

Hong Kong Council for Testing and Certification

Report for 2019-20



Foreword

I am pleased to report the work of the Council for the period April 2019 – March 2020.

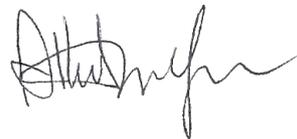
In the past year, we continued to put focused efforts in strengthening manpower development of the testing and certification sector. The Panel on Manpower Development has made good progress in enhancing youngsters' understanding of the diverse job exposure and career development opportunities of the testing and certification sector. We have completed the production of a new set of manpower resource package and a series of short videos, which introduce different work aspects and job positions in testing and certification. Through interesting real-life stories of our young practitioners, these new materials help demonstrating to the youngsters, parents and teachers mission and value of the sector, and how it is safeguarding our everyday life.

As for new business opportunities for the testing and certification sector, a new CEPA agreement was signed in November 2019 to amend the previous Agreement on Trade in Services. Qualified testing organisations in Hong Kong would be allowed to conduct testing for products requiring China Compulsory Certification (CCC) that are processed or manufactured anywhere in the world. This is the first time that the geographic scope of CCC-related liberalisation measures is extended beyond China. It is hoped that our testing laboratories, with good international network, could exploit new potential with such new coverage. On CCC factory inspection that may be undertaken by qualified certification bodies in Hong Kong, the coverage has also been extended from manufacturers located in the China (Guangdong) Pilot Free Trade Zone to manufacturers anywhere in the Mainland. Selection of post-certification test samples at factories has also been added as a new task under the liberalised regime. All these new measures would come into effect in June 2020. On the other hand, we have lined up our local testing and certification bodies to attend the high-level China Quality Conference, held in Shenzhen in December 2019. Representatives of our local bodies made use of this opportunity to exchange views with Mainland stakeholders on how Hong Kong's testing and certification sector could contribute to enhancing Mainland's product quality.

On other potential areas, I am pleased to note that in September 2019, the BEAM Society launched the new version of BEAM Plus New Buildings. By awarding credits to the use of certified construction materials, it would help incentivise private developers and their suppliers to make good use of construction materials product certification. As for the Chinese Materia Medica Product Certification Scheme under refinement by the Hong Kong Productivity Council, it has come to a stage of preparing for a pilot run. It would engage testing and certification bodies as well as Chinese medicines traders to try using the improved scheme to identify authentic Chinese herbal medicines.

On the promotion front, we have seized a new opportunity to introduce the local sector's services to potential users in the Greater Bay Area through participation in the "Chic Hong Kong" trade show, a new Hong Kong Trade Development Council's event held in Guangzhou in January 2020. Locally, we have provided schools with more comprehensive information on ISO 22000 food safety management system certification, encouraging them to select certified lunch suppliers. In addition, we have completed publication of a series of 30 comic strips to introduce to the general public, in a lively manner, the capability of our testing and certification sector. The comics have been compiled into a booklet to facilitate further distribution through both online and offline channels.

All the above has been achieved with collaborative efforts of many parties. I would like to express the Council's gratitude to all testing and certification bodies, trade and professional associations, tertiary institutions, public bodies and government departments which have supported our work in the past year. The coming year would be very challenging for everyone due to the COVID-19 epidemic. Nonetheless, it has aroused public's interest in testing and certification as we are all looking for quality protective gears. We would take this opportunity to strengthen our efforts in educating the public the importance of the services provided by our sector. I am confident that with collaboration of all our stakeholders, Hong Kong's testing and certification sector would continue to contribute to assuring product quality and safety and help reviving our economy.



Professor YU Cheung-hoi, Albert
Chairman
Hong Kong Council for Testing and Certification
8 May 2020

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Abbreviations Used

APAC	Asia Pacific Accreditation Cooperation
BEAM	Building Environmental Assessment Method
CCC	China Compulsory Certification
CEPA	Mainland and Hong Kong Closer Economic Partnership Arrangement
CMM	Chinese Materia Medica
EMC	Electromagnetic Compatibility
HKAS	Hong Kong Accreditation Service
HKPC	Hong Kong Productivity Council
HKTDC	Hong Kong Trade Development Council
HKTIC	Hong Kong Association for Testing, Inspection and Certification
ICAC	Independent Commission Against Corruption
ILAC	International Laboratory Accreditation Cooperation
ITC	Innovation and Technology Commission
LEP	Local Exhibition Programme
MOEP	Mainland and Overseas Exhibition Programme
OUHK	The Open University of Hong Kong
PT	Proficiency Testing
SSSDP	Study Subsidy Scheme for Designated Professions/ Sectors
VTC	Vocational Training Council

I. HONG KONG COUNCIL FOR TESTING AND CERTIFICATION

- Established in 2009 by the Government
 - A non-statutory advisory body
 - Terms of reference:
To advise the Chief Executive on –
 - (a) The overall development strategy of the industry;
 - (b) New business opportunities worth exploring for the industry, having regard to latest developments in the Mainland and overseas markets; and
 - (c) Measures needed to raise the professional standing and community awareness of the industry.
- Annex 1 ➤ Members for the terms of 2018-19 and 2020-21 are at Annex 1

OUR VISION

To develop Hong Kong into a testing and certification hub in the region by reinforcing the branding of 'Tested in Hong Kong, Certified in Hong Kong'.

OUR ROLE

- Act as a focal point of contact among all stakeholders, including the testing and certification industry itself, the related industries, providers of supporting services, etc.
- Assist the industry to explore new business opportunities.
- Coordinate effort by the industry to best dovetail Government policy objectives.
- Promote acceptance of Hong Kong's testing/inspection reports and certificates by overseas/Mainland governments.
- Enhance manpower development and professionalism in the industry.

OUR STRATEGY

Adopt market-oriented approach to promote the development of the testing and certification industry.

II. INDUSTRY PROFILE (2018 FIGURES¹)

Number of Establishments

2.1 There were 830 establishments in Hong Kong engaging in testing, inspection and certification activities in 2018, of which 730 were private independent establishments –

Category	Number
Private independent establishments engaging in testing, inspection and certification activities as their major economic activity	730
Manufacturers and exporters engaging 100 persons or more and with in-house laboratories for testing activities	40
Laboratories in government departments/public organisations (including those in the hospitals of the Hospital Authority and those accredited by Hong Kong Accreditation Service in local universities)	60
Total	830

Size of Private Independent Establishments

2.2 The vast majority (95%) of the private independent establishments were small and medium enterprises engaging fewer than 50 persons. They accounted for 35% of the total persons engaged and 33% of the total business receipts in the industry.

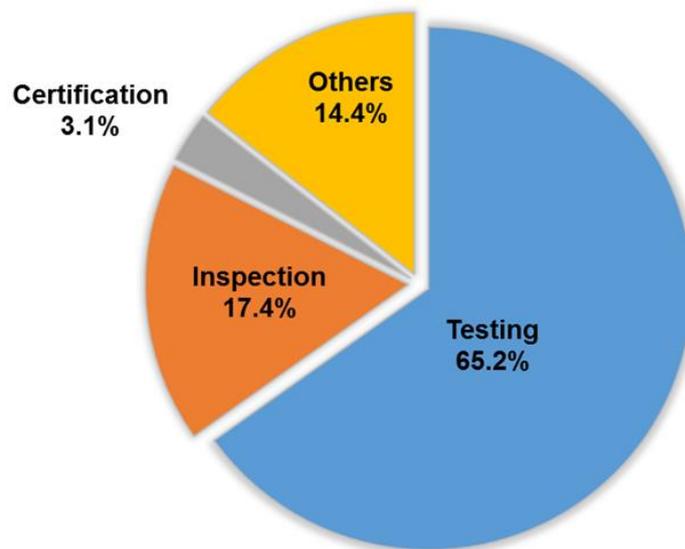
Persons Engaged

2.3 The number of persons engaged in testing, inspection and certification activities was around 18 690 in 2018, of which 14 620 persons were engaged by private independent establishments. About 6 940 (47% of 14 620) were professionals and associate professionals whose main duties were to provide testing, inspection and certification services in the private independent establishments.

¹ Based on a survey conducted by the Census and Statistics Department.

Business Receipts

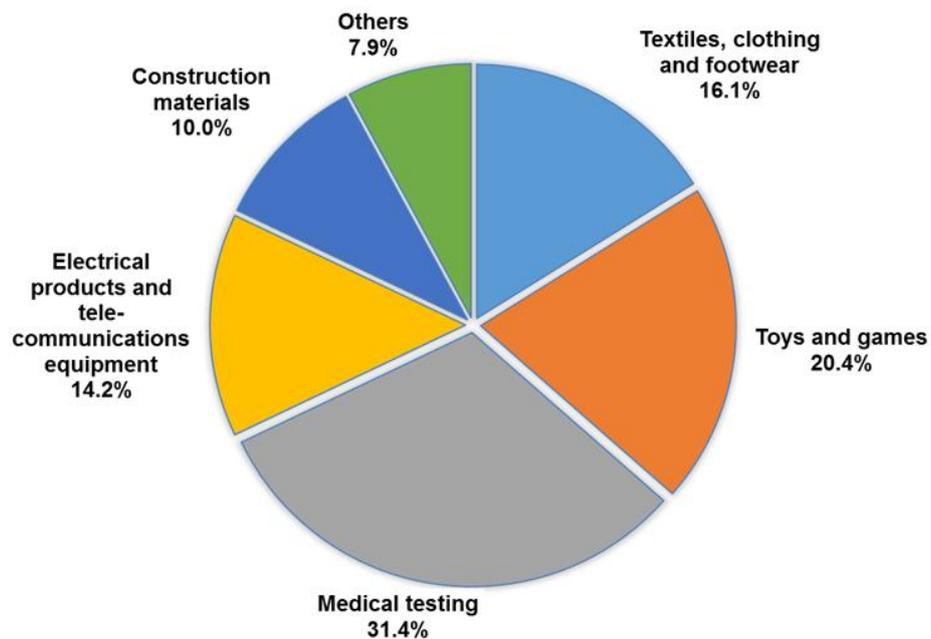
2.4 The total business receipts of private independent establishments in the industry were \$15.6 billion in 2018. The direct economic contribution to Hong Kong's Gross Domestic Product was \$7.7 billion. Breakdown of the business receipts are shown below:



2018

Business receipts by type of services

(Note : Percentages add up to more than 100% due to rounding.)



2018

Further breakdown of business receipts from testing services

III. IMPROVEMENT ON THE GENERAL FRONT

3.1 Efforts for improvement on the general front cover two major aspects – accreditation service and factors of production of the testing and certification sector.

Accreditation Service

3.2 The Hong Kong Accreditation Service (HKAS) under the Innovation and Technology Commission (ITC) continues to provide high-quality accreditation service, meeting the needs of the local testing and certification sector. Given that the Environmental Protection Department has updated its Indoor Air Quality Certification Scheme for Offices and Public Places in 2019, HKAS has extended its accreditation service to cover the related new inspection activities. In addition, HKAS is preparing to extend its accreditation service to cover medical examinations based on next generation sequencing.

3.3 To ensure high professional standards in delivering accreditation service, HKAS continued to arrange training workshops and courses for its staff and assessors. For instance, training workshops on medical testing accreditation and equipment calibration were conducted in 2019.

Factors of Production

Manpower

3.4 In 2019-20, the Council continued to take a more focused approach in helping to attract new blood for the testing and certification sector. It also continued its efforts in enhancing the capabilities of industry practitioners.

Attracting new blood

3.5 To help attract youngsters to join the testing and certification sector, the Panel on Manpower Development² under the Council has produced a new set of manpower resource package. It contains five brochures which present the profile and possible career pathway of the sector as well as real-life stories of selected testing and certification practitioners. Five

² Terms of Reference and Members of the Panel are at Annex 2.

videos have also been produced to showcase the interesting stories of testing and certification practitioners. These publicity materials have been uploaded to the Council's website in January 2020 and would be disseminated at career booths/talks, career expo, youth and career-related portals.

3.6 The Council has continued to arrange a wide range of activities in 2019-20 to enhance students' understanding and interest in the testing and certification sector –

- (a) three career talks and nine laboratory visits were organised for university and secondary students, and a promotional booth was set up at The Hong Kong University of Science and Technology Career Mosaic with support from HKAS and industry practitioners. The Council and five testing and certification organisations respectively participated in the Virtual Career Fair of the University of Hong Kong, and the Hong Kong Baptist University. The Council has also prepared to participate in the Education and Careers Expo, which has been rescheduled from February 2020 to a later time this year;



Career Talk, Laboratory Visit and Career Booth for Students

- (b) co-ordination of internship opportunities was made for Summer 2019. More than 130 internship places offered by accredited organisations were relayed to the Vocational Training Council (VTC)/ local universities, and uploaded to the Council's website;
- (c) the Council and HKAS delivered two talks on accreditation, testing and certification to tertiary students.

3.7 The tertiary education sector has continued to offer courses dedicated to testing and certification, ranging from sub-degree to postgraduate levels. In particular, the Open University of Hong Kong (OUHK) will turn its full-time Bachelor of Science Programme in Food Testing Science from a top-up to a four-year course in the 2020/21 academic year.

3.8 Starting from the 2018/19 academic year, the Government has regularised the Study Subsidy Scheme for Designated Professions/Sectors (SSSDP), to subsidise students to pursue designated full-time locally accredited self-financing undergraduate programmes in selected disciplines with keen manpower demand, including the testing and certification sector. SSSDP has extended its coverage to OUHK’s Bachelor of Science with Honours Programme in Testing Science and Certification in the 2020/21 academic year, in addition to OUHK’s Bachelor of Engineering with Honours Programme in Testing and Certification.

Enhancing the capabilities of practitioners

3.9 The Council, HKAS, VTC and the Government Laboratory organised around 20 seminars, workshops, short courses and other training events for practitioners in the testing and certification sector in 2019-20.



Seminar

3.10 Given that integrity is a cornerstone to the success and further development of the testing and certification sector, the Council, for many years, has been working closely with the Independent Commission Against Corruption (ICAC) and other stakeholders to promote integrity among industry players. In June 2019, the Council and the ICAC jointly organised a seminar on “Professional Ethics and Integrity in Testing and Certification” to highlight the importance of maintaining and upholding integrity and credibility.

Capital and Technology

3.11 The “Lab Test One” initiative jointly launched by the Hong Kong Productivity Council (HKPC) and the Hong Kong Science Park has enabled private testing laboratories to make use of laboratory facilities in the public sector for a reasonable fee. As of March 2020, “Lab Test One” covered 36 laboratories, which includes HKPC’s new multi-functional anechoic

chamber. Local testing laboratories can make use of this new chamber to conduct electromagnetic compatibility (EMC) tests pursuant to the latest regulatory requirements in Europe and US, and carry out EMC tests for Internet of Things (IoT) equipment, wireless devices, medical equipment and robots.

3.12 Proficiency testing (PT) is crucial for the upholding of technical capability of our laboratories. In 2019-20, the Government Laboratory has organised three PT programmes on safety testing of food products, viz. boric acid in food, propionic acid in flour confectionery and toxic metal/metalloid species in powdered rice. It has also organised a PT programme on assay of Chinese Materia Medica (CMM)³ and another one on assay of chemical markers in Chinese medicinal oil.

Premises

3.13 The “Nil Waiver Fee” measure has been introduced in 2016 to facilitate the operation of testing and calibration laboratories in industrial buildings. Upon approval of application, the Government will exempt the waiver fees that would otherwise be chargeable for issuing waivers to allow the use of such laboratories under a general industrial land lease. The Council’s Secretariat has continued to support the Lands Department in implementing this measure.

³ The CMM covered in proficiency testing programme are *Atractylodis Rhizoma* (蒼朮) and *Forsythiae Fructus* (連翹).

IV. NEW OPPORTUNITIES IN DIFFERENT BUSINESS AREAS

4.1 In 2019-20, the Council has continued to promote testing and certification services in different business areas and explore new opportunities.

Promotion of New Testing and Certification Services

4.2 The BEAM Society, owner of Building Environmental Assessment Method (BEAM), launched the BEAM Plus New Buildings v.2.0, an upgraded assessment tool for sustainability performance of new buildings, in September 2019. In the new version, credits would be given for the use of building materials certified to a product certification scheme. This new move is expected to give more incentive to the construction industry in adopting construction materials product certification. To enhance stakeholders' understanding on how product certification could improve construction and building quality, the Council organised a seminar in November 2019, attracting over 120 attendees.

4.3 The HKPC has earlier developed a product certification scheme for CMM to help users identify safe and authentic CMM. To better meet the trade's need, HKPC has kick-started in January 2019 a scheme refinement exercise. HKPC would conduct a pilot run on the refined arrangement in the coming year.

The Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA)

4.4 Continuous efforts are being made to further liberalise the Mainland market for Hong Kong's testing and certification sector.

4.5 In November 2019, an Agreement was signed between Hong Kong and the Mainland to amend the CEPA Agreement on Trade in Services. Starting from 1 June 2020, the scope of China Compulsory Certification (CCC) testing that could be undertaken by qualified Hong Kong testing organisations in collaboration with designated Mainland organisations would be extended to cover all products manufactured or processed in any place, including places outside China. The scope of CCC factory inspection that could be undertaken by qualified Hong Kong certification bodies in collaboration with designated Mainland organisations would also be expanded to CCC product manufacturers in the whole Mainland. Furthermore, qualified Hong Kong certification bodies could undertake the

new task of selection of post-certification test samples at CCC product manufacturers in the whole Mainland.

4.6 The Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area promulgated in February 2019 mentions supporting Greater Bay Area enterprises in using services of Hong Kong such as testing and certification. In this connection, the Council participated in the “Chic Hong Kong” trade show, a new event organised by the Hong Kong Trade Development Council (HKTDC), which was held in Guangzhou in January 2020 to introduce Hong Kong’s testing and certification services to potential Mainland users. Moreover, the Council has rendered support to the Hong Kong Association for Testing, Inspection and Certification (HKTIC) in studying testing and certification development opportunities in the Greater Bay Area. With government funding support, HKTIC has kick-started the study in early 2020.

4.7 The Third China Quality Conference, co-hosted by the State Administration for Market Regulation, the Guangdong Provincial Government and the Shenzhen Municipal Government, was held in Shenzhen in December 2019. This is China’s highest level conference on quality. We have lined up our local testing and certification bodies to attend this event. Representatives of our local bodies made use of this opportunity to exchange views with Mainland stakeholders on how Hong Kong’s testing and certification sector could contribute to enhancing Mainland’s product quality.

V. SEEKING WIDER RECOGNITION OF HONG KONG'S ASSESSMENT RESULTS

5.1 HKAS has been participating actively in the international accreditation community. In May 2019, HKAS hosted a training workshop for member bodies of the Asia Pacific Accreditation Cooperation (APAC) on the use of ISO 15189 for the accreditation of medical testing laboratories. Besides, HKAS contributed two articles to the newsletters of International Laboratory Accreditation Cooperation (ILAC) in 2019.

5.2 Through the multilateral mutual recognition arrangements administered by APAC, ILAC and the International Accreditation Forum, endorsed reports and accredited certificates issued by HKAS-accredited organisations are now recognised by 105 accreditation bodies in 102 economies, including Hong Kong's major trading partners. In October 2019, HKAS successfully extended its signatory status under ILAC Mutual Recognition Arrangement to cover Proficiency Testing Providers accreditation.

VI. PROMOTION

Enhancing Different Sectors' Understanding of the Benefits Brought by Testing and Certification

6.1 The Council has continued to promote the brand of “Tested in Hong Kong, Certified in Hong Kong”, and introduce to different industries the value that testing and certification could bring to them.

6.2 In the past year, the Council has continued to promote accredited testing and certification services to target users. For instance, we have beefed up the information regarding accredited ISO 22000 food safety management system certification in the updated version of the Handbook of Selection of Lunch Suppliers published by the Department of Health, with a view to encouraging schools to select lunch suppliers which had obtained such certification. In a training session held in January 2020, we introduced to civil servants how accredited testing services could help assure the quality of goods procured.

6.3 In 2019-20, the Council set up promotional booths in 13 trade fairs in Hong Kong, three in the Mainland and two overseas, targeting a wide range of business areas. With assistance of the HKTIC, we arranged 11 seminars to promote testing and certification services to local, Mainland and overseas buyers and manufacturers attending these trade fairs. The HKTDC has also assisted the Council by displaying promotional materials at 19 trade fairs outside Hong Kong. Advertisements were placed in several HKTDC publications including the Enterprise, HKTDC Medical Devices and Supplies Magazine and HKTDC World SME Magazine.

6.4 During the year, the Council continued pursuing the Local Exhibition Programme (LEP) as well as the Mainland and Overseas Exhibition Programme (MOEP) by inviting testing and certification bodies to join our booths at selected trade fairs. The Council was responsible for the booth rental, design and production costs, whereas the testing and certification bodies were only required to deploy their staff at the booth to assist in promoting the strengths of Hong Kong's testing and certification services. For LEP, there were respectively three, four and two testing and certification bodies joining us at the Hong Kong Fashion Week for Spring/Summer, the Hong Kong Food Expo and the International Lighting Fair (Autumn Edition). As for the MOEP, four testing and certification bodies joined our booth at the China Hi-tech Fair held in Shenzhen in November 2019 while five participated in the Spielwarenmesse International

Toy Fair held in Germany in January/ February 2020. The arrangement has been well received by the local testing and certification bodies, which consider it a good opportunity to make contact with potential clients and enhance Hong Kong testing and certification sector's presence in the international arena.

6.5 In the past year, the Council published 14 advertorials in newspapers, covering a wide range of topics such as latest development in certification, food certification, underground utility survey, greenhouse gas quantification, toy, environmental and textile testing services, etc. Two issues of HKCTC Newsletter were published in July 2019 and January 2020 respectively, with feature stories on the important role that materials engineers play in the testing and certification sector, as well as how the Electrical and Mechanical Services Department had capitalised the benefits of testing and certification to improve service quality.

Enhancing Industry Profile and General Awareness

6.6 To convey the importance of testing and certification to the general public in a lively manner, the Council has produced a series of 30 comic strips. They have been published in a free newspaper, two newspaper mobile apps and our comic booklet.

6.7 Being one of the working partners of the "Science in the Public Services" (科學為民) Programme, the Council arranged a public talk titled "Measurements and Our Daily Life – Introduction to the International System of Units (SI)" which was held in the Science Museum in November 2019.

6.8 In the light of the success of arranging summer activities for secondary school students in 2018, we organised 12 sessions of "Summer Laboratory Workshops on Chemical Testing for Senior Secondary School Students" between June and July 2019. Around 360 students from 25 secondary schools participated and they were given practical experience to apply their Chemistry knowledge on testing using the teaching kit earlier developed by the Council.

6.9 The Council has again collaborated with the Hong Kong Association for Science and Mathematics Education to organise the fourth Digi-Science Video Production Competition. A briefing on this year's theme "Testing Science in Daily Life – Textile & Clothing" was held in November 2019 for the participating students. In collaboration with the Hong Kong New

Generation Cultural Association, the Council sponsored, for the fourth time, the HKCTC Special Award for the best testing-related entries joining the Hong Kong Youth Science and Technology Innovation Competition 2019-20. The results of both competitions would be announced later in 2020.

Annex 3 6.10 Photos showing the Council's various promotion initiatives are enclosed at **Annex 3**.

VII. SUPPORT TO THE COUNCIL

Secretariat Support

7.1 The Council is served by the secretariat as its executive arm, which is staffed by 11 members under the permanent establishment of the ITC.

Resources

7.2 The Government provides financial support to the Council in the implementation of its initiatives. In 2019-20, the expenditure incurred was approximately \$5.6 million (excluding staff emolument⁴).

⁴ All personal emoluments and personnel related expenses of the staff in the Secretariat are met by the ITC from its recurrent operating expenditure.

**Members of
Hong Kong Council for Testing and Certification
(1 January 2018 – 31 December 2019)**

Chairman

Professor YU Cheung-hoi, Albert

Members

Ir CHAN Kin-sek, Raymond

Mr CHAN King-wa, Felix

Mr CHAN Wai-fung, Raymond

Ir HO Chi-shing

Professor HO Kin-chung

Mr HSU Tsun-fai, Marvin

Mr KO Kwok-on, Andy

Mr LAM Kar-kin, Kenneth

Ms LAM Yuen-shan, Stephanie

Dr LI Hung-wing

Ms NARDI Kar-wai, Agnes

Ms TANG Mui-fun, Karen

Ms TSE Pui-pui, Pearl

Mr WAI Siu-bong, Basil

Mr YEUNG Chi-wah, Harry

Dr YUNG Wai-hung, Raymond

Executive Director of Hong Kong Productivity Council or representative

Executive Director of Hong Kong Trade Development Council or representative

Executive Director of Vocational Training Council or representative

Government Chemist or representative

Commissioner for Innovation and Technology or representative

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Ms LAM Yuen-shan, Stephanie

Mr LEE Sai-yin, Patrick

Dr Ann LEUNG

Mr LEUNG Yuk-wai, Kenneth

Dr LO Kam-wing, Wingco

Ms TANG Mui-fun, Karen

Ms TANG Wai-fan, Fanny

Ms TSE Pui-pui, Pearl

Mr WAI Siu-bong, Basil

Professor WONG Wing-tak

Mr YEUNG Chi-wah, Harry

Dr YUNG Wai-hung, Raymond

Executive Director of Hong Kong Productivity Council or representative

Executive Director of Hong Kong Trade Development Council or representative

Executive Director of Vocational Training Council or representative

Government Chemist or representative

Commissioner for Innovation and Technology or representative

Panel on Manpower Development

Terms of Reference

- a) To serve as a platform for stakeholders to exchange views on the manpower development need of the testing and certification sector
- b) To promote cooperation among stakeholders to nurture the manpower needed by the testing and certification sector
- c) To consider ways to strengthen the manpower resource to support the testing and certification sector
- d) To promote awareness of professional development of testing and certification personnel

Members (27 June 2018 – 31 December 2019)

Convener

Mr CHAN King-wa, Felix

Members

Professor HO Kin-chung

Mr LAM Chun-hong, Dominic

Mr LAM Kar-kin, Kenneth

Ms LAM Yuen-shan, Stephanie

Dr LAU Hing-keung, George

Mr Trevor LEE

Dr LI Hung-wing

Dr LO Yiu, Tommy

Professor MAK Yiu-wing, Joseph

Ms NARDI Kar-wai, Agnes

Ms TSE Pui-pui, Pearl

Mr YAU Kwok-keung, Daniel

Mr YEUNG Chi-wah, Harry

General Manager, Qualifications Framework Secretariat or representative
Executive Director of the Vocational Training Council or representative
Secretary-General, Hong Kong Council for Testing and Certification

Members (1 January - 31 December 2020)

Convener

Mr CHAN King-wa, Felix

Members

Ir HO Chi-shing

Mr LAM Kar-kin, Kenneth

Ms LAM Yuen-shan, Stephanie

Dr LAU Hing-keung, George

Mr Trevor LEE

Mr LEUNG Yuk-wai, Kenneth

Dr LO Yiu, Tommy

Professor MAK Yiu-wing, Joseph

Ms TANG Wai-fan, Fanny

Ms TSE Pui-pui, Pearl

Professor WONG Wing-tak

General Manager, Qualifications Framework Secretariat or representative

Executive Director of the Vocational Training Council or representative

Secretary-General, Hong Kong Council for Testing and Certification

Efforts of Hong Kong Council for Testing and Certification in Promoting Hong Kong's Testing and Certification Sector



Resource Package



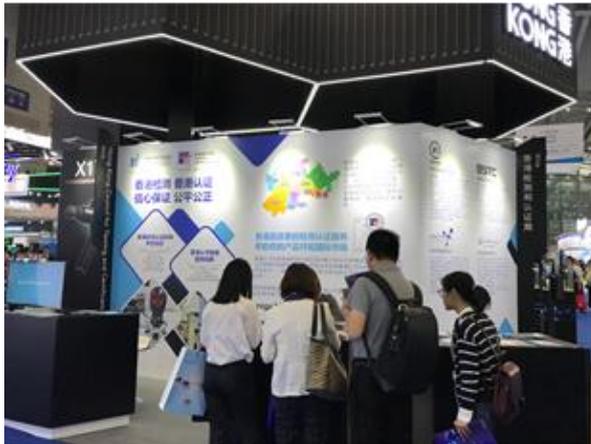
Promotional Videos



Food Expo



Fashion Week



China Hi-tech Fair



Chic Hong Kong

HKCTC Newsletter
香港檢測和認證局通訊
Issue No.4 July 2019
第4期 2019年7月

Cover Story 封面故事

Materials Engineers – Professionals in Testing and Certification Sector Upholding Quality of Construction
被測認證業專業材料工程師 為建造工程安全及品質把關

In recent years, infrastructure and construction projects in Hong Kong are being carried out in full swing. The quality of the construction materials used and the strictness of the quality control procedures form an essential part of the safety and quality of these projects. Unbeknownst to many people, such high standard is being upheld by a group of professionals working in the T&C sector, namely materials engineers.

In this issue, we are honored to have Dr Professor Joseph Mak, Chairman of Materials Council of Hong Kong Institution of Engineers (MCE), to share with us the contributions made by materials engineers in ensuring the overall safety and quality of construction projects in Hong Kong, and ways to gain recognition of the qualifications for these professionals.

Expert in assuring quality of construction works
Materials engineers are the experts who can apply their materials science, technology and engineering knowledge to meet engineering challenges through the use of advanced and reliable materials. They are engaged in a wide variety of fields, from management of construction, material balance and laboratories, to certification and audits, and research and development.

Dr Professor Mak explained, "There are around 700 materials engineers in Hong Kong. The organizations they work for are diverse, ranging from government departments, works consultants and contractors, accredited laboratories, construction materials factories and certification bodies. All of these organizations have one thing in common – being responsible for the quality control of construction materials, which in turn brings out the core work of a materials engineer."

Based upon international and local standards, materials engineers supervise comprehensive on-site or laboratory tests on construction materials to see if they meet the relevant requirements. In addition, they participate in the entire production and construction process by checking the operation and making sure the products are being produced and assembled according to standards.

Professor Mak pointed out, "Construction work involves numerous processes including planning, design, audit, production

HKCTC Newsletter
香港檢測和認證局通訊
Issue No.5 January 2020
第5期 2020年1月

EMSD leverages the advantages of testing and certification to provide quality services
機電工程署善用檢測認證 致力提供優質服務

As opposed to the traditional government "one funding" model, Electrical and Mechanical Service Department (EMSD) operates as "Testing Fund" mode in which the department acts as operating funds by providing electrical and mechanical (E&M) services to other government departments and public sector organizations. On the other hand, EMSD takes on an important role as enforcement of legislation related to electricity, gas, lift, escalator safety and energy efficiency, aiming to ensure E&M safety and promote energy conservation and emissions reduction in Hong Kong. In the time, we are honored to have Mr Alfred Si, Director of Electrical and Mechanical Services, to share with us EMSD's experience in capitalizing the benefits of testing and certification to reduce service quality.

A path to enhance an organization
Owing to its special mode of operation, EMSD has to compete against the private market in testing service contracts and attract departments and organizations to opt for using EMSD's services. Mr Si explained, "The most difficult part for us is that competition in the private market can enter our market, but we cannot look for opportunities in the private market. In order to stand out in a crowd of competitors, we make full use of certification to choose our competence and commitment in delivering quality service."

EMSD obtained the ISO 9001 quality management system certification early in 1995. It was the first government department and the first organization in Hong Kong to obtain such certification, paving the way for providing services in fulling ISO standards in quality system management. Mr Si stated, "Quality forms the very core of our activities. However, we could not merely rely on our own strength to gain clients' recognition. So we make use of certification to provide third party assurance to our service quality. Through which, we have not done better as we differentiate from other service providers."

A tool for continual learning and improving
Subsequent to the first ISO 9001, EMSD has obtained numerous certifications over the past 20 years. Mr Si said, "We are the pioneer who constantly make improvements and participate in competitive advance advancement. We put every endeavor to obtain various certifications to keep ourselves up to international standards. The basic concept of certification is to 'plan, do, check, and act'. The process enables us to evaluate ourselves systematically. Every time we prepare for obtaining a certificate, we are able to identify more areas for continual learning and improvement so that we could allocate our resources effectively." Mr Si further explained by citing an example, "EMSD used to have a traditional organization structure, under which our staff was grouped based on their area of specialization. The

HKCTC Newsletters



Promotion of Testing and Certification on Local Newspapers



Lecture in Science Museum

Summer Activity