浪花 Newsletter 會員簡訊

The Hong Kong Institution of Plumbing and Drainage Limited
香港給排水學會有限公司

2016 年 6 月號 電話: 5110-8379 電郵地址: hkipdl@gmail.com

學會專題

Technical Visit to Guangzhou and Foshan

We are most honored to have been invited by two stainless steel piping companies in China to Guangzhou and Foshan respectively on 7th – 8th May 2016. We have 47 members, non-members and family members participating in the delegation.

The host company gave the visit delegation a very warm welcome by making all their staff on parade from the moment we arrived to the last minute we departed. The HKIPDL visit has been highly valued by the Factory and Plant companies. The itinerary was divided into four different sessions:

1. Mayer Steel Piping Factory and Plant visit in Guangzhou;
2. Forum hosted by O-Matic Technology Company Limited in Hilton Hotel Foshan;
3. Design facilities visit to Headquarters in Foshan; and
4. Workshop visit to Machine Research and Development Department in Foshan.

Session 1

The delegation was warmly welcomed by the entire factory and plant leadership and working personnel. We were greeted with fresh fruit and drinks in a super cool conference room in this hot summer day. We were divided into three groups. Before the tour took place, Ir CK Cheung, the invited Material Specialist from Hong Kong gave the delegation a talk about metallurgy of steel and stainless steel composition, followed by the Mayer Company Leader Mr Lee introducing the company products. The verbal introduction about the manufacturing process was exhaustive leaving not much time for the quality issue which is to be found during the subsequent tour.

The tour to the factory and plant has been eye-opening. The plant scale was enormous and the production line has been neat and tidy which is consisting of all works in the process of welding, annealing, polishing, testing and packaging of stainless steel pipes. All their raw stainless steel rolled sheet materials were originated from Taiwan, China. The plant employs over 1,000 persons. The facility has a site area in 60,000 m^2 with a covered building size in 20,000 m^2.

The factory authority has been generous for the groups to see every part and every department in the plant buildings. It was shown that raw materials admitted to the plant will first be screened through by a hand held spectrometer to ensure the composition of the required standard reaching the accepted standard. There were activities, welding, annealing, water jet cooling, sawing, packaging of finished products. The plant has focused on different types of test before the products exit from the factory. These tests include: 1. Temperature change test due to hot and cold water; 2. Pressurized impact test; 3. Water pressure test at bends and angles; 4. Negative pressure test; 5. Pressure holding test; 6. Water pressure vibration test; 7. Salinity corrosion test; and 8. Test using a multiple testing machine. We have seen an all-rounded test and procedure attempting to satisfy the Certification Bodies Requirements before the products leave their production plant.

Session 2

In the second day, the delegation was given to see the products from the practice point of view after the information consolidation over the night. An important forum has been organized by O-Matic Technology Company Limited in the Hilton Foshan Hotel to fostering exchanges and to answering questions and queries about stainless steel piping and fittings as raised by the participants.

Most piping and fittings are produced in Germany but local modification works are unavoidable due to their special specification requirements. Therefore O-Matic Company will help devise different tool, procedures and machine to resolve the Certification requirements. In welding, for example, the use of argon –arc welding is in lieu of the laser welding although the latter is faster, however its remnant oxidized debris could be disastrous to the smoothness requirement. The question about the plastic sealing ring within piping abutting fitting was raised. Ethylene propylene diene monomer (EPDM) ring has a working life for 50 years which will be effective within a temperature range of minus 30 to 120 degrees Celsius. Because of unforeseen condition, stainless steel piping is not recommended to be buried within excavation in external works. A question was raised about solar energy piping which on many occasions exceeds the maximum temperature. It was explained that the 120 degrees figure represents a long-time working temperature that allows certain tolerance for solar energy system. It was raised that the working pressure of 16 bar for the 42-108 mm diameter piping might seem a bit marginal, basing only on the gate valve static pressure in Hong Kong which was thought to be 16 bar. It was pointed out that 16 bar was a misnomer, the actual allowed pressure is 1.5 times the pressure from the service reservoir which can be well over the 16 bar mark. The company will carry out destructive tests to ensure these critical working pressures are met.

Later, the forum has given a lot of attention on three inventions: 1. The lightweight M22 Novopress grip from the Novopress hand held clamp; 2. PP condensation cover to protect the unsheathed stainless steel fittings; and 3. The expansion joint used longitudinally to take into account the elongation due to temperature differences.



Session 3

The delegation then moved to the O-Matic's headquarters building to see the design facilities. Autocad 3D software was basic and essential for design changes. There is a sample room showing a supply stainless steel pipe welded with eleven Nos of supply outlets in one single piece. On the wall of the conference room there are at least 20 certificates of patent already granted by the Chinese authority.


Session 4

The delegation was transferred to the Workshop of the Machine Research and Development Department which was located in an obsolete but huge textile mill facility. There we had chances to see the new invention of machines designed to modify the stainless steel pipes and fittings, and to improve efficiency of the clients' factory. The facility will soon move into the national research estate to complete within two years' time.

The following are some of the captured machines.

A. Pressing machine for two electrodes to meet to replace manual spot welding. It has proven to have saved eight different manual steps which are necessary in the past.


B. Automatic welding robot, the bonding uses argon-arc which will take a little longer time but has no oxidation residue.

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C. Glass pellet polishing machine: 3D all-profile robotic polishing prototype. A bag of glass pellet is ready to be opened.


D. Numeric Control Hydroforming machine for making fittings

E. 3-Dimensional Carbon Dioxide Laser Metal Cutting machine in normal environment, with a maximum power of 4,000 watts laser output. The laser generator must use a mixture of helium, carbon dioxide and nitrogen to create the constant laser beam output. Combined with a 6-axis numeric control system, it can achieve almost any cutting shape by just one click of the keyboard.

Conclusion

The visit time has been short and did not allow a full coverage leaving some quality questions unanswered. For example, what is the gauge thickness of the raw material sheet from Taiwan? What is their chemical composition? Which part of the pipe segment is jointed by internal welding and which portion is by argon arc welding? How to ensure the weld not rust? How to maintain a circular profile of the piping? How to detect the situation if the cross section becomes oval? When the stainless steel piping is jointed by press method, what is the magnitude of 'residual stress' of the piping which will resist pressing to the fittings? There are also queries regarding issues including auto welding, rubber gasket, storage, delivery, pressure test, rating, etc. which are to be sorted out in our second episode of the visit to be arranged in the future.

We are however, very impressed by the concept and attitude of the two companies. For products to be entrusted for use in the industry, it is important that they conform to the appropriate material quality and to some accepted international standards. This is not always possible because of cultural and technology differences in different areas or countries. To achieve this end, a systematic support system to ensure that the use and application can meet the local context is essential. As noted during our technical visit, the automation and technical problems have been matching excellently by the two companies, Mayers Company and O-Matic Company. Both of these companies are advancing in this manner resulting in more and more reliable products finished economically and efficiently for use in the market.

撰文： Dr. Eric Cheng (副會長)

We Work For a Better Community

學會交流

調解技巧能助你解決水管滲水或漏水糾紛

The mediation seminar organized by the HKIPDL and supported by the Department of Justice; the Public Education & Publicity (PEP), SOJ's Steering Committee on Mediation; and the Hong Kong Mediation Centre was held on 14th November 2015 at the City University of Hong Kong. The seminar was conducted by Ms Jenny Fung, Senior Assistant Law Officer (Civil), Mr Chan Bing Woon, SBS, JP and Mr Kwan Wai King, Frankie, Vice-President of the HKMC. The seminar was well attended by 90 participants and it took two hours to complete. It began with the opening address of our Chairman Mr Vincent Ma, followed by the welcome address made by the Chairman of the PEP. Ms Jenny Fung gave the topic entitled "mediation development in HK" (調解在香港的發展) and Ir Raymond Wu discussed on "ways to apply mediation to resolve water leakage dispute" (調解如何應用於樓宇滲漏糾紛).

Two case studies were shared by our Vice-Chairmen Mr H.W. Leung and Dr E Cheng. A role play illustration was performed to show how the mediation procedure can work to resolve the problem of a "row with the neighbor upstairs". This has been a lively highlight of the seminar. The participants seemed to have been amused by the show. There were some questions about expert witness, secrecy and how to locate mediators.

Overall the seminar has instilled some thinking about the role of a mediator amongst the audience, especially the younger members, who have no perceptions in their minds, and have never thought that mediation can be a way to resolve disputes.

It was grateful that Ms Jenny Fung of the DOJ has agreed to allow us upload her power point to the Website for later reference.

撰文：Dr. Eric Cheng (副會長)

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學會交流

WSP Parsons Brinckerhoff Training Seminar

On 23 February, 2016 our institution has great honors to be invited to an internal training seminar of WSP Parsons Brinckerhoff. The seminar took place at the board room on the 7/F of One Kowloon, Kwun Tong. It has taken two and half hours to finish. There were three speakers including Mr William KH Cheung, Ms Kelly Mak and Mr Derek Chan.

There were four main topics:

1. UPVC pipe for water supply;
2. Rainwater re-cycle;
3. Drafting and design mistakes; and
4. Swimming pool design.

The last topic No. 4 has taken one hour to finish. Four members were present including Vincent Ma, Lau Hon-wah, Tam Chi-lam and Eric Cheng.

Mr William K.H. Cheung the Technical Adviser of HKIPDL was the chief speaker. Mr Cheung has profound knowledge in both materials and design in swimming pools. PVC pipe for water supply is very favored but has several known workmanship difficult to achieve. He quoted BS3505 and BS3506 and classified pipes into Classes A, B, C, D and E with the following pressure tolerance: 3, 6, 12, 15 and 18 bars respectively. Bending PVC pipes is an important process in plumbing works and there were several footages demonstrating this important step.

Mr Cheung's young colleague, Mr Derek Chan also played an important role. His skillful act and movement to demonstrate hot air blowing showed that he is a competent welder of PVC pipes.

Another area of concern is the jointing method which requires very careful and skillful use of the jointing solvent agent. Ms Kelly Mak described her use of a rainwater re-cycle system to add value to an architectural design. Catchment area has to be carefully calculated based on the choice of the proper location for reliable source of rain water. The Arch SD circular letter has been a good guideline for the type of environment-friendly design. Mr Cheung described some common areas of design weakness in a schematic diagram, for example, too many automatic air vents AAV in the riser (which was mistaken as stack); and the use of identical pipe sizes indiscriminately resulting in unnecessary wastage of pipes. Mr Cheung spent most of the time discussing the design for swimming pools. There are three main types of pool which are skimmer, scum channel and level deck. Pools are differentiated by their inlet and the use of chemical for purification. The water reception tank sizing is based on the most fascinating standard that a normal person will displace 70 litres of water when immersed. Design of pools can be governed by very different regulations in different places like China, US and local HK.

撰文：Dr. Eric Cheng (副會長)

We Work For a Better Community

學會交流

風水講座

The seminar took place on January 12, 2016 at the City University of Hong Kong. There were 15 audiences including HKIPDL members, friends and CityU students. Mr Eddie Lee Wai-kwong has given us a basic introduction about what Feng Shui is. There are briefings about the history, patterns of Feng Shui in China. The most useful part should be the explanation of different terms and jargons of Feng Shui which gave us a clearer picture of what Feng Shui is. There are really many difficult Chinse words which are hard to pronounce. Finally, there was a computation exercise on the type of life that could suit what kind of building layout. The seminar has also provided some useful notes for the audience to take home.

英國特許水務學會-香港分會 27 周年晚會

2015 年 12 月 10 日是英國特許水務學會-香港分會的 27 周年晚會，設宴於九龍灣國際展貿中心。本會亦參與，分享這份喜悅。

水源與白蟻監控的講座

今次的講座，是由本學會副會長鄭成光博士為講者，為大家分享一個非常有趣的題目，"水源與白蟻監控的關係"。通過研究白蟻的生態及慣性，如何減少對建築物材料造成破壞。 在講座上，鄭博士還顯示他在研究過程時培養的白蟻。

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學會花絮

2016 年香港給排水學會之春茗

2016 年香港給排水學會的春節聯歡聚餐於 3 月 4 日，在嶺南會所舉行。當晚除了頒發新加入的個人會員及業內會員外，更高興的是要宣佈，前香港水喉潔具商會理事長黃國強先生，將擔任本會的顧問。

新個人會員：陳耀榮先生 / 列楚恩小姐

新業內會員：金特霸(香港有限公司)/愛家(香港)集團有限公司/奧馬迪(香港)科技有限公司

We Work For a Better Community

學會花絮

會慶慶功旅行

二零一五年十月三十一日為本會的會慶慶功旅行，行程共兩天，遊覽了東莞及深圳龍崗。我們一行約四十人，由會員、委員及家屬等組成，陣容強大。

第一個景點是以小黃鶴樓而聞名的長安公園，一入園，便覺古雅脫俗，不像堆砌出來的新造景點，依山而建的長長階梯引領到小黃鶴樓。拾級而上的中途，委員們在噴水池前停下來研究潛水泵，可見我們在遊樂時都不忘研究學問。

遊樂亦不忘工作，下午的連串活動後及晚餐後，我會會長召集了委員們在酒店大堂開了個會議，討論學會工作，即時召開會議，動員能力極強，大家沒有議程、沒有紙筆文件，亦成功完成會議，各人將會議討論的事項記錄在心中，然後繼續晚上的活動，唱卡啦 OK 又或參加萬聖節活動。

第二天參觀了龍鳳山莊，有噴泉、城堡，是拍攝人像的勝地，沿途滿是新人們拍婚紗照。值得一提是下午遊覽龍崗區的小義烏，那裡有工藝品及瓷器等，都是有特色的，我們各人都樂而忘返。

兩天的行程完滿結束，非常成功，實有賴公關組長李惠光先生的悉心安排，安排了個輕鬆又稱心的行程，日後我會再舉辦旅遊或參觀活動，大家必定要參加呢。

撰文：Terry Chu (秘書長)

五會與水務署新春團拜

從２０１３年起，五會（香港給排水學會，香港水喉潔具商會，英國特許水務學香港分會，香港持牌水喉匠協會，及香港水務專業協會）必定在新春期間，相約一起，齊向水務署團隊新春團拜。

今年的３月１日，便在灣仔東園酒家，與水務署林天星署長，及其團隊聚首一堂。

盼望新一年，各會與業內人士，工程順利，業界更旺盛。

學會之友

∽ 學會資深執委訪問 ∽

今次編輯部在委員侯銘生先生安排下，與從事機電設計工作達 47 年，是大部分人的師父，而且，還是香港給排水學會的副會長，梁顯榮先生作個人訪問。訪問前，為了更深入認識他，大家先閱讀以下由他親自準備的簡單個人歷程。

我在初出道是很嚮往建築行業，所以在 1969 年 1 月在一間則師樓入行，心想在則師樓做繪圖員也好，其後發覺學不到甚麼，在 1970 年 4 月轉入"王歐陽則師樓"機電部門工作負責給排水工程及消防系統設計。我對排水設計還可應付，但對給水及消防系統設計完全不懂，幸得當時上司悉心教導，加上自己努力才可應付。

在王歐陽則師樓工作曾參與多個不同項目的設計如:住宅，寫字樓，商場，學校，酒店及大型屋村等等。在給排水工程及消防系統設計上也學到很多。 我不經不覺在王歐陽則師樓工作至 1987 年已有 17 年多，其後曾在三間機電工程顧問公司及兩間水務工程公司工作，在設計及工程運作收穫很多。在這其間曾與一些好學的年青人一齊工作覺得很開心，我把所學的一切無私奉獻的教給這些年青人。我在這行業工作上已有 47 年，想必要退休啦!

當年工餘後我仍致力推廣水務行業。1989 年加入"英國特許水務學會(CIPHE)香港分會"做執委。1997 年後，認為香港應該有一個本地的學會，在 2003 年 SARS 病毒爆發後，在創會會長劉文成先生的帶動下，香港給排水學會便成立，學會曾舉辦多次舉辦研討會，學術講座，交流及物料認證，曾舉辦兩屆"Plumbing and Drainage Superintendent Course"(PDS) 課程，各類活動都很成功。學會成立至今已有 12 年，希望多舉辦學術講座，參觀廠房，產品認證及推廣，團結業界，學會領導者及各執委要齊心努力推廣會務，培育新一代接班人。

訪問:

當年為何選擇從事工程行業？

年青在學時，已經對工程有興趣，第一份的工作便選擇則師樓做繪圖員，便接觸到排水工程的設計。及後，想豐富自己更多知識，便轉職至更有規模的王歐陽則師樓，在機電工程部部門工作，在當時上司的悉心教導下，除要努力學習供水系統及消防設計之外，也接觸其他機電工程的設計。
由於自己對工程的熱誠，工作後，選擇在夜校繼續進修，增強自己在給排水設計的知識。工作至今已經 47 年了。

現在與過去的機電顧問工作的差別?

當年顧問工作主要是提供設計基礎圖，包含基本的機電設計及要求，在工程施工中，再與承辦商緊密合作，在工地上，按現場環境因素下，將問題解決，最後去完成工程。現代的市場，對設計要求提高了，除了要認識市場上新的設備，加上有限的施工期及資源條件，工程投標前，一切的設計圖紙必須清楚，準確性高，務求令承辦商可按設計圖進行工程，避免在工程進行中出現技術性問題，順利去完成工程。其實，在施工中，總會遇上不能預測的事情，現今的設計師還要懂得如何應變，所以，現在顧問工作比過去更繁複，面對更多壓力。

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∽ 學會資深執委訪問 ∽

與學會一起 12 個年頭，還有甚麼抱負?

香港回歸後，我們創立一個本地學會，香港給排水學會。曾與 VTC 合作，舉辦課程，成績不錯。每屆會長與執委們以義務性質為學會工作，縱使有限資源與時間，每位都努力做到最好。可惜缺乏行業及政府部門的認受性，招收的會員不多。

我們以學會性質成立，長遠多集中技術及學術方面，仍繼續舉辦學術演講。市場上出現的產品日新月異，業內人士可透過參加學會舉辦的新技術研討會，工廠參觀，更了解市場上的產品及應用。另一方面，業內經歷沙士，與近期的鉛水事件，水務行業在社會上的地位提昇，本人希望業內各學會，可以團結一起，推廣學術。

為增強本學會的認受性，可以加強在學術講座的題材，譬如在'設計的問題'的題目外，再加深討論，'設計後的反映，及加以改善'意思是解決了設計過程中的問題，出來的效果是理想，可以把整個設計概念，反映在其他各項工程中使用; 或許，藉著加以改善，獲得更好的效果。如一例子，正常水泵運作時產生的聲音，在晚間操作會造成滋擾，設計工程師透過反映，加以改善，想到晚間的用水量不多，用一台較小功率的水泵作晚間運作，促以減低聲音。這個例子說明設計後給予反映的重要。

在訪問的最後，梁顯榮先生藉此機會，向新一代說話:

新一代學懂新知識，要傳下一代，延續下去。
知識，要不停更新自己!"

另外，送上的七字詩句是紀錄了香港給排水學會的"過去，現在，將來" 以作勉勵各領導人及執委們銘記於心，齊心推廣會務。

零三學會已成立　成績業界有共鳴
默默耕耘十數載　水務行業要團結
學術工藝已展開　領導執委齊努力
認證交流也曾做　會務顯耀更光榮

訪問:Alan Lee (編輯部組長)

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