

Reports from Discipline Advisory Panels 2007/2008

Biomedical Discipline Advisory Panel

Following the recruitment of Founding Members of the Biomedical Discipline in 2006, the drive for membership growth has now been focused back on the normal routes including "Formal Training", "General Experience" and "Mature". Currently there are three organisations offering 14 places of Scheme "A" training programmes to university graduates in biomedical engineering. In addition to the promotion initiative to attract more organisations and manufacturers to offer training programmes, there are also continuous membership drive activities to recruit new members.

The rapid growth of biomedical engineering is expected to continue as evidenced by the optimistic forecast within the medical device industry. Such growth is intensified by the aging population and the heightened demand for quality of healthcare services. Indeed, biomedical engineering has gradually migrated from a macroscopic and systemic perspective to a microscopic and cellular one. One example is the recent research and development of novel diagnostic technologies due to the pandemic threats of SARS and avian flu, which aims at overcoming the challenging demand for high sensitivity, specificity and minimal turn-around time, and thus more efficient infectious disease control.

The expeditious advancement of medical technologies has also brought with it a number of challenges, one of them is the concern over the safety and effectiveness of medical devices. The proposed regulation of medical devices and the associated regulatory impact assessment exercise conducted by the Government has raised public awareness and encouraged active involvement of professionals. The Biomedical Discipline will continue to serve as a platform for the exchange of views and ideas among its members and to channel their expert comments to the Government. Furthermore, with the coming statutory regulation of medical devices, the Discipline anticipates that there will be an increasing demand for qualified biomedical engineering professionals in both the public and the private sectors.

Building Discipline Advisory Panel

Last year the membership of the Building Discipline grew about 6% to 325 and the Panel continued to encourage more senior members from building-related disciplines to join the Building Discipline. Noting that there are about 130 Associate Members in the Discipline, ranking the fourth highest number among the 18 Disciplines, and 42 trainees under Scheme "A" training programme, the Panel would revisit the training scheme and professional assessment and collaborate with the Building Division in organising appropriate technical talks and site visits for them.

With the mutual recognition examination successfully held in October 2006 for members of the Chartered Institute of Building (UK), the Panel has planned to hold the second examination for them by end of 2008.

At the 10th joint meeting between the Ministry of Construction (MOC) and the Development Bureau held on 18 January 2008 in Beijing, members of the HKIE Mutual Recognition Task Force successfully invited the delegates from the then MOC and China Association of Engineering Consultants (中國建設監理協會) to visit the HKIE and study the site operations of building engineers in 2008 with a view to finalising the formal arrangements for the mutual recognition exercise of supervising engineers. Members who are interested to join this exercise are required to join the sub-list of the Building Discipline on Project Supervision as a pre-requisite to mutual recognition with the Registered Supervising Engineers on the Mainland.

Building Services Discipline Advisory Panel

In Session 2007/2008, in addition to the normal duties on qualification and membership matters, the major tasks the Panel have performed in the year included the following:

The Panel actively participated in the Task Force on Mutual Recognition Agreement between the HKIE and National Administration Board of Engineering Registration (全國註冊工程師管理委員會), including two working meetings in Beijing. Members of the Specialist Liaison Group of both parties will work more closely together to come up with a set of detailed requirements and conditions to achieve mutual recognition.

The Panel continued to work in close collaboration with the Building Services (BS) Division Committee in giving views and comments on a number of matters and consultation papers that are closely related to our profession, such as Registered Inspectors for Mandatory Building Inspection Scheme, Third Party Fire Safety Certification and Mandatory Implementation of the Building Energy Codes.

Finally, thanks to the great support from members and the industry, the Panel in collaboration with the BS Division Committee has raised sufficient funding to enable the large scale research project as reported last year to commence in September 2007: "Research Study on Hong Kong's Building Services Profession – With a View to Enhancing Future Roles and Functions of Hong Kong's Professional Building Services Engineers in Society". The research team of the Hong Kong Polytechnic University is about to complete the Stage 1 study report by now and will finish the entire study by end of 2008. We will keep members informed of the progress and the research finding in due course.

Chemical Discipline Advisory Panel

The Chemical Discipline Advisory Panel is committed to promoting the chemical engineering to the public. To assist the Panel in delivering various goals of the Discipline, the Panel is very pleased to have an activity supporting team comprising chemical engineering graduates and undergraduates from the Hong Kong University of Science and Technology (HKUST).

The Panel invited chemical engineering students to join the HKIE as Student Member. The Panel explained how chemical engineers in Hong Kong could be beneficial to the local industries and the society and that "chemical engineer is not a chemist who knows how to use a screwdriver!" Chemical engineering deals with industrial processes in which raw materials are changed or separated into useful products without producing effluents and wastes.

The Panel recognises "in short, chemical engineers develop new products, design more effective processes, recover valuable raw materials and protect the environment and our health. In future, chemical engineers will have a vast array of choices when it comes to the industry and type of position they desire. Chemical engineers can contribute to environmental and industrial engineering in cleaner production."

The activities for Session 2007/2008 were highlighted below:

- Technical visit to Dunwell's Oil Refinery Plant;
- Technical seminars on chemical and environmental engineering works; and
- Career talks for students in the HKUST to enhance the image of chemical engineers.



The Panel started a running club with about ten members since June. With the Chairman, Ir Dr Peter Yau, as the volunteer coach, the club was set up to bring together interested runners and to foster a healthy lifestyle among the members. After five months of training, eight of us joined the Distance Run in the Corporate Games 2007 organised by the Leisure and Cultural Services Department on 28 October 2007. Two of us won the Champion of Women's Open Group B and the 2nd Runner-up of Men's Open Group B respectively.

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 consists of 14 members divided into different function groups performing their duties in an interactive manner with various Sections of the HKIE. In essence, the Panel looks after the interest of a significant proportion of HKIE members in terms of qualification, education, training and professional assessment. One key role provided by the Panel is to advise the Q & M Board, the Training Committee and its sub-committees of the HKIE on matters relating to accreditation of degrees as well as Scheme "A" training which are crucial for the membership of engineers in the Civil Discipline.

Civil engineers in Hong Kong play a significant role in infrastructure development and this is indeed reflected by the size of its membership compared with other Disciplines of the HKIE. Each year, the Panel handles some 200 candidates sitting for professional assessment, which is the most profound task of the Panel. A considerable amount of time is needed to handle the administration of all applicants who aspire to become 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 applications of the two Institutions into one assessment, and hence eliminating differences in standard and simplifying the demand of examiners. Negotiation with the ICE continued over the Session and it is expected that such joint assessment would be implemented in the near future. Headed by the Development Bureau, discussions have been started to include the Civil Discipline on mutual recognition with the National Administration Board of Engineering Registration in China.

Control, Automation & Instrumentation Discipline Advisory Panel

The Panel continued to provide support to the Q & M Board and its Sub-committees in regards to membership qualifications, professional engineer registration, training and educational matters. Throughout the period, the Panel members have conducted several accreditation reviews and visits to universities and different campuses of the Hong Kong Institute of Vocational Education offering academic and training qualifications to candidates as potential members to our Institution. During the period, the Corporate Membership of the Discipline has increased slightly by 4.9%.

The interaction between the Panel and the relevant engineering societies on the Mainland such as the Chinese Association of Automation, the Chinese Instrumentation Society in Shenzhen, etc. remains very close throughout the year with attendees from both sides participating in functions organised by the others. These

activities have assisted in maintaining our relationship and network with other groups so as to keep the Panel abreast of the change of policies which may affect our members working on the Mainland.

Electrical Discipline Advisory Panel

The negotiation for the Mutual Recognition of Professional Qualifications between the then Ministry of Construction (MOC) and the HKIE has resumed in January 2008 after a suspension of about one year. The Panel attended the Joint Meeting between the MOC and the Development Bureau on 18 January 2008, followed by the Electrical Discipline Expert Group Meeting with the Mainland counterparts on 14 April 2008 to further discuss the mutual recognition issue. The Panel learned from our Mainland counterparts that they had conducted three professional examinations and about 11,400 candidates had passed the examination but the registration of electrical engineers was yet to commence in due course.

After much deliberation at the meetings, it has been agreed in principle that the requirements of the professional qualification and experience are basically very similar but the professional assessment methods are different and further discussion is considered necessary. The Registered Electrical Engineers on the Mainland are mainly responsible for the design while in Hong Kong, the Registered Professional Engineers/ Corporate Members are responsible for the design, construction, testing and commissioning, operation and maintenance.

The Reciprocal Recognition Agreement between the HKIE and the Society of Operation Engineers on technologist qualification for Associate Members of the HKIE in the Electrical Discipline is being arranged and the draft documents are being drawn up for mutual agreement.

The Discipline currently has 101 Fellows and 1,273 Corporate Members.

Electronics Discipline Advisory Panel

The Panel is pleased to report that there is a steady growth of membership in Session 2007/2008. This was again another productive year for the Panel. The number of Fellow applications for the Discipline membership received during the year almost doubled as compared to last year.

The Panel actively promoted membership in a focused and effective way during the Session. It also coordinated and performed routine activities, which included the professional assessment of applications for membership, and the assessment and re-assessment of Scheme "A" training. The Panel has continued to work closely with the Electronics (EN) Division over the year. This strategy has proved to be effective and the Panel is planning to organise some membership promotion activities targeted at large corporations.

The Panel also put immense efforts in attracting Student Members who will become the new breed of professional electronics engineers to join the Discipline. With full support from the EN Division, the Panel gave professional career development talks to electronics engineering students from all local universities and institutions offering degree, associate degree and higher diploma programmes.

A number of companies participated in the Scheme "A" training programme of the Discipline while many of the degree and sub-degree programmes relating to the Discipline were accredited.

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Environmental Discipline Advisory Panel

The Q & M Board has approved a trial scheme of "Emerging Discipline Route" for the admission of non-accredited degree holders with a minimum of eight years of relevant experiences. The trial period will expire in March 2010. It is encouraging that the HKIE has received the first application under this new route which is now in process.

The Panel held five meetings in the last Session. On behalf of the Panel, the Chairman gave two talks at the HKIE Headquarters on the same subject "Route to HKIE Corporate Membership" with particular reference to Environmental Discipline.

There are a number of issues which require further attention and follow-up actions including the signatories of Indoor Air Quality Certification Scheme, the qualification of the Environmental Officer under ETWB Technical Circular No. 19/2005, Noise Control Ordinance and the Air Pollution Ordinance. The Panel is keen to cooperate with the HKIE's initiative to further discuss with the Mainland on the qualification and examination matters regarding the Environmental Engineer. The Q & M Board has requested the Administration Board to review and clarify the role and responsibility between Discipline and Division for a better development of the Institution.

There are five new applications for the Discipline membership during the year and it is hoped that there will be more qualified members to join the Discipline.

Fire Discipline Advisory Panel

The Fire Discipline Advisory Panel is pleased to report another eventful year for Session 2007/2008. The Panel met six times to deal with applications for Founding Members, refinement for academic qualifications for Normal Route Applicants, including top-up requirements for applicants with non-fire engineering degree programmes, drafting and submission of the model training guide to the Training Committee, admission requirements for Associate Members in Fire Discipline, review of appeal cases and other associated matters. All Panel members have been kept busy in vetting applications as well as conducting professional assessments. Up to the time of writing, over 290 Founding Members have been accepted into the Fire Discipline.

In support of the HKIE Engineering Series in the Classified Post of the South China Morning Post, several members of the Panel were interviewed by the media to introduce the work of fire engineering in Hong Kong. The article entitled "Professionals Who Keep Hong Kong Safe" was published on 29 March 2008.

With a view to keeping the Discipline au fait with international development, the Panel supported and provided advice on a proposal of "Reciprocal Recognition Agreement between the HKIE and the Institution of Fire Engineers, UK (IFE (UK))." An appropriate response has been sent to IFE (UK) in March 2008 and their reply is awaited.

On a number of occasions, the Panel supported the Institution in offering technical advice to enquiries from Government departments, one of which was the response to a consultation paper from the Fire Services Department on the proposed enactment of legislation for Registered Fire Engineers and the Third Party Fire Safety Certification. This subject matter could have a major impact upon the role of fire engineers in the fire safety community, and the Panel is taking an active interest in offering professional views and will closely monitor the progress.

Parallel to the Panel activities, many Panel members have also been assisting in the set up of the Steering Group for the formation of a new Fire Division. Members worked tirelessly against planned milestones in preparatory work after the endorsement of the Learned Society Board and approval of the Council in September 2007. The first Annual General Meeting of the Division took place successfully on 3 June 2008. In addition to the normal recruitment drive for Division members via the *Hong Kong Engineer* and the HKIE website, two promotional seminars were held in March and April 2008, resulting in the enrollment of over 310 members, which was a remarkable achievement indeed.

Gas Discipline Advisory Panel

During Session 2007/2008, Panel members regularly exchanged views in dealing with the professional and qualification issues relating to the Gas Discipline. Panel representatives were nominated to sit on the Q & M Board, Registration Committee, Professional Assessment Committee, Education & Examinations Committee, Training Committee and Training Review Sub-committee to contribute to the discussions and advise on matters pertaining to professional qualification.

In response to the request from Fire Services Department to seek views from the Engineers Registration Board on the use of R.P.E.s under the Dangerous Goods Ordinance, the Panel contributed a very comprehensive and detailed review of the current international standards in testing of oil tanks and proposed the most practical approach that should be adopted.

The Panel addressed the fact that the Gas Discipline ranked the 4th among the smallest disciplines of the HKIE and proposed possible steps to encourage current HKIE members with gas-related skills and experience to seek Gas Discipline as an additional Discipline. In line with the practices of most of the other Disciplines, the Panel developed for the first time the specific additional admission requirements for the Gas Discipline, which would be incorporated into the HKIE Routes to Membership Handbook in due course.

Geotechnical Discipline Advisory Panel

The Panel met four times in Session 2007/2008, in which members exchanged their views on issues of the quality of membership and other related matters. The Panel has continued its representation on the Q & M Board and associated Committees on membership, education, training, professional assessment and reciprocal recognition.

The Panel reviewed the programme of the Master of Science Course in Applied Geosciences offered by the University of Hong Kong to top up Earth Science graduates for the Geotechnical Discipline of the MHKIE. Members of the Panel joined the course committee to help assure the learning quality of students studying for master's degrees. The Panel also reviewed the geotechnical contents of the Part-time BEng (Hons) Degree in Civil Engineering of the Hong Kong Polytechnic University for Scheme "A" Training in the Geotechnical Discipline.

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



Information Discipline Advisory Panel

During Session 2007/2008, 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 continued its effort to promote different routes for membership of the Discipline, including the new route for degree holders of applied science in nature who have qualified working experience in Information Technology (IT) and Information engineering areas. In this regard, presentations and Q&A sessions on the entry requirements for membership were given by the Chairman at occasions organised by the IT Division and the Hong Kong Science Park. The Panel also continued its effort in assisting eligible companies to become Scheme "A" companies so as to enable more formal training opportunities for fresh engineers to develop their careers in IT and Information engineering areas. It is the goal of the Panel to enable the HKIE to become the professional home for all qualified Information engineers and IT professionals in Hong Kong.

Manufacturing & Industrial Discipline Advisory Panel

In Session 2007/2008, the Panel held two meetings and continued to serve the Institution by providing advice to various Committees on membership, qualification, training, education, examinations and other matters within the Manufacturing & Industrial Discipline.

In particular, the Q & M Board has set up a task force to explore the "Logistics" engineering. Ir Dr Li Ying Hung, Deputy Chairman of the Panel, was appointed as the convenor. The objective is to study the possibilities in establishing a discipline to cover the professional engineers in the logistics area.

In the aviation industry, the Panel continued to provide support and facilitated a number of professional aircraft engineers to join the Discipline. Another task force was also established by the Q & M Board to explore the establishment of a new discipline for the aircraft maintenance engineers. The Panel Chairman was appointed as the convenor of the task force.

Finally, the Panel is now reviewing the indicative areas of practice. It is proposed to study the current education programme and industrial practice and to update the indicative areas of practice if necessary.

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

Marine & Naval Architecture Discipline Advisory Panel

In Session 2007/2008, Panel members held two meetings to discuss matters relating to the Marine & Naval Architecture (MNA) Discipline and did three interviews for the application of the Discipline and five R.P.E. (MNA) registrations.

By the invitation of Ir Dr the Hon Raymond Ho, a meeting was held on 5 May 2008 between the Deputy Director of Marine, Mr Francis Lui and the Panel Chairman, with the attendance of Mr Albert Chow, Registrar of the Engineers Registration Board (ERB) and representatives of both sides to discuss on how to formulate a solution to lower the appointment standard of Authorised Surveyors.

The Panel Chairman also represented the Discipline to attend the meeting of the Registration Committee of the ERB and the Q & M Board.

Materials Discipline Advisory Panel

The Panel has dealt with a few cases of application to membership of the Materials Discipline in the past year, including cases with non-engineering degrees. In an effort to promote the Materials Discipline to the general public, the Chairman and some other members explained the relevance of Materials Engineering to the community in an interview with the South China Morning Post (SCMP). The article was published in the SCMP on 10 November 2007.

The Panel will continue to encourage students and graduates of the Materials Engineering Programme at City University of Hong Kong to join the HKIE.

Mechanical Discipline Advisory Panel

In Session 2007/2008, the Panel held two meetings to discuss and agree on how to improve our services and support to the Q & M Board, the Registration Committee and various Committees of the HKIE. The exchange of views on how to assist newly joined members to become versed in handling the Panel's matters deemed to be fruitful and supportive.

In addition to discharging the Panel's normal roles and duties, the nominated Panel members have continued to serve the Task Force on Mutual Recognition Agreement between the HKIE and National Administration Board of Engineering Registration.

The Chairman would like to take this opportunity to thank those retiring Panel members for their dedication, commitment and contributions to the Panel in this Session.

Structural Discipline Advisory Panel

In this Session, the Panel held three meetings to discuss various issues regarding professional practice and Reciprocal Recognition Agreement (RRA) Examination between Class I Registered Structural Engineers on the Mainland and members of the Structural Discipline. 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.

The RRA Examination was held in Guangzhou from 14 to 16 December 2007. 75 members of the Structural Discipline have taken the joint assessment examination. The passing rate was about 95%.

The Panel Chairman, together with the Director of Qualifications cum Registrar of the HKIE, met the Director General of the National Administration Board of Engineering Registration (Structural) on 19 February 2008 in Shenzhen. The meeting was to discuss the RRA Examination results for 2007 and the arrangement of the 4th RRA Examination. It was agreed that the forthcoming RRA examination would be held from 18 to 21 September 2008 in Guangzhou. As the RRA agreement was obtained under the Closer Economic Partnership Agreement (CEPA), it is expected that the RRA Examination 2008 would be the last one under the current CEPA. Members of the Structural Discipline with not less than five years of post-qualification experience have been strongly recommended to take the examination in September 2008 to become a qualified Class I Registered Structural Engineer of the People's Republic of China if they have not yet done so.