

香港空調及冷凍商會有限公司 THE HONG KONG AIR CONDITIONING AND REFRIGERATION ASSOCIATION LIMITED

SUMMER 2013 Newsletter 曾員通訊

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Message from the President

The impacts of labour shortage in the Construction Industry has began to emerge followed by the commencement of numerous infrastructural and new casino projects in Macau. It is expected the trend of shortage will continue in the forthcoming years. In a developed city like Hong Kong, we have to admit that the young people nowadays are having



Mr. Ringo Shea President

many choices when they pursue their carrier, and apparently the E&M as well as the construction industry may not be their first choices. The working environment, social status, career prospect and also the income package are all realistic and critical elements. But before coming to those, the first we should take the immediate action is to introduce to the youth or newcomers what exactly our works are in the society. In a recent job exhibition, I had a chance to chat with some secondary school students and it was interesting to note that all they thought about the air conditioning were just unit coolers and split type units, and nothing more. Though they spend much time surfing the web every day, they would not get in touch with something more realistic about our industry if proper guidance and resources are not available.

In 2013, the industry has put much more efforts to tackle the labour shortage problem. The government departments, CIC, VTC and various trade associations, have jointly organized job exhibition, skill show, job fairs and other different occasions. The introduction of the CCTS in E&M trades this year would also help to provide better, or at least not inferior, offer for the newcomers when compared with other industries. The results of these though are still yet to be verified, we opine that we are on the right track and believe more efforts and resources should be followed in all dimensions in the shortcoming future.

A recent explosion in a restaurant in Ma On Shan has alerted the industry the safety concern on proper handling and also the selection of the refrigerants. While we are going for environmental friendly and energy saving in our Air Conditioning Equipment or System, Safety, no doubt that it should not be compromised. Many new researches in recent years have introduced new types of refrigerant. Some of them may have excellent performance in terms of global warming and Ozone Depletion, but at the same time are being flammable, requiring high cautions and proper training for the working personnel.

ACRA, as a trade association in the HVAC industry, would strive to further proceed and cooperate with the government and other professional institutions to see what following steps the industry should take, not only aiming at achieving the maximum benefit from the optimum use of the various type of refrigerants, but also to educate the working personnel and the public the relevant knowledge of safety and the environmental concerns. We would continue to liaise with the major equipment manufacturers for their latest development and application of the new refrigerants and organize training whenever appropriate.





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FEATURE ARTICLE

Safety on Handling Refrigerants

By: Daniel Chong

(FHKIE, RPE, EA, CBCP,RSC(V), RMWC, Reg. AS & TD)

The use of refrigerant in MVAC system and all associated applications have been widely diversified in recent years with the technology development and the Montreal Protocol on phasing down of HFCs to the low-global-warming-potential alternatives to minimize the reliance on HFCs.

Physical Properties of Commonly Used Refrigerants:

Refrigerant	Appearance	Toxicity	Flammability	Cylinder Colour
R-22	Colorless, liquefied Gas	Low	No Flame Proprogation	Green
R-123	Colorless, liquefied Gas	Low	No Flame Proprogation	Grey
R-134a	Colorless, liquefied Gas	Low	No Flame Proprogation	Light Blue
R-407c	Colorless, liquefied Gas	Low	No Flame Proprogation	Rust
R-410a	Colorless, liquefied Gas	Low	No Flame Proprogation	Pink

With a vision to promote low carbon building design and technologies, the Construction Industry Council (CIC), the statutory coordination body for the construction industry, is developing the first Zero Carbon Building (ZCB) in Hong Kong in collaboration with the Hong Kong government.

All such refrigerants give off a kind of faint and ether-like smell. Apart from odour, they are having similar appearance, low toxicity, non-flammable but different characteristic and working pressure, in particular, R-410a's vapour pressure at 25 degree C is 16.7 bar which is the highest amount all others hence thicker refrigerant gas pipe wall-size would be required. As compression characteristic of the refrigerants are different, use incorrect refrigerant can cause explosion and life damage. Therefore, from the selection of refrigerant pipe, charging up of suitable refrigerant, safety and ventilation, apply compatible lubrication oils etc., all must be strictly followed to the technical requirement of Individual Manufacturers.

It can be seen that all commonly used refrigerants adopted in Hong Kong are of Low Toxicity and Non Flammable in nature under ambient conditions of temperature and pressure. One may not aware that "Propane" can also be blended as refrigerant. According to ASHRAE Standard 34, refrigerant is classified from no flame propagation to higher flammability and from low to high toxicity.



Refrigerant Safety Groups (ANSI/ASHRAE Standard 34-2010)



Refrigerant Safety Groups (ANSI/ASHRAE Standard 34-2010)

In Hong Kong, some government buildings and a few industrial applications are adopting R-717 refrigerant, they are "Ammonia" which is reasonably high flammability and toxicity. In fact, highly flammability refrigerant such as HFC-429A, 430A, 431A & 435A, propane, butane, Butene, Butyne and Dymetlether are also be used specifically for industry applications in many countries.

Although different kinds of MVAC system are available in the market, one must be very careful in making your choice. In particular, is highly flammable and toxicity type of refrigerants - MVAC system practically and physically suitable for your project? After all, health, safety and environmental considerations are the fundamental area of concern on whatever establishment.

The followings are the key perspectives in planning and design of a MVAC system:

Primary Goal: Health and Safety

- 1) The environmental conditions, population density and the nature of establishment around;
- 2) Type of the building and occupancy;
- 3) Statutory requirement;
- 4) MVAC system application;
- 5) Equipment location;
- 6) Machinery-room design;
- 7) Natural and Mechanical Ventilation;
- 8) Access and transportation;
- 9) Refrigerant handling and storage;
- 10) Safety refrigerant monitoring, discharge and emergency operation system.

Being the family of HFCs, R-22 is in time becoming the history in the MVAC industry. Recently, there are some kinds of environmental friendly refrigerant available in the market to replace the R-22 refrigerant. One must be very careful in checking their characteristic and to examine if they are suitable for your application. Will you adopt them as R-22 substitution if these are highly flammable? Are you willing to live in a high-rise residential building of which all air-conditioning units are adopting propane like refrigerant? Would you mind to work in a commercial building that the chiller plant is operating with hundred pounds of flammable refrigerant? What would happen in the event that the propane like refrigerant is leaking out from a MVAC system while one is lighting up a cigarette? It can be resulted in disaster. Hong Kong is one of the cities with highest population in density in the world, it is totally not acceptable to adopt flammable refrigerant- MVAC system in urban area unless properly designed with safety provisions for emergency plus comprehensive operation and maintenance programme are being adopted throughout the life cycle of the entire system.

References: Technical Seminar on Safety and Proper Handling of Refrigerant Training For Workers in Handling HFC & Blend Type Refrigerant ASHRAE Standard ClydeMan Engineering Ltd - In house Technical Guideline OZONE DEPLETIO

People Interview Tony Chow

提到周榮光先生(Tony Chow), 説他是中港貿易的 先驅,一點也不誇張。原來早於1984年, Tony已經 踏足中國市場和使用一站式服務來推銷空調和相關 產品。還有,想知道香港的年青人在中國如何提昇 競爭能力,就要聽聽Tony的分析和意見。



周榮光先生

周榮光先生於1966年中學畢業後就加入太古船塢的機械部門當學徒。當時Tony一面工作,一面進修,直至 1971年離開太古,去當輪機工程師,俗稱「行船」。及後於1973年加入J Roger & Partners (JRP),開始接觸 和學習屋宇裝備設計,隨後轉到Binnie & Partners參予海洋公園等大型項目的建設。三年後,因Philips Hong Kong接到當時香港第一高樓合和中心的機電工程顧問合約,極需要有經驗的工程師加入,所以Tony就離開 JRP轉到Philips Hong Kong工作。當合和中心於1981年入夥後, Tony就轉職到怡和機器有限公司(JEC)的合 約部。原來當時在JEC能慧眼識英雄的人,就是我們的永遠名譽會長連金水先生。Tony之後曾被公司派到英國 參予香港匯豐銀行總行的投標工作。直到1984年,因公司需要加強對空調銷售部門的技術支援,Tony內部擢 升到當技術部經理。在1985年,JEC由原本代理York轉為代理Trane後,公司希望加強在中國的業務發展和開 拓中國市場,Tony也由那時開始專注國內的空調銷售工作。到1988年下半年,當時在JEC負責香港銷售工作的 Hugh Turner先生離了職,Tony便順理成章接手香港空調銷售業務,把香港和大陸的業務都歸納到他的職責範 圍。在1995年,Trane和JEC在中國上海投資設廠,成立了一間新的合資公司,Tony就帶同大批同事長駐中國 市場,統管Trane在中國的銷售和維修業務,而Trane及空調產品在香港的銷售業務就由梁基強先生接手。新公 司成立後,直到1998年,JEC把國內的股份賣回給Trane,Tony就回到JEC並被委任為董事局成員和負責JEC 產品銷售工作。到2001年,Tony被公司再次派到中國工作並長駐上海,Tony工作至2005年榮休。但因為Tony 有豐富的中國業務經驗,退休半年後,被邀請加入Jebsen擔任捷成中國總經理,為它們開拓市場和排難解憂。 直至2007年才真正退休。

想當年

回想80年代初,在中國做生意全靠打關係,有煙和能喝酒就能交朋友,一旦成為朋友,什麼事都好商量。Tony 曾經試過喝一杯酒後,就能成功拿到訂單。以前項目多,對手少,別人知道你已經建立了關係,就會知難而退, 所以工作壓力不大,但時間付出就很長。當時整個怡和集團在中國只有北京、上海和廣州三個辦事處。每個辦 事處只有一部電報機,所有對外通訊都依賴著這唯一的據點。那時候,一星期只有幾班航機,出差後沒有人會 知道何時能回來。一次出差可能要數星期,雖然尚算輕鬆自由,但因當時酒店、餐廳和其它硬件質素較差,更 要經常喝酒和抽煙,所以公司給予到中國出差的同事,每天發放港幣150元的辛勞津貼。當時要回香港,每天早 上就需要到酒店的訂票部訂機票,一旦有機位,就需要馬上往機場。有一次,Tony幾經辛苦才找到機位,就馬 上去機場等侯,但等了很久,都沒有指示。最後收到通知,整個飛機都在等他上機,所以Tony馬上飛奔登機。 上機後,才發現整個航班只有4位乘客,原來大部份的機位都被有關係的人留起來,所以經常訂不到機票。到最 後才放出剩餘機位,其他乘客才能「執死雞」。

以前行走中國,因為經常要等車和等飛機,須要有隨身三寶:乾糧、水和扇。有一次,Tony要從廈門乘飛機到 福州,最後等了七個小時才能上機。所以跑中國市場的同事,當年有一句名言:「有得食就要食飽些了!」。還 有一次Tony要坐火車從杭州到上海,需時5個小時,全車都坐滿,最後靠關係才能拿到一張無座車票,總算可 以回程。上車後不久,看到有一婦人手抱一名穿著開襠褲的小孩,也是無座階級,但因自己也是站立在一角, 無能為力。經過一段時間,忽然見到小童尿急,在忍不著的情況下便就地解決,他的尿剛好泡在坐在他前面的 人的頭上,最精彩的是2小時後,再來一次,此情景令Tony都笑到彎了腰。



成功之道

Tony沒有機會上大學,深覺要成功必須接受新機遇和更多挑戰。在1982至1983年,當時深圳剛剛經濟開放,公司安排了一個研討會和客戶作技術交流。Tony最初以為是一件輕鬆和簡單的例行公事,誰知道出席者全是資深的工程師,所提出的全是專業問題,幸好Tony都能一一應付。經此一役,Tony覺得自己也能應付國內的客戶,所以在後來的公司發展方向中,就大膽提議發展中國一欄,最後得到公司接納,並轉到中國市場發展。

這麼多年來,Tony一直秉承一個「誠」字來作為自己的座右銘。它的意思就是:「對人要有誠意和不能欺騙人」。 團隊對Tony而言也很重要,這裡不單是説自己公司的專業團隊,還有分銷商網絡。還記得有一次Tony跟Carrier 其中一個分銷商合作,希望獲得一個工程項目。雖然最後成功了,但這Carrier分銷商最終還是選用了Carrier的 產品,原因是Carrier以前在他困難時曾經幫他一把,所以在Carrier的要求下,他最終都背棄了Tony。這件事令 Tony明白到分銷商的重要性,所以他積極開發在香港和中國的分銷商網絡。雖然已事隔多年,Tony和很多舊有 的分銷商還保持聯絡和經常聚會。

提起分銷商,就不得不提勁龍工程公司,它當時是Carrier全廣州最大的分銷商。Carrier那段時間剛轉換銷售負 責人,令到廣州的分銷商經常自己人打自己人。Tony有見及此,就拉攏勁龍加盟Trane,並將Trane在廣州的銷 售業務交給勁龍獨家負責。當時Tony這個決定,曾備受質疑。但事後勁龍為Trane帶來可觀的生意額和利潤, 大家不得不對Tony的眼光和遠見寫個服字。

寄語年青人

香港這市場相比中國市場其實很小,香港的年青人要把眼光放遠一點,不能坐井觀天。香港以前是中國的樣板 房,中國可以在香港看到和學到很多新事物,但事隔多年,香港回歸後反而漸趨保守。相反,中國現在較為開 放,容易接受及嘗試新事物,所以進步空間比香港大。要有更大的發展空間,便一定要有中國營商經驗。現在 中國有很多外國人,都是在吸收中國經驗,才能有機會在自己的公司更上一層樓。

中國現時有很多留學歸來的年青才俊,俗稱「海歸」,他們的薪金跟香港人差不多,所以我們要放下以前高人一 等的心態,來和他們在同一起點上競賽。香港人做事勤快、誠實正直和有責任心,國內同胞對香港人其實一般也 有好感,但香港人因近年國內同胞來港消費有所反感。原因是國內人的消費只令香港一小撮人得益,其他普通市 民其實沒有直接得益,這不是國內人的錯,不應排斥他們。

其實現時香港的地產發展商享有豐厚利潤,而承建商、分判商和供應商只能在高風險和低利潤下運作,整個社會 不公平現象太多,才會做成分化現象。而大部份公司只看重利潤增長,也令員工對公司的歸屬感也大大減低。

其實中國員工很多都很精明,但自我中心很強,對公司歸屬感 不大,很多時候都想自立門戶。所以要有良好的待遇和佣金/ 花紅制度,才有機會把他們留下來。僱主不應當他們是員工, 要當他們是分判商一樣,提供機會去享受利潤分享,才能達到 雙贏局面。

退休生活

Tony現時長居上海,但有一半時間在外地,主要會在香港和美國兩邊走。在美國,Tony大部份時間會弄孫為樂。閒時會相約 三五知己打高爾夫球和做運動,保持良好體魄。大家有機會到 上海,不妨聯絡Tony切磋一下高球。



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Introduction of **BIM Technology**

WHAT IS BIM?

BIM (Building Information Modeling) is the process of generating and managing building data during the life cycle of any building. Typically it is in three dimensional (3D), real-time, dynamic with building modeling software to enhance productivity in building design and construction cycles. Fig.1 depicts the BIM rendered building.



Fig.1. BIM Model with Sample Buildings

The process produces the Building Information Model (BIM), which encompasses building geometry, spatial relationships, geographic information, and quantities and properties of building components. Comparing with the traditional building drawings, this process allows the building owners, operators the ability to experience the new facility virtually and make critical decisions before it is constructed.

The building information model contains not just the information of the design and construction phases but also all of the final commissioning and facility turn-over information that becomes an asset to be utilized to operate the building efficiently. Thus BIM is becoming known as a building life cycle management solution from inception through design, construct and operate phases to decommissioning of the building.

BIM is not new – the concept and demand have been evolved since 1992, and now, enabled by technology, enhanced productivity during design and construction phase could be achieved, with this digital repository changing the way owners build and operate their facilities. The information from the BIM is now being used with Integrated Workplace Management Systems (IWMS) that control the facility environmental and lighting systems but also the information can be readily shared with Computer Maintenance Management Systems (CMMS) to track facility work orders and maintenance repairs.

BIM IN BUILDING FULL LIFE CYCLE

Today, Using BIM approach results in lower construction cost, improves the design process by giving the building owners a much clearer picture of the end result in a 3D visualization, and drives the construction schedules directly from the model.

The adoption rate of this transformative technology seems rapid. Despite steep initial adoption costs, general contractors have seen as much as a 25% reduction of costs and schedule utilizing BIM with the improvement of communication between contractors, reduction of the numbers of errors, and orchestrated building processes. BIM enabled technology advancement has brought change in every process that affects the design, construction, and long term management of buildings and their assets, as it becomes the backbone of every process in the building lifecycle. Fig. 2 illustrates the information that could be throughout the BIM approach.



The true power of BIM lies in the semantic model that underlies it – the international standard Industry Foundation Classes[™], as defined and maintained by BuildingSmart International. The BIM standard is a rich description of the geometry and parametric data that describe a structure. BIM is often discussed as a single entity, but it is more often a federated collection of information from different sub domains, describing the complex systems that comprise a building. Though Autodesk leads the market by providing the lowest barrier to entry in 3D modeling, many other vendors support BIM-enabled design and construction.

In practice today, a BIM very likely consists of input from many different contractors with generally each using a preferred tool. A BIM is typically constructed by draftsmen who manually design the geometry, and then information is layered into the model by other users or sources over the course of the design and construction project.

During the design phase, emphasis is on the physical dimensions and the aesthetics of the building and the site. Distribution systems are mapped out so that necessary clearances can be worked into the architecture. Devices may be placed into the model from a library of vendor (manufacturer) products. These 3D product models usually come from manufacturing and marketing engines. These products can be selected during the design process. It is also becoming common for energy optimization, which to be modeled in the design phase, so to give overall ecology consideration of the site plan and building construction before ground work.

In the construction phase, contractors and engineers add data about physical properties of the building components, so that constraints can be met, costs can be estimated, materials resourced, and work scheduled for maximum efficiency. MEP engineering is refined in this stage, and designs validated for their ability to meet local regulations, ventilation standards, and capacity expectations for the structure. The exact measurements and correct product specs can allow systems may be assembled off-site to reduce waste and eliminate fabrication at the job site. Theoretically, this could be applied to the entire HVAC control system also.

When construction is complete, the "as-built" BIM is passed on to the owner for long term operation and maintenance. At this stage, the BIM provides context in which facility management (FM) applications can share information about assets for better management of the site, such as:

- Analyzing building performance
- Assessing equipment health
- Tuning building controls
- Track modifications of the building and its operation, etc.

BIM BENEFIT FOR FACILITY MANAGEMENT OPERATION

The ability to visualize the building in 3D is useful for maintenance, but the real value of the BIM for facility management and energy analysis applications is to interrogate the model for information. Fig.3 below shows the examples of areas which BIM can assist in the facility management. The BIM can become the single source of shared context across all facility management applications. It has been estimated that BIM will enable significant long term savings for building operations that will far surpass the savings achieved in design and construction.

The overall purpose of utilizing BIM for FM is to enable building owner to leverage facility data through the facility lifecycle to provide safe, healthy, efficient work environments by an accurate as-built information and an optimized operation and maintenance of the building systems with reduced energy usage, e.g. to improve the energy analyst's ability in finding and reporting actionable measures when the building and equipment ages, understand the building loads to response to smart-grid price signals.



BIM BENEFIT FOR SECURITY

BIM technology can also benefit to system design accuracy, like security system, and potential to the HVAC. In the aspect of video surveillance, camera placement is critical and could be complex. Traditionally camera placement is

estimated per the camera coverage area on 2D plane. This may result giving an approximate solution with the ignorance of the elevation or height of the structures. For example, it is difficult for the approach to distinguish the occlusion by half wall (such as cubicle, desk, etc) or whole wall. With the BIM model, it is possible to precisely visualize and evaluate the camera placement solution, as Fig.4 shows. It not only provides real time interactive visualization of camera coverage for adjusting camera's parameter but also provides precise evaluation of the performance of the camera placement solution as well as the quantitative analysis of the performance of camera placement.



Fig.4. BIM for the Camera Placement

BIM BENEFIT FOR AWAREING AND RESPONDING TO FACILITY SITUATION

IWMS environment provides your facility engineers with at-a-glance views to determine the condition of your building controls system by 3D graphic representations that are user friendly and quickly interpretive. Fig.5 is an example of the temperature on a floorplan. At a glance you can see the comfort level of each area in the building as illustrated in the picture. This can checks against the actual with the scheduled HVAC or lighting resources at a glance. Day lighting and energy simulations are easily run against the building information model and represented in 3D to the facility engineers so that they can optimize the systems for comfort and productivity while reducing energy costs.



Fig.5. Temperature on the BIM Floorplan Traditional Temperature Display (Left); Temperature with Color Map in BIM Floorplan

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Holiday Inn Express Hong Kong Soho

Overview

Holiday Inn Express Hong Kong SOHO sets out as an Integrated Green and Sustainable building design participated by the Developer, Architect, Structural Consultant, Building Services Consultant, Energy Optimization Solution Provider, Specialist Consultant and Construction Team.

The hotel is the first high rise building (Hotel) achieving triple platinum of Green Certificate – (1) Hong Kong BEAM Plus (Hong Kong Building Environmental Assessment Method), (2) US LEED (Leadership in Energy and Environmental Design)and (3) BCA Green Mark by The Building and Construction Authority, Singapore. Besides, Merit Award of Green Building Award 2012 and Intelligent Hotel Building (Distinction Rank) of Year 2012 by Asian Institute of Intelligent Buildings were also awarded to the hotel. To achieve this, the design & construction of the building need to be "Green" concerned & oriented on sustainability, water efficiency & energy.



Energy Optimization Solutions and Green Products

Many unique and innovative solutions are adopted : -

1. Building Services Systems are designed with **Energy Optimization Solution** to optimizing overall system energy efficiency and control performance. The result is an overall energy saving of 58.5% over the EMSD HK hotel energy consumption benchmark, translating into significant energy cost savings.

-

BCA CREEN MARK

- 2. Use 2 nos. of High CoP (5.48) Water Cooled Variable Speed Chiller with twin compressors and primary pump.
- 3. Integrated Solar Hot Water Panel, Heat Pump and Solar Hot Water Cladding Systems drive lower energy used for central hot water system.

Solar Hot Water Collector System with heat recovered from solar hot water system supports the hotel's central hot water supply, it saves over 75% energy consumption;

Heat Pump offers cooling for room space and hot water for central usage. It helps contributing to hot water heating energy production with additional benefits of reducing the cooling load to chiller plant.

- 4. Energy saving intelligent Fan Coil Unit iFCU[™] saves as much as 80% power consumption for cooled air distribution in the building at low speed.
- 5. Key Card Control **Automatic Motorized Blinds** with high solar reflection interlinked with Key Card Control reduces solar loading to guest rooms under unoccupied situation.
- 6. Patented **Peltier Headboard** utilizing the personal cooling concept reduces air conditioning load whilst maintaining guests sleeping comfort.
- 7. Patented **Pattern Recognition Energy Saving Solution (PRESS)** uses the pattern recognition technology integrating with CCTV system offers lighting and air-conditioning control in common area during the unoccupied duration helps avoiding unnecessary lighting and cooling energy.
- 8. Intelligent Lift Optimization Solution to optimize the counterweight thus reducing lift energy consumption by 13.4%.
- 9. Energy Optimization Solution to optimize overall system energy efficiency and control performance. The result is an overall energy saving of 58.5% over the EMSD HK hotel energy consumption benchmark, translating into significant energy cost savings.
- 10. **PowerBox** Energy Management Intelligent Tool with web based platform provides analysis report, energy distribution, cost allocation, improvement opportunity advice and benchmarking for continuous monitoring of energy consumption.

Green Building Materials

Use of innovative finish "StarfonTM" produced from recycled concrete of non-toxic and low CO2 emission. "StarfonTM" were applied at Great Room & G/F Lobby, external façade. All building materials used are low-VOC products; all timbers are from reused timber or from sustainable forest.

Summary

To achieve this, the design & construction of the building need to be "Green" concerned & oriented on sustainability, carbon emission reduction, water and energy efficiency. Mechanical, Electrical and Plumbing (MEP) design as well as Energy Optimization Solution plays an important part contributing towards these achievements. Adopted integrated solution for energy optimization and green designs to the industry, and now available of our clients consideration for implementation, it is honored as the most environment friendly hotel in Hong Kong.

PROJECT SUMMARY

Project Site	: No. 83, Jervois Street, Sheung Wan, Hong Kong
Client	: Million Wealth Enterprises Ltd.
Architect	: Chau, Ku & Leung Architects Engineers Ltd
M&E Consultant and Contracto	r: REC Engineering Company Limited
Completion Date	: 15 March 2012



Notes:

- (1) HK BEAM Plus (Hong Kong Building Environmental Assessment Method) is the comprehensive environmental assessment scheme recognized by the Hong Kong Green Building Council (HKGBC)
- (2) LEED (Leadership in Energy and Environmental Design) is an internationally recognized mark of excellence launched by US Green Building Council (USGBC), provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- (3) BCA Green Mark, launched by Singapore Building and Construction Authority, is a benchmarking scheme which incorporates internationally recognized best practices in environmental design and performance.

FECHNICAL VISIT

中國制冷展2013 訪滬團

每逢4月,又是中國制冷展舉辦的時候。今年我們 冷凍空調界這盛事在上海舉行。一如過往,香港空 調及冷凍商會(ACRA)都會被邀請出席。為了希望 多一些不同專業人仕參加,ACRA聯同其他三個商/ 學會一起組織了一個代表團出席今次盛會,它們分 別是香港能源工程師學會(HKAEE),香港註冊通 風承辦商協會(HKRVCA)和美國供暖和制冷學會一 香港分部(ASHRAE-HKC)。最後在H7N9禽流感的 陰霾下,報名人數高達46人,是我們歷年來的一個 新記錄。另外,為了迎合各方面的興趣和需要,這 次的行程安排非常緊凑及涉及層面十分廣泛。

4月7日早上,參加者在香港機場集合,一起乘坐航 班,代表團在團長老少達、會長佘達志、主席陳志 雄、上屆會長葉啟賢、司庫劉志威、永遠名譽會長 連金水和前會長陳家龍的帶領下,浩浩蕩蕩出發。 經過兩個小時的飛行旅程後,代表團在下午抵達上 海浦東國際機場。

辦理完酒店入住手續,大家稍事休息後,馬上出席 中國制冷展在卓美亞喜馬拉雅酒店為國際友人舉辦 的接待酒會,即場還有抽獎助興。代表團的四個學 會和商會的領導人也被邀請上台作抽獎嘉賓。有 部份代表團的團友非常幸運地被抽中獎項,大家 開心而回。雖然經過一天的舟車勞頓,但刊物委 員會(Publication Committee)也利用晚上的空餘時 間,訪問了現時長居上海的周榮光先生。



ALLENIS COM



展覽場館內



4月8日早上,四會的領導人一起出席了中國制冷 展在嘉里酒店舉辦的開幕典禮。及後,馬卜會合代 表團的其他成員一起進場參觀制冷展的展攤。今年 參展的廠商高達1,146個,來自33個國家,大會主 題是 [服務民生,建設生態文明]。眾人各自參觀 到下午2時半左右,代表團就一起出發去參觀由怡





和機器安裝,在虹橋商務 核心區能源中心的分散式 供能系統,今眾人大開眼 界。參觀過後,代表團馬 上又要趕回浦東卓美亞喜 馬拉雅酒店出席中國制冷 展的開幕晚宴。

參觀虹橋商務核心區能源中心



參觀昱輝陽光集團太陽能板工廠





參觀虹橋商務核心區展覽館

4月9日早上8時正,代表團便出發到無錫參觀兩間 工廠。經過四小時的車程,代表團終於到達昱輝陽 光集團(Renesola)位於宜興的太陽能板工廠, Renesola的產品出口到世界各地,技術和效能也 是數一數二,大家參觀後對太陽能板的認識又加深 了。從宜興到無錫西面需要差不多一個小時的車程, 大家只好忍耐多一會兒,到2時許才能享受濱特爾為 我們準備的豐富午膳。

吃過午飯後已經三點多,代表團馬上到'濱特爾水 泵廠'參觀。經過負責人的介紹後,大家對水泵的 制造和測試都加深了解。雖然從上海過來的時候有 點塞車,但回程時就相當順利,大約7時多便回到上 海。'濱特爾'非常客氣地邀請代表團一起晚膳,大 家當然不會推卻'濱特爾'一番誠意。飲飽食醉後, 大家就回酒店休息。

4月10日早上,代表團是日沒有行程安排,大會提 供自由時間給予團友自由發揮,有些團友把握時間 機會再去參觀中國制冷展,有些團友就去購物和到 外灘觀光,各適其式!

到正午時間,代表團就出席怡和機器宴請的午宴, 在兩瓶「茅台」酒的帶動下,大家酒酣耳熱,現場 氣氛十分高漲。雖然大家依依不捨,但最終都要出 發到浦東國際機場乘航班回香港。

這次旅程的成功,代表團非常感謝怡和機器有限公 司、昱輝陽光集團和濱特爾水泵廠的安排及熱情款 待。沒有參加的會友,緊記明年及早報名(明年中 國制冷展會移施到北京舉行)。



耆英萬歲晚宴 Joyful Dinner

We were happy to co-organize 耆英萬歲晚宴 again with Open Door Ministries 開心社區服務中心 (Lam Tin) to celebrate Winter Solstice Festival with 200 singleton elderly in December 2012. Over 30 volunteers from the 2 organizations attended the dinner to help and serve. Other than great food, the volunteers also brought a wonderful and entertaining performance to enlighten the evening. Mr Ringo Shea, President of ACRA, said 'We have been



Mr Ringo Shea (middle), President of ACRA, received a souvenir from Open Door Ministries.

continuing the relationship with Open Door Ministries to organize this meaningful event for 3 years. Hope our effort has brought care and love to the singleton elderly at Lam Tin. We'll definitely do the same.

Our Caring Committee would like to give special thanks to the members who sponsored the dinner and exquisite gifts.



An unusual, but amazing band with members at different ages.







Thanks to all the volunteers, the singleton elderly had an enjoyable Winter Solstice Festival.

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Annual Dinner 2012

The 51st Anniversary Dinner was successfully held on 26th November 2012 at JW Marriott Hotel. The event featured a cocktail hour, seated dinner for over 500 guests and live performance. We also invited Mr Frank F Chan, Director of Electrical and Mechanical Services Department of HKSAR, as our guest-of-honor to join us celebrating the most important event of the year.







Mr Frank F Chan, Director of Electrical and Mechanical Services Department of HKSAR, gave an inspiring speech at the event.



Mr Ringo Shea, President of ACRA, and council members gave a toast and wished all good luck and health in 2013!



Ms Sabrina Ng's beautiful voice lightened up the evening.



The evening was climaxed by the wonderful flair bartending show.

Who was the lucky one to get a special prize from our guest-of-honor?



Guests had great interests on members' product at their exhibition booths.



ACRA President Cup

Sponsored by Bun Kee (International) Limited and Gruvlok, the ACRA President Cup was successfully held on 30th November 2012. We had 48 golfers playing on our 18-hole championship course.

Best Score: Dean TaylorChampion: Leung Chi Ming1st Runner-up: Benjamin Chan2nd Runner-up: Mike ChengLongest Drive East 3: Ron PoundLongest Drive North 8: Athens CheungClose to Pin East 6: Peter WongClose to Pin North 6: Chow Wo







'Gate Way & New Way Cup' Bowling Competition 2013

This year the ACRA Bowling Competition was specially sponsored by Gate Way Valve & Fitting Limited and New Way Engineering Company Limited and successfully held on 1st February 2013. We received overwhelming response to compete for the champion!

Team Awards

Champion: Analogue Technical Agencies Limited1st Runner-up: Gate Way Valve & Fitting Limited2nd Runner-up: ATAL Engineering Limited

Special Awards

Highest 3 Games Series: Sunny Ho (Southa Company Limited – team 2)Highest Single Game: Cindy Lee (Newland Engineering Limited)



Highest Single Game award:

Ms Cindy Lee (Newland Engineering Limited) Team champion award: Analogue Technical Agencies Limited



Badminton Competition 2013

The final of Badminton Competition was held on 25th February 2013 and there were lots of fireworks with final. Congratulations to the winning teams!

盃組賽

Champion : Tinwood Pacific Limited 1st Runner-up : Honeywell Limited 2nd Runner-up : Kembla (HK) Limited

碟組賽

- Champion: Young's Engineering Company Limited1st Runner-up: IES (Hong Kong) Limited2nd Runner-up: Shinryo (Hong Kong) Limited碗組賽
- Champion : ATAL Building Services Limited 1st Runner-up : Winston Air Conditioning & Engineering (HK) Company Limited 2nd Runner-up : Southa Company Limited



Mr Ringo Shea (middle), President of ACRA, presented the award to 盃組賽 Champion team: Tinwood Pacific Limited



碗組賽 Champion team: ATAL Building Services Engineering Limited



Mr Dave Chan (2nd from the right), Chairman of ACRA, presented the award to 碟組賽 Champion team: Young's Engineering Company Limited

Spring Dinner 2013

As the kick-off event in the year of Snake, Spring Dinner was held successfully on 1st March 2013. Thanks to the support of all members and different organizations in the industry, we were happy to have more than 240 guests joining this event. Sure we had good food, but nice wine was also essential for a joyful evening. The dinner was filled with fun, laughter and fine wine. Hope to see you all again next year!



The gentlemen took off the ties and were so into Beer Drinking Contest!



Guests enjoyed the interesting game for table prizes.



Toast from the Council Members signifying vibrant business of industry in year of Snake.



Mr Ringo Shea (left), President of ACRA, and *Mr* Dave Chan (right), Chairman of ACRA, presented the big red pockets to the lucky one!

Industrial Training for



Workers in Handling HFC & Blend Type Refrigerants

In accordance with the new Requirement of Refrigerant Workers for ArchSD project as from 1st April 2008, there should be not less than 25% of the registered workers (or 1 worker minimum at the ArchSD job sites who should have received this recognized training so that they can be qualified to service refrigeration equipments such as chillers and DX split units.

In this respect, we continue to organize the revision training program to meet the need of

the market. Organized jointly with Vocational Training Council, the half-day classroom training and full-day practical workshop training at the Institute of Vocational Education were conducted again in March 2013. The response was overwhelming and over 80 professionals signed in the course.

Technical Seminar on Safety & Proper Handling of Refrigerants for HVAC Application

As there is a growing concern in the HVAC industry on the safety issues of the refrigerants due to recent accidents, a seminar was held on 23rd April 2013 to give the industry a comprehensive view on the safety issues and proper handling procedures for refrigerants commonly used. The physical characteristics of refrigerants, the operating procedures in servicing an air-conditioning equipment and safety at workplace were discussed.

We invited Ir Victor Wong, Senior Manager of Trane Service Hong Kong, as the speaker for this seminar. Mr Wong has established a career in HVAC industry for over 20 years, now specializing energy project management, air conditioning system application and training.



Ir Victor Wong also shared relevant safety regulations and applicable code of practices for refrigerant, including the recent new hydrocarbon refrigerants.



A photo of ACRA representatives.



2013 專業才華展示日



Mr Ringo Shea (right), President of ACRA, received a souvenir from VTC.



Our members shared their experiences and advices with the students.

ACRA was invited to participate in 2013 專業才華展示日, organized by The Office of the Director of Apprenticeship of the Vocational Training Council, on 25th and 26th April. We set up a booth to showcase the operation, industry development and career

opportunities in HVAC industry. Many of our members volunteered to help out at the event and gave useful, inspiring advices to the secondary school students for their future career.

The Office of the Director of Apprenticeship of the Vocational Training Council provides free placement service of apprenticeship scheme to employers and young job-seekers.

「香港機電業(技術人員)-就業及發展」 展覽暨職業講座

To attract more young-generation talents and drive continuous development of E&M industry,「香港機電業(技術人員) - 就業及發展」展 覽暨職業講座 was co-organized by 18 government departments, public utility organizations and trade associations and held at IVE (Kwai Chung) campus on 1st and 2nd April 2013.

The event has recorded over 3,000 man-time and ACRA had a booth to show the career

path and opportunities in HVAC industry. We

are glad to have many interactions and

conversation with the students. Through event

like this, hope we can bring in more talents to

the HVAC industry.



Mr Ringo Shea (7th from the left), President of ACRA, joined other guests for event's kick-off ceremony.

Mr Ringo Shea (middle), President of ACRA, shared his experiences and views on HVAC industry with a group of secondary school students.

'Kembla / Victaulic Cup' Golf Tournament 2013

We couldn't have picked a better day and it was blessed with sunny blue skies. Sponsored by Kembla (HK) Limited and Victaulic, the 'Kembla / Victaulic Cup' Golf Tournament at Nansha Gold Club has rounded off with happy golfers playing on our 18-hole championship course on 16th May 2013. Congratulations to all winners!



Gross
Champion
Nett
Champion
1 st Runner-up
2 nd Runner-up
3 rd Runner-up
4 th Runner-up

· Hymon chon
: K F Chan
: Wilson Choy
: Daniel Chong
: Sandy Leung
: Y Y Yeung

• Hyman Chan

Nearest to the Pin

8 : Scott Howser13 : Sandy Leung

- Longest Drive
- 6 : Benjamin Chan
- 14 : Eric Leung

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機電承建商合作培訓計劃 ("CCTS-E&M Trade") 及中專教育文憑 ("DVE")

機電行業培訓及實習計劃

馬家駿 香港機電工程商聯會

培訓及人力委員會主席

香港建築業一向缺乏新血入行,加上十大基建工程陸續展開,對人力資源需求殷切。為吸引新血加入建造業, 現由發展局、建造業議會("CIC")推動、香港機電工程商聯會("HKFEMC")積極參與,推出"機電承建商合 作培訓計劃"(Contractor Co-operative Training Scheme-E&M Trade)提供工作培訓機會給加入機電行業的 學員在工地受訓。

由2013年4月起新出的政府工程合約會加入條款,要求參與政府工程的承建商必須加入此計劃,提供特定數量 的培訓名額,建造業議會則會津貼參加此計劃之學員實習期間每日HK\$150,為期六個月。而在2013年4月之 前已開始的政府合約,政府會以附加條款("Supplementary Agreement")的形式要求承建商提供培訓名額。

除上述的"機電承建商合作培訓計劃"提供工地訓練外,為加強新血對機電行業的認識,香港機電工程商聯會亦積 極參與建造業議會及職業訓練局("VTC")推出的機電行業實習計劃。在職業訓練局的中專教育文憑("DVE")課 程就讀的全日制學員在第一年課程期間有機會在指定的機電公司實習一年,並得到由建造業議會提供為期十一 個月,每月HK\$1,400的津貼(共HK\$15,400)。為鼓勵畢業學員繼續學徒訓練,完成一年實習並與僱主公司簽訂 三年學徒計劃成為合約僱員的畢業學員在簽訂合約的六個月後更可獲得建造業議會一筆過HK\$15,400的津貼。

此計劃共有七個機電行業提供實習機會,包括:屋宇裝備工程、空調製冷工程、消防裝備工程、電機工程、升 降機及自動梯工程、機械工程、以及焊接,本年共有595個名額。以上名額會分配給政府機電工程署、各大公 共事業機構及香港機電工程商聯會各屬會會員。

	機電行業	實習名額		機電行業	實習名額
1.	屋宇裝備工程	50	2.	空調製冷工程	150
3.	機械工程	100	4.	焊接	20
				總人數	320

其中,與冷氣工程有關的機電行業今年提供的實習名額:

香港機電工程商聯會在此計劃中是代表業界與建造業議會,職業訓練局與業界溝通的統籌角色,一方面將建造 業議會的指引與職業訓練局提供的學員資料轉發給業界公司安排實習,另一方面收集業界對計劃的意見傳達給 建造業議會與職業訓練局。

展望兩個計劃會吸引更多年青人加入機電行業,並讓他們留在行業內繼續受訓成為專業人員,為機電行業提供 新的人力資源。

如有興趣進一步了解此計劃,歡迎登入以下網頁參考詳情。

-建造業議會 http://www.hkcic.org/chi/main.aspx

-職業訓練局 http://www.vtc.edu.hk/html/tc/

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