of qualification, education, training and professional assessment. One key role of the Panel is to advise the Q & M Board and Training Committee on matters related to accreditation of degrees as well as Scheme "A" training which are crucial for creation of engineers in the Civil Discipline and for the well being of Hong Kong.

Each year, we have about 150 candidates seeking for professional assessment. This is the most profound task of the Panel. A considerable amount of time would be needed to handle the administration of all the applicants who aspire to be qualified as Corporate Members of the HKIE.

On inter-institutional affairs, the Panel has been working closely with the Institution of Civil Engineers (ICE) in the past years on joint assessment. Such joint assessment would combine all the applicants of the two Institutions into one assessment hence eliminating differences and simplifying the demand of examiners. Negotiation with the ICE is in progress.

Control, Automation & Instrumentation Discipline Advisory Panel

The Panel continued to provide supports to the Q & M Board and its associated Sub-committees in regard to membership qualifications, training and educational matters. The overall membership has increased by 1% in Session 2008/2009.

Active interaction between the Discipline and the relevant societies on the Mainland continued throughout the year. Representatives of the Panel attended the annual ceremony of the Chinese Instrumentation Society (CIS) held in Shenzhen and the CIS reciprocated the same in February 2009. It is anticipated that closer interaction shall be maintained between the two parties to ensure any policy changes affecting the Institution can be identified for follow-up actions.

On the international front, the renewal of the Reciprocal Recognition Agreements (RRA) between the HKIE and the Institution of Engineering and Technology (IET)/Engineers Australia respectively have been approved which will facilitate the recognition of HKIE engineers working overseas as well as boost up the membership of the Discipline.

Electrical Discipline Advisory Panel

There has been much progress on the Mutual Recognition of Professional Qualifications between the Ministry of Housing and Urban-Rural Development and the HKIE since the 11th joint meeting held on 22 December 2008. The Panel attended the Electrical Discipline Expert Group Meeting with its Mainland counterparts on 4 March 2009 in Shenzhen to further discuss the mutual recognition issue and detailed arrangements of training courses and assessments. Subject to the endorsement of the proposal by the Mainland authority, it is anticipated that the assessment of the first batch of candidates would commence in early 2010.

The Panel conducted a survey in March 2009 on our members' interests to apply for the Mainland qualification via the proposed mutual recognition route. The response rate is about 45% and the result is very encouraging. About 89% of the respondents indicated their interests. Furthermore, the Panel has prepared draft proposals on the outline of the training courses and assessment methods, and submitted to the Mainland authority for consideration. Further meetings with the Mainland counterparts may be needed to finalise the proposals for implementation.

In February 2009, a joint working party consisting of representatives from the HKIE (including the Electrical Discipline) and the IET was formed to discuss the reinstatement of the RRA between the HKIE and IET and the result was fruitful. A signing ceremony for the RRA was held on 4 June 2009.

The Discipline currently has 101 Fellows, 1,276 Corporate Members and 145 Associate Members.

Electronics Discipline Advisory Panel

The Panel had another eventful year for Session 2008/2009. Activities co-ordinated and organised by the Panel included routine professional assessment of applications for membership, assessment and re-assessment of Scheme "A" training, and accreditation of degree courses.

The Panel has participated actively in the recent renewal of the RRA between the IET and the HKIE in the Electronics Discipline.

In the year ahead, we will also look into the "334" education system and prepare for the challenges of future education and training needs.

Environmental Discipline Advisory Panel

Membership quality and professional status are the key focuses of the Panel. The Environmental Discipline remains a relatively small Discipline whereas the membership of Environmental Division is one of the highest, reflecting a keen interest in environmental issues which surpasses opportunities to practise, or the need to obtain the HKIE qualification.

A paper was produced to summarise the outlook and concerns of the Discipline with respect to membership issues, and strategic orientation with respect to membership drive which includes more active introduction of the Discipline to senior practising members who currently do not see the need to join the HKIE or the Environmental Discipline; maintaining a high admission standard for young applicants; and working

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closely with senior management of the Institution to improve the status of Registered Professional Engineers (R.P.E.s) in general, and R.P.E. (ENV) in particular.

A meeting was held between the President, Chairman of the Engineers Registration Board, the Discipline representative and Deputy Discipline representative to discuss the implications of the Indoor Quality Scheme and how it may affect the perceived status of R.P.E. in Hong Kong. Further work and lobbying with senior Government officials will be our on-going task.

A Reciprocal Recognition Agreement (RRA) with the Chartered Institution of Water and Environmental Management of the United Kingdom was signed by the respective Presidents of the Institutions on 6 May 2009, marking a significant step forward in the international reach of the Environmental Discipline.

Assessment for applications for the class of membership of the Environmental Discipline was conducted. One of the applicants was approved under the newly established "Emerging Discipline Route".

Fire Discipline Advisory Panel

Unlike other Disciplines in the HKIE, the Fire Discipline was established in 2005 without a matching Division. As such, for the first two and a half years, Panel members have found themselves fully engaged in both Discipline and divisional activities. The Fire Discipline flourished with a total membership of 338 in June 2009, thanks to the dedication of all Panel members and the strong leadership, as well as the support from many quarters towards this new and promising Discipline.

The formation of Fire Division in June 2008 has drawn in more devoted members from the fire fraternity and thus alleviated much of the burden in publicity and learned society functions, although many Panel members played a dual role in both sectors. Since then, the Panel has concentrated on qualifications and professional assessment matters.

Following the admission of Founding Corporate Members, admission for Founding Associate Members commenced with the admission period open until January 2010.

The Panel also finalised the admission requirements for Corporate Members, including top-up requirements and relevant academic qualifications in local universities. A built-in special feature was the recognition of professional working/training experiences, considering the background of many practitioners and the fact that fire engineering curriculum is not available in local tertiary institutions.

As regards training and professional assessment, the Panel is pleased to note that two engineering firms have been approved for Scheme "A" training.

The Panel continues to work closely with the Government on the Introduction of Registered Fire Engineer Scheme for the Implementation of Third Party Fire Safety Certification. The Fire Services Department has taken a very positive attitude on the views offered by the Panel and has indicated that a revised proposal will be ready for public consultation in not too distant future.

Gas Discipline Advisory Panel

In Session 2008/2009, the Panel processed applications via the RRA route, mature route applications, degree accreditation as well as various issues related to the Discipline.

The Panel also reviewed its membership. New members have been invited into the Panel in the coming Session to extend its coverage. At the same time, the Panel also reviewed the assessor list and more assessors were added to it. Further to the discussion during the last Session, members continued to look into different ways to extend the membership of the Gas Discipline and to set its target.

As in previous years, Panel representatives continued to participate in the Qualification & Membership (Q & M) Board, Registration Committee, Professional Assessment Committee, Education & Examinations Committee, Training Committee and Training Review Sub-committee to provide advice on matters relating to qualifications, membership, reciprocal recognition, professional assessment, education, training and accreditation of engineering programmes.

Geotechnical Discipline Advisory Panel

The Panel and its members exchanged views on issues of the quality of membership and other related matters. The Panel has continued its representation on the Q & M Board and its associated committees on membership, education, training, professional assessment and reciprocal recognition.

To facilitate candidates applying for the Geotechnical Discipline, the Panel reviewed the documents to be submitted by candidates for satisfying the admission requirements laid down in the Admission Requirements for the Geotechnical Discipline. Amendments to the documents were proposed to and approved by the Q & M Board.

Regarding the progress of reciprocal recognition of geotechnical qualification with the Mainland, the Discipline representative took part in the discussions with Mainland officials and counterparts to exchange views and work out details for the reciprocal recognition.

Information Discipline Advisory Panel

During the year, other than the regular functions and activities in serving the Q & M Board and the committees/sub-committees on training, education and examinations, membership, qualification and professional assessments of the Institution, the Panel has initiated the following strategic developments: (1) to pursue the signing of the Seoul Accord for Computer Science degrees, an initiative similar in nature to the Washington Accord for engineering; (2) to work with related Discipline Advisory Panels to re-establish a RRA with the Institution of Engineering and Technology; (3) to work closely with the Electronics Discipline with a view to inviting relevant members of the Electronics Discipline to become members of the Information Discipline; and (4) to enhance the recognition of the HKIE professional qualifications in the Discipline in Information Technology (IT) related job recruitments. The Panel has also worked actively to recruit and assist eligible companies to become Scheme "A" companies so as to enable more formal training opportunities for fresh engineers to develop their careers in IT/information engineering areas. It is the goal of the Panel to make the HKIE become the home for all qualified information engineers and IT professionals in Hong Kong.

Manufacturing & Industrial Discipline Advisory Panel

In the past Session, the Panel continued to serve the Institution by providing advice to various committees on membership, qualification, training, education, examination and other matters within the Manufacturing & Industrial Discipline.

In particular, the Qualification & Membership (Q & M) Board has set up a working group to explore the possibilities in establishing a discipline to cover the professional engineers in the transportation and logistics fields. Ir Dr Li Ying Hung, Deputy Chairman of the Panel, was appointed as the convenor. In the coming Session, the working group will submit a final proposal to the Council for the establishment of this new Discipline.

In the aviation industry, a number of professional aircraft engineers have joined the Manufacturing & Industrial Discipline with the support provided by the Panel. A working group was established by the Q & M Board to explore the establishment of a new discipline on aircraft engineering and the Panel Chairman was appointed as the convenor of the working group. In early March 2009, the working group presented a proposal on the formation of Aircraft Discipline and was endorsed by both the Q & M Board and the Council.

On another issue, the Panel joined with the Manufacturing & Industrial Division in promoting the career of manufacturing and industrial engineering at local universities. We have invited members as well as industrialists to present the career prospects of a professional engineer in the Manufacturing & Industrial Discipline.

The Chairman would like to take this opportunity to thank all members for their dedication, commitments and contributions to the Panel.

Marine & Naval Architecture Discipline Advisory Panel

During the Session, the Panel processed applications for Members of the HKIE and Registered Professional Engineers (R.P.E.s). It also supported and participated in the HKIE corporate video production to promote the benefits of marine & naval architecture.

Two members of the Marine & Naval Architecture (MNA) Discipline were nominated as representatives to serve on the Task Force on Lift Safety.

Led by the Deputy Chairman, the Panel is assessing the programme matching of BEng (Hon) Degree in Product Analysis and Engineering Design Engineering to the HKIE Engineering Graduate Training Scheme "A" in the Discipline.

Panel members continued to strive for the recognition of the MNA Discipline by relevant authorities.

The Chairman and members diligently attended meetings of Board, Committee and Sub-committee of the Institution as required in the Session.

Materials Discipline Advisory Panel

The Panel handled some cases of membership application for the Materials Discipline in the past year. Members of the Panel have continued their effort to promote the Materials Discipline to the general public and explained the relevance of materials engineering to the local community.

Students and graduates of the Materials Engineering Programme at City University of Hong Kong have been encouraged to join the HKIE.

Mechanical Discipline Advisory Panel

In the past Session, the Panel discussed and agreed on various issues in connection with our support and inputs to the Q & M Board, the Registration Committee and various Committees of the HKIE. The 11 members in the Panel representing different sectors within the Mechanical Discipline have proved to be effective in handling 37 cases of applications in the Session.

In addition to performing the Panel's normal work and duties relating to qualification, education, training and professional assessment, the nominated Panel members have continued to serve two Task Forces – one on Mutual Recognition Agreement between the HKIE and National Administration Board for Engineering Registration, and the other on Lift Safety.

As for new additions, we have one Fellow and 31 Corporate Members joining the Discipline in this Session.

The Chairman would like to take this opportunity to thank all Panel members for their dedication, commitment and contributions.

Structural Discipline Advisory Panel

The Panel held bi-monthly meetings to discuss various issues related to the Structural Discipline such as membership, education, training, professional assessment and reciprocal recognition. The Panel Chairman has also represented the Structural Discipline in attending the Q & M Board meetings to provide professional input on behalf of the Discipline.

At the bi-monthly meetings, the Panel vetted applications to join the Structural Discipline, and scrutinised applications to the Engineers Registration Board for registration as R.P.E.s in the Structural Discipline. The Panel would from time to time assess the eligibility of the HKIE-accredited programmes for joining the Scheme "A" training in the Structural Discipline. The arrangement for announcing the Institution of Structural Engineers (IStructE) Part Three Examination results were reviewed by the Panel. In future, the HKIE will arrange with IStructE to inform Hong Kong candidates of their results by email directly, so that they will know their results without any delay. Under the Mutual Recognition Agreement between the HKIE and the Ministry of Housing and Urban-Rural Development (formerly named Ministry of Construction), the Panel and the National Administration Board of Engineering Registration (Structural) of the Mainland jointly organised a series of training and examination sessions in Guangzhou from 18 to 21 September 2008. To assist Hong Kong candidates to prepare for the examination, the Panel also organised a half-day seminar in conjunction with the Structural Division on 13 September 2008 providing guidance on earthquake design for building structures on the Mainland. Of the 70 candidates from Hong Kong who attended the training and examination sessions, 62 successfully obtained the Class I Registered Structural Engineer qualification of China, while 42 out of the 46 Mainland candidates were qualified as MHKIE.

The Panel was in good progress of formulating the proposed professional assessment for the Structural Discipline. The professional assessment would comprise a five-hour written examination and a one-hour professional interview. Graduate Members will be invited to submit applications in July 2009 for professional assessment.