



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

Rm. 1801, Tung Wai Commercial Bldg., 109-111 Gloucester Road, Wanchai, Hong Kong.
● Fax : (852) 2519 0298 ● E-mail : info@acra.org.hk ● Web Site : www.acra.org.hk

Newsletter **Winter 08**



MESSAGE FROM THE PRESIDENT



Daniel Chong
President

The new council was elected in June 2008, it is indeed, my great honour to be the President of ACRA. Thanks for the unfailing supports and the valuable views from members, in the new term of office, the number of council members has been increased from sixteen to twenty aiming at providing better services to members and, of course, the community too.

With a handful of rare exceptions, all fellow members

have had experienced a most challenging worldwide economy in 2008, the chain effect of the financial turmoil leading to further damages to the competitive construction industries. The way forward can perhaps be an opportunity to many of us as through company restructure and/or amalgamation, better cutting-edge and focus can be made on business ahead.

Collective voice makes us stronger in time. With that, I plead for your kind support, active participation and positive response on all matters of the Association for the best interest of our profession. •



ACRA COUNCIL MEMBERS FOR 2008 - 2010



<p>Hon. Life President C. O. Synn Krueger Engineering (Asia) Ltd.</p>		<p>Hon. Life President Raymond Lin The Jardine Eng. Corp. Ltd.</p>		<p>President Daniel Chong Winston A/C & Eng. (HK) Co. Ltd.</p>		<p>Adviser Victor Law ATAL Engineering Co. Ltd.</p>		<p>Adviser K. L. Chan Trane Hong Kong</p>			
<p>Chairman K. Y. Ip Young's Engineering Co. Ltd.</p>		<p>Imm. Past President Raymond Synn Krueger Engineering (Asia) Ltd.</p>		<p>Vice President Dave Chan ATAL Engineering Ltd.</p>		<p>Vice President Ringo Shea Newland Engineering Ltd.</p>		<p>Treasurer Joe Yau Shinryo (Hong Kong) Ltd.</p>		<p>Secretary Victor Wong Trane Hong Kong</p>	

Council Members

 Raymond To Bun Kee (International) Ltd.	 Nicole Wong Carrier Hong Kong Ltd.	 Derek Leung Fook Loong (HK) Ltd.	 Conson Yu Gether-Force A/C Eng. Co. Ltd.	 Derek Lam Johnson Controls HK Ltd.	 Allan Cheung Honeywell Ltd.	 W. G. Chu Meco Engineering Ltd.	 Angus Leung Ryoden Engineering Co. Ltd.	 Aidan Heung Southa Co. Ltd.	 C. H. Wu Shun Hing Engineering Contracting Co. Ltd.	 Franklin Lau The Jardine Eng. Corp. Ltd.	 Bill Cheung York Int'l (Northern Asia) Ltd.	 Pachu Leung Welcome Air-tech Ltd.
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Chairman : Allan Cheung
Adviser : K. L. Chan

Members :
(in alphabetical order)

Mr. C.H. Wu
Mr. Conson Yu
Ms. Nicole Wong
Ms. Queenie Young
Mr. Raymond To



Westland Garden Shops



Bright Future
Pharmaceutical Lab. Ltd.



Pathology Building at
Queen Mary Hospital



Cityplaza Hotel



St. Stephen's Society Expansion
A Kung Kok Shan Road, Shatin



Chai Wan Youth Centre



MTRC Central Station



Mong Kok Ambulance Depot,
Ambulance Command &
Fire Safety Command H.Q.



Rock Hill
Joint Used Building



Le Meridien Cyberport Hotel



Public Health Lab. Centre



Lee Theatre Plaza



HK Police Headquarters



St. Paul's Hospital



Juveniles Centre, Tuen Mun



Tuen Mun Polyclinic
Ophthalmic Centre



New Infectious Disease Centre
Princess Margaret Hospital

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Zhongshan SAIVER WELAIRE Air-Cond. Equip. Co., Ltd. 中山昇華偉基空調設備有限公司



Zhongshan SAIVER WELAIRE Air-Cond. Equip. Co., Ltd. is a joint-venture between WELCOME AIR-TECH LTD. and SAIVER S.r.l. It moved to a new factory in September 2008. The new factory was located at Sha Lang Zhongshan with over 60,000 sq.ft production area and more than 100 employees, who focus on manufacture SAIVER Air Handling Units, SAIVER Integrated AHU, WELAIRE Ventilating Fan and Filtration products to serve Hong Kong, Macau and Mainland China markets.

The factory was certified to ISO 9001:2000 quality management certificate and the product is certified by EUROVENT EN1886.

中山昇華偉基空調設備有限公司位於中山市西區，是意大利 SAIVER S.r.l 與偉基空調有限公司成立的合資公司，於本年 9 月遷入佔地面積超過 60,000 平方呎的新廠房。過百名優秀員工及經優化的生產線更有效提高生產效率，標準機組可於三至四星期內交貨，新廠房主要為香港，澳門及中國市場生產昇華 (SAIVER) 空調處理機組、智能空氣淨化系統及偉利亞 (WELAIRE) 通風及過濾產品。

公司已通過 I.S.O.9001 品質管制體系標準認證，用心製造的高品質產品已獲得歐洲權威組織 EUROVENT EN1886 性能認證。



Advantages of SAIVER Integrated AHU:

智能空氣淨化系統有以下優點：

- Minimize Cost 控制成本**
Pre-fabricating complex work at factory and reduce wastage during site installation.
複雜的組件程序在工廠預先完成，減少現場安裝時不必要的浪費
- Reduce Construction Period 縮短施工期**
Reduce on sit installation time.
減少安裝時間
- Better Quality 控制品質**
Works are done in a controllable environment and test before delivery.
能在受控的良好環境下生產，讓產品質素得到保障及預先進行各項測試
- Save Space 節省空間**
The extended width of AHU is smaller than traditional piping connection space.
機組所增加之闊度少於傳統安裝水喉空間
- Environmental Saving 環保**
Reduce site fabricate time and wastage, less effect to public.
縮短於現場組裝時間減少和損耗，減少對公眾及環境的影響

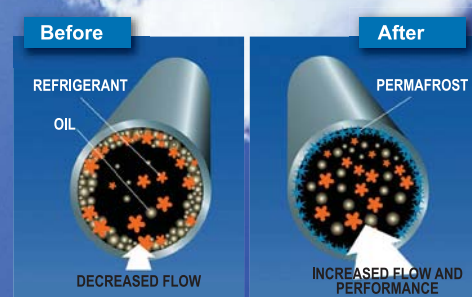


PermaFrost – A simple way to reduce energy costs while increasing cooling capabilities

Energy usage within chiller plants represent a major portion of total energy consumption in a building. Up to now energy solutions for HVAC equipment have had to rely on innovations using either water or electrical techniques. Now, due to advancements within metallurgical thermo-dynamics, energy reduction and efficiency gains can be achieved effectively and cost efficiently within the refrigerant side too - thanks to the unique **PermaFrost** technology.

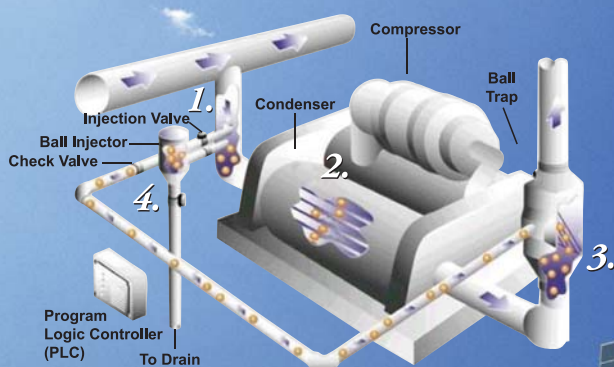
PermaFrost allows the refrigeration systems to reach set temperatures faster while using less energy. It is especially suitable for commercial properties, schools and institutions, hospitals, hotels, shopping centres etc.

- Already in use by some of the world's largest companies
- Quick return on investment
- Tested to International standards



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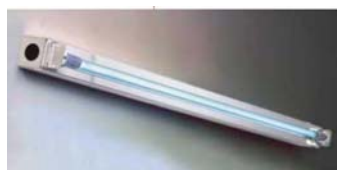
日本因幡空調配件專家
INABA DENKO SLIMDUCT SYSTEM AND A/C ACCESSORIES



RD SLIMDUCT(STEEL)



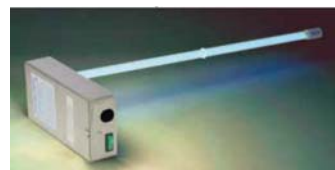
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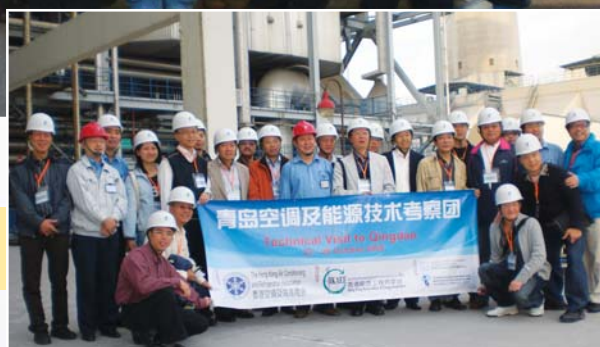
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青島空調及能源技術交流團

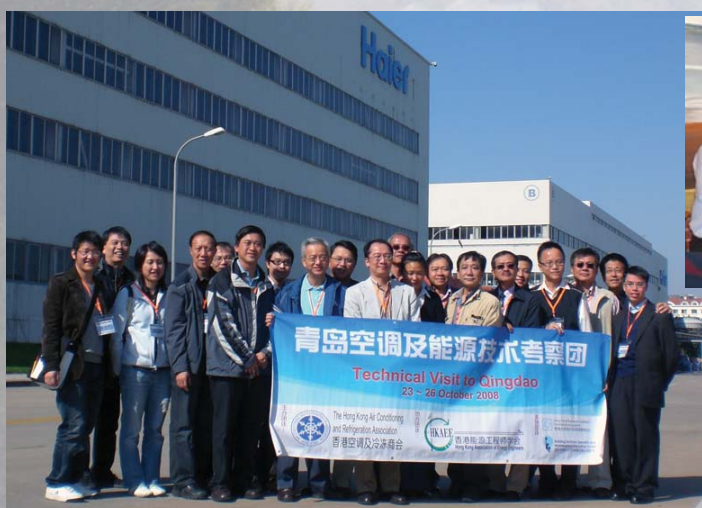
23 - 26 Oct 2008



青島，一個大家熟識的名字，除了跟它今年成為北京奧運會帆船比賽場地有關外，還有它美麗怡人的風景、歐洲式的建築物、青島啤酒和對蝦等等。二零零八年十月二十三日，一行二十一人的香港空調及能源技術交流團，在我們會長莊國明先生，副會長余達志先生，永遠名譽會長連金水先生和前會長陳家龍先生的帶領下，浩浩蕩蕩從香港機場出發到青島作四天的交流。這次的訪問團是由香港空調及冷凍商會（ACRA）主辦，香港能源工程師學會（HKAEE）協辦，並得到香港註冊通風系統承建商協會（HKRVC），屋宇設備運行及維修行政人員學會（BSOMES）和中央政府駐港聯絡辦的大力支持，大家都盡興而歸。

當天下午，甫下飛機，馬上就到LS空調系統（山東）有限公司參觀。LS為Leading Solution的簡稱，是韓國LG集團屬下的公司，主要生產中央空調的冷水機組及末端設備。其吸收式的冷水機組，使我們留下深刻印象，LS於晚上更設宴款待我們。

第二天早上，出發到海爾空調位於黃島的家用空調生產基地作參觀。工廠佔地非常廣泛。黃島離開青島要一個半小時的車程，青島現已修建一條跨海大橋及海底隧道。完成後，就可將車程縮短至只有二十分鐘，有利黃島的發展。午餐於海爾工業園內的餐廳。午飯後馬上趕回青島市內另一個海爾工





業園，我們參觀了它的家用空調生產工廠和展覽大樓。了解到「海爾」除了生產空調產品外，還有很多多樣化的家電及家居產品。其品牌已經成功地打入世界市場。

第三天，我們利用早上部份時間，參觀了嶗山風景區。嶗山老君峰下有太清宮，三面環山，南向大海；冬天風不臨，暖如陽春，盛夏酷暑不至，海風送爽，真是風水寶地之所在也。宮內古樹名木眾多，值得遊覽。但因當天風勢太大，索道停止運作。我們在會長的帶領下步行上山，經過四十五分鐘的旅程後，終於到達嶗山頂峰。但因時間關係，未能逐一參觀頂峰的景點，有點遺憾。回程時在外圍參觀了奧運帆船

比賽場地，非常壯觀。下午經中聯辦的安排，參觀了青島發電廠，大家對該廠的環保設施非常讚賞。經過參觀及討論後，大家對發電廠的運作和管理有更深的認識。

第四天早上，透過中聯辦的安排，參觀了位於登州路的青島啤酒廠。看到青島啤酒廠從1903年到現在的發展及生產上的改變，才明白到為什麼它能風行海外，享負盛名。我們參觀完畢後，還有機會一嘗新鮮的青島啤酒，非常美味。享用過簡單的午餐後，便馬上趕往青島的流亭機場乘飛機回香港。

四日行程到此完滿結束，大家不單在空調及能源技術上有所裨益，彼此的友誼也在不知不覺中增長了不少。



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Celebrating 10th Anniversary



Technical Forum for the Proposed Mandatory Implementation of the Building Energy Codes



The captioned Forum was successfully held on 3 March 08, over 16 members attended. The speaker is Mr. S. K. Ho, Chief Engineer of EMSD,

explained very clearly on the captioned content, while our members have expressed their positive feedback on this proposal. All of us found that was a very fruitful forum.

ACRA Associate Members Ma Jong Competition

This activity was held on September 25, 2008 at King Palace Restaurant. There were total 16 participants and the winner was Shinryo HK Ltd. We all had a celebration dinner after competition and had found happy, funny and enjoyable at that night.



Chinese National Day Celebration Dinner



We had attended the Chinese National Day celebration dinner held by HKCA. It was a grand function with a lot of government officers attended. ACRA had won a champion for the Beer Competition.



Technical Visit At Qingdao

The ACRA organized a technical visit on 22 October 2008 to 25 October 2008 to "Haier" < 海爾工業園 >, "LS" < 樂聲空調系統 (山東) 有限公司 > Qingdao Electric Power Plant and Qingdao Beer Factory energy efficient facilities at PRC and we are pleased to have the Hong Kong Association of Energy Engineers (HKAEE) as our co-organizer and Hong Kong Registered Ventilation Contractor Association as our supporter. This is a good opportunity for the members of the Associations to explore more cooperation opportunities with air-conditioning equipment suppliers and understand the latest technology in the HVAC&R industry.



ACRA Golf Competition

This function was held on 05.11.2008. It was a sunny day which is suitable for golf function and all golfers enjoyed the competition. There were total 32 participants on that day. The result was shown as below:

Winner

K.Y. Ip (YEC)

1st runner up

Wilson Choy (Gotop)

2nd runner up

Hymen Chan (Gotop)

Longest drive

Gary Hui (Chevalier)

Longest drive

John Collier (Atal)

Nearest to the pin

Andy Cheung (Welcome)

Nearest to the pin

Pachu Leung (Welcome)



Basketball Tournament

There were total 12 teams for the whole tournament and the final competition was held on 06.11.2008 at Shek Kei Mei Sport Centre. The result was shown as follows:

Champion

The Jardine Engineering Corporation Ltd.

1st runner up

Welcome Air-Tech Limited

2nd runner up

Shinryo (Hong Kong) Ltd.

1st runner up



Champion



2nd runner up





MEMBER LIST



COMPANY NAME	CONTACT NO	TRADE	
ATAL Engineering Ltd. Carrier Hong Kong Ltd. Krueger Engineering (Asia) Ltd. Newland Engineering Ltd. Ryden Engineering Co., Ltd. Shinyo (Hong Kong) Ltd. Shun Hing Engineering Contracting Co., Ltd. The Jardine Engineering Corporation, Ltd. Trane Hong Kong Winston Air Conditioning & Engineering (HK) Co., Ltd. York International (Northern Asia) Ltd. Young's Engineering Co., Ltd.	安樂工程有限公司 開利(香港)有限公司 高雅機電工程有限公司 新陸工程有限公司 菱電工程有限公司 新菱工程香港有限公司 信興電工工程有限公司 怡和機器有限公司 特靈香港 永通冷氣工程(香港)有限公司 約克國際(北亞)有限公司 景福工程有限公司	2565 3392 2694 5618 2860 7333 2967 8620 2619 8082 2237 8624 2419 5608 2807 4511 3128 4764 2764 1200 2331 9286 2235 1803	E&M Contracting Air-Conditioning Equipment Supplier Air-Conditioning, Electrical, Fire Services, Plumbing & Drainage Installation Registered Contractor in ACMV & Electrical Installation E&M Contracting Building Services, E&M Contractor Trading and Engineering Contracting Contracting / Supplier / Building Automation / Energy Service Air-Conditioning Equipment Supplier Contracting Manufacture of Air-Conditioning Equipment Supply & Installation of Electrical & Mechanical Services, Routine Maintenance Work
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Yordland Engineering Ltd.	奇樂工程有限公司 雅士(國際)空調有限公司 裕風先達有限公司 雅訊機電工程有限公司 第一電業有限公司 奧思(香港)有限公司 正佳工程有限公司 阿樂斯亞洲有限公司 安利有限公司 冠昇空調有限公司 穿梭科技有限公司 彬記(國際)有限公司 惠生電業有限公司 華力創建有限公司 中興電業有限公司 堅毅服務 佳電工程有限公司 冠殿有限公司 大昌貿易行工程有限公司 大豐空調服務 佳澤科技有限公司 勁技有限公司 恩索有限公司 廣達工程有限公司 精基貿易有限公司 福隆(香港)有限公司 馮氏機電工程有限公司 歐諾空調有限公司 英國通用工程(香港)有限公司 香港通用電器有限公司 群力冷氣工程有限公司 佳域工程有限公司 佳濤電業有限公司 協進國際有限公司 高陸工程(香港)有限公司 鄧氏恒信工程有限公司 禾峰國際有限公司 明發冷氣有限公司 豪華國際空調有限公司 恒豐工程(香港)有限公司 萬程國際有限公司 建力聲震控制(亞洲)有限公司 景匯空調工程修有限公司 蘭吉爾有限公司 李德工程有限公司 必發(香港)有限公司 雄力工程有限公司 明新玻璃纖維工程(國際)有限公司 美的電器(香港)有限公司 NAP聲學工程(遠東)有限公司 第一工程及物料供應有限公司 鑫輝(國際)有限公司 必德信工程有限公司 百利高工程(香港)有限公司 威信工程有限公司 萬聯空調有限公司 和信亞洲有限公司 聖備貿易有限公司 第一太平戴維斯設備工程有限公司 順興雪櫃冷氣工程有限公司 陸建有限公司 南龍工程有限公司 高達(香港)工程有限公司 泛達建築材料有限公司 義隆設備有限公司 金鳳凰工程服務有限公司 聯明有限公司 偉保工程有限公司 威圖工程有限公司 偉聯空調設備有限公司 和記電業有限公司 華德亞洲有限公司 威士文有限公司 日島工程有限公司	2408 2960 2764 0307 2887 7000 2595 1199 2529 7555 2647 8163 2598 4228 2574 8376 2807 9400 2331 8559 2511 3161 2748 9319 2799 9797 2818 7990 2365 0288 2425 5033 2332 3591 2416 8066 2768 3595 2836 0301 2511 2118 2116 9021 3590 4656 2827 0688 2889 1681 2393 7773 2682 7200 2323 0809 2123 0888 2919 8383 2890 2622 2893 3600 2405 0888 2575 8770 2459 3038 2428 8640 2730 3272 2396 8108 2596 8888 2992 0830 2881 8011 2368 6136 2191 2488 2796 2417 2960 7835 2305 3111 2568 4092 2474 9832 2787 5717 2669 4888 2866 2886 2334 3871 2590 8088 2565 0372 2402 2772 2395 6081 2698 3423 2385 5121 2573 4219 2534 1688 2387 2882 2333 1518 2963 7241 2595 1122 2756 3837 2757 5539 2117 9211 2797 2168 2543 0610 2571 5382 2890 9321 2522 3128 2456 0198 2614 2213 2362 2186	Contracting Manufacturing of Air Conditioning Equipment & Component Contracting & Supplier of Air Conditioning product Contractor Authorized distributor of 'General' air-conditioner Contracting Supplier 'Armalex' Insulation manufacturer To Market and Distribute A/C and Engineering Equipment for Building Construction Industry of HK & China Market Trading of HVAC Equipment Supply & Install Window/Split Type & Packaged VRF Systems Wholesale Supplier of air-conditioning products - Daikin-Japan, Kimukoh-Japan, Inaba-Japan, Taco-USA, etc. Contracting Supply of electrical products of brand 'MK', 'LEGRAND' & 'HAGER'; Cable of brand 'DRAKA', 'PIRELLA', & 'AEI' Environmental Protection Services, Indoor Air Quality, Duct Cleaning System E & M Contracting Contracting / Supplier / Building Automation HVAC Installation, E&M Packaged Installation Contracting Trading Supplier (water treatment) Supply of HVAC Trading Trading - Mechanical Equipment, Building Materials, Environmental Products Insulation Material Supplier E & M Contracting Supplier (Authorized Dealer of AC Products - Daikin, Toyo, Valmatic, Honeywell-MING) Contracting Supplier Contracting Contracting Authorized Distributors Manufacturer's Representative Electrical & Mechanical; MVAC Engineering Aluminum Cladding for Air-Conditioning Supply 'Shangfeng' blower & fan for ventilation Contracting & Supplier Manufacturer of Air-Conditioning Equipment Supply & Install Central Hot Water Plant and Seawater Plant, Supply of Equipment. Manufacturer of 'IMASU' ventilation product Building Services - E & M Works Supply of Acoustic materials, vibration isolators, floating floor & barrier materials HVAC Contracting & Maintenance Supply of Cold Meter, Chilled Water Energy Registered Ventilation Contractor Supply Pre-insulated Pipe, Air Filter, Butterfly Valve, Electrostatic Precipitator, UV Sterilizer & Other Building Material Contracting, Supplier of A/C Equipment Manufacturer of 'MESAN' water cooling tower; Distributor of Air-Conditioning Equipment Supplier & Manufacturer of 'MD' product Design, Supply & Installation of Acoustic Treatment and Vibration Control Products Contracting Supplier Pump, Cooling Tower, VAV Box, Vibration Isolators, Dura Duct, Liquid-Solids Separation Systems, Fibreglass Supplier Contracting Contracting/Supplier Authorized Distributor of Toshiba & Carrier product; Registered Contractor Distributor of HVAC product Trading of 'SINRO' Cooling Tower, Fan Coil, AHU & Control Specializing in trading Construction Insulation Materials, such as Phenolic Foam, Fibreglass Contracting / Energy Service Design, Supply & Installation of Air-Conditioning Contracting Air-Conditioning & Refrigeration Installation Supplier / Distributor for Electrostatic Precipitator, MVAC System & Electrical Installation Contracting / Supplier for Weatherproof / Fire Resistant Materials to E & M Services Insulation Material Supplier Contracting Contracting Contracting Contracting Contracting Supplier of Electric Appliances (Brand Name : Mitsubishi Daiya, LG, GREE, TCL & Body Sonic, etc) Supply & Manufacturing of full range of Ventilation Fans Trading & Manufacturing Air Conditioning Accessories Design, Supply, Installation and Maintenance of HVAC, Electrical and Fire Services System

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Polyurethane (PU)/ Phenolic Foam Non-Metallic ductwork Proven alternatives to air conditioning ducting systems

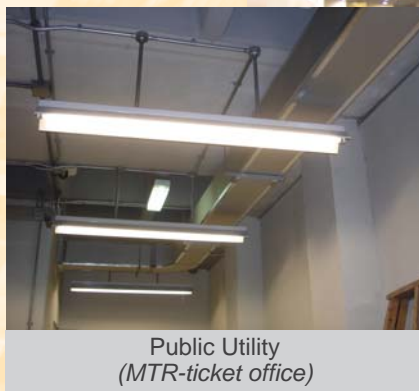


Office Tower
(Mega Box Office)

Fiber glass thermal insulation applying to metal air ducting has been on its way out in government projects. According to the issue of the US Department of Health and Human Services, they have put fiber glass on its official list of

suspected carcinogens in 1994 and the Architectural Services Department (ASD) began describing fiberglass insulation's performance as "unsatisfactory" 13 years ago. Thus, the elastomeric foam/ phenolic foam insulation has been the acceptable alternatives for metallic air-conditioning air duct application since that time.

Non-metallic Phenolic Foam Ductworks systems have been used by ASD 10 years ago to replace G.I. ductworks c/w insulation for the improvement



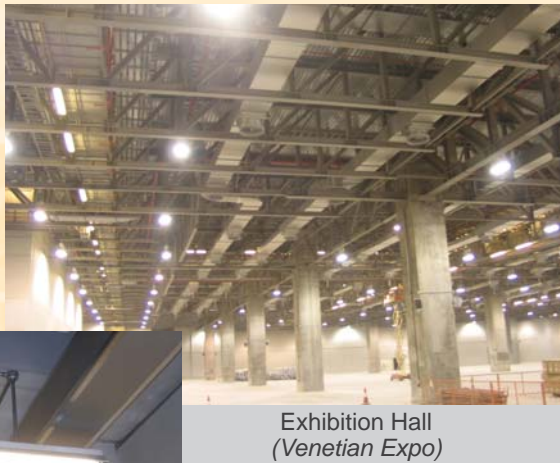
Public Utility
(MTR-ticket office)

of the air duct system. In accordance with the latest updated general specifications issued by ASD, polyurethane (PU) foam non-metallic ductworks was also included, and both phenolic/ PU foam non-metallic ductworks are having the following advantages as compared to traditional metallic ductworks:

1. Save construction time – Insulation process will not be necessary.
2. Save installation cost and time – Pre-insulated foam panel only has 1/5 of the weight of Metal Air Duct. Installation time can be easily reduced

by at least 30-40%; hence installation cost could also be reduced.

3. Ensure air ductwork quality – Pre-fabricated air duct ductwork for site installation has become the market trend to ensure better workmanship of all kinds of air duct layouts.
4. Better insulation performance – Fiber glass insulation jacket is open-cell material and will absorb water droplet/ moisture foam metal air duct, where phenolic/ PU foam is close-cell materials and will not absorb water. The "K" value, thermal conductivity is much better. (Fiberglass=0.038w/°cm, Phenolic/PU foam=0.023-0.024 w/°cm).



Exhibition Hall
(Venetian Expo)

Pre-insulated Panel Air Duct has been developed for over 20 years in Europe with proven experience and Phenolic/PU foam non-metallic ductworks have also been used in government and commercial projects

since 1996. In addition, if any consultant is interested to evaluate the standards of this new generation of air duct in their coming projects, please refer to European/BS standard EN13403: 2003, which had been established since April 2003. (For further information, please visit <http://www.bsi-global.com>).



Swimming Pool
(FuJian Middle School)

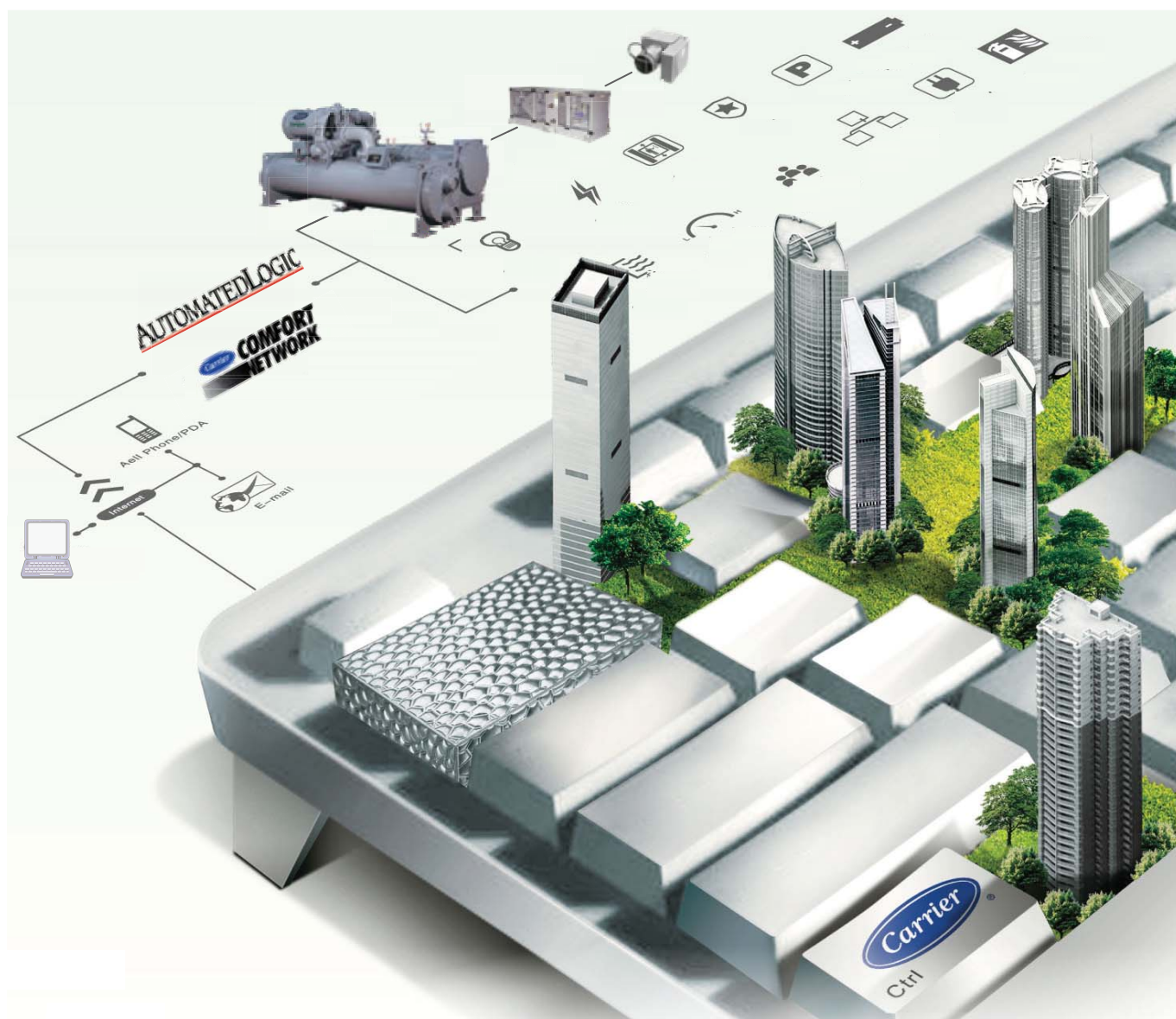
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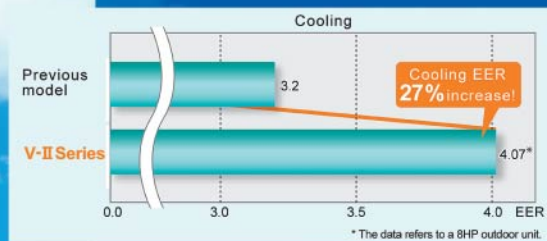
珍寶 冷氣機
GENERAL

AIRSTAGE™ V-II

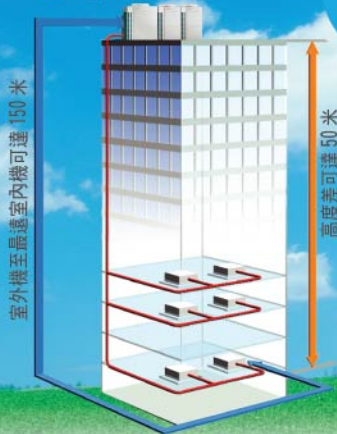
Variable Refrigerant Flow System VRF

變頻冷暖式中央冷氣系統

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直流變頻壓縮機：控制更精確，效能更高
長管道設計可在大型樓宇使用
高效能雪種 R410A



長管道系統設計



最多可接駁
100
室外機

最多可接駁
400
室內機



掛牆式
WALL MOUNTED TYPE

藏天花式
CASSETTE TYPE

氣管式
DUCT TYPE

天花 / 座地式
CEILING / FLOOR TYPE



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INVERTER
R410A 環保雪種系列



王迺星

提起“星爺”大家都會聯想起影視界的周星馳先生；但在空調及冷凍行業，提起「星哥」，大家就不其然想起王迺星先生。一生人，一份工，四十六年的經驗，當中的甜酸苦辣，以下一一為大家分享。

想當年

60年代的香港，生活及找工作非常之困難。王迺星先生剛好於1962年中學畢業，面對著這個人浮於事的社會，找一份合適的工作，可說是大海撈針。碰巧有一位在建築公司工作的親戚認識怡和機器有限公司的Mr. John Lui (雷先生)，在他的介紹下到怡和機器當學徒。當時的香港社會很流行學徒制度，很多人都希望學一門有用手藝傍身。但當時所謂學徒制度，都是沒有正式的學徒計劃及訓練，主要是採用師父帶徒弟的模式。在這舊制度下，大部份師父都存在“教識徒弟無師父”的想法，要在合理的時間內完成訓練，非得要靠自己的不斷努力和細心觀察。以前有些師父於履行維修調校的重要時刻時，就會借故叫徒弟走開，回來時工作已經完成了，徒弟自然需要留在師父身邊一段更長的時間去學習和幫忙。

在60年代，空調及冷凍是比較冷門的新興行業，只有高消費的地方及有錢人的家裏才會安裝空調。對一個剛畢業的青年人來說，能找到一個有學習機會的工作，已經算不錯了。星哥的同期師兄弟，包括有溫維鑑先生、何國祥先生，蔡炳坤先生及梁國柱先生等等；師父輩則有蔡全先生，施玉方先生，鄧旋坤先生和麥志輝先生等等。經過三年不斷學習和實踐，再加上自己不斷進修，星哥於1965年已被擢升為師父（Mechanic），開始帶學徒工作。

到1970年，星哥被升為技工領班（Foreman），並於1980年被升為高級督導員（Senior Supervisor）。1980年對星哥來說可以說是一個重要的人生交叉點。在公司的要求下，成立了一隊調試隊伍，為尖沙咀的一個項目做整個空調系統的調試工作。到1985年，被升為高級工程師，專注負責處理調試、運行、保養、保修、管理和培訓等工作。Mr. Barry Honeyford於1986年為怡和機器有限公司空調部門帶來了新改變，將原本代理約克改為代理特靈。

到了1987年，星哥被擢升為技術經理。直到1995年中，星哥加入特靈的大家庭為高級經理，被公司委派負責在筲箕灣成立一所新的維修和保養辦事處，負責調試、運作管理及維修等工作等。並成立更換冷媒項目專組，負責提供機組變換環保冷媒方案，包括技術監督及效果檢查等，在五年內已為五十台特靈R-12冷媒機組更換使用環保冷媒。一直到2000年被擢升為總技術經理，專注負責技術支援、策劃工業安全及技術培訓、保修及管理工作。其實星哥早於2005年已經達到退休年齡，但在公司大力挽留下，跟公司續簽3年合約直到2008年才完成。

難忘往事

在1982年，星哥曾經參予Connaught Centre（即現時怡和大廈）的冷水機組調試工作，當時的Connaught Centre樓高52層，不但是當時全港最高的大廈，也是擁有當時全港最大冷噸的空調系統，能成功完成調試工作，很有滿足感。當HarbourCity於1984年落成的時候，星哥也曾參予整個冷暖空調及供水系統的調試工作。基本上大部份在80年代到90年代經怡和機器安裝的大型冷水機組項目，都經過星哥調試。在1985年，星哥和梁基強先生一起到約克於美國的廠房學習，並順道參觀當時在紐約世界貿易中心全世界最大冷噸的冷水機組，對於它的運作及保養進行取經。在1987年被擢升為技術經理後，星哥被指派為與廠方於技術上的聯絡人，加強於產品維修技術上的交流及品質改進。後來更成立技術培訓班，加強前線維修技術員於產品上的認識及提高保養維修的技巧，此培訓班是當時香港少數正統的空調培訓課程，現時部份在空調及冷凍行業有經驗的維修保養人員，也可能曾經就讀於此。

成功之道

除了不斷進修之外，星哥喜歡把新產品的說明書收集起來，慢慢分析和細心研究，使自己對每一樣新產品的運作原理及結構，都掌握得一清二楚。星哥的成功之道，除了敬業樂業、勿忘增值、做事要實事求是和把握機會之外，最重要還是一個「誠」字。從1980年到現在，星哥在處理保修管理時，因「誠」而得到各方信任，建立別人對自己的信心。時時以「誠」心學習和「誠」心工作，無論做什麼事也可成功。

興趣廣泛

星哥閒時喜歡聽各式各樣的音樂包括交響曲及流行曲等等，總然之有靚聲就可以。現在更愛上攝影這玩意，並經常去旅遊，拍下很多美麗照片留念。還有星哥已榮升外公，閒時也會弄孫為樂，唯繫三代感情。



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Hunghom Harbourfront 紅磡海灣軒		✓	
Lohas Park 日出康城			✓
Lung Kwn Tan 龍鼓灘住宅項目			✓
Macau City Of Dreams Bubble Area 新濠天地	✓		✓
Macau Venetian Resort Parcel 5 & 6 威尼斯人渡假村第5-6期	✓	✓	✓
Mount Beacon 筆架山峰		✓	
MTRC Kowloon Station Phase 2 香港鐵路九龍站第2期	✓		
One Island East 港島東1號	✓		
Po Sum On Factory 保心安工廠	✓		
Prince Ritz 太子匯			✓
Singapore - Marina	✓		
Singapore - Tampines 新加坡淡濱尼廣場	✓		
Skyplaza 翔天廊	✓		
St. Teresa's Hospital – Chinese Medicine Centre 法國醫院 - 中醫保健中心	✓		
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One Island East consists of a 70-storey tower (excluding roof floors and basement) comprising 59 office levels, 2 entrance foyer lobby levels, 3 M&E floors, 2 refuge floors and 2 sky lobby floors on a 2-storey basement for car park and plant rooms.

The mechanical services comprise 7 nos. of chillers providing total cooling capacity of 9300 TR, 17 nos. cooling towers, 145 air handling units, 243 fans, plate type heat exchangers, numerous unitary systems and Heat Recovery systems. The installation of fire services protection includes sprinkler systems, pre-action sprinkler systems, drencher systems, hydrant/hose reel systems and an automatic fire alarm and detection system. There are over 80 pumps for the various mechanical and fire protection services.

The electrical works include installation of HV and LV electrical distribution systems with 10 nos. of 11/0.38kV transformers, 7 nos. of generators, 10 sets of HV switchboards, 12 sets of LV switchboards, over 30,000 metres of power cabling, a public address system, an SMATV system, an emergency intercom system, an induction loop system and a car park management system.

3D Modeling

Driven by the Customer, the Contract requires the use of 3D Modeling throughout the project to achieve reduction



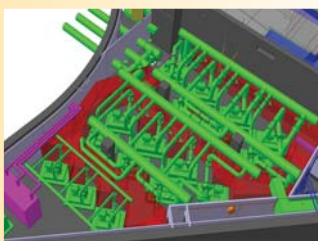
of waste traditionally encountered in building projects. Spatial coordination is visually proven by the 3D model and used as the key tool for co-ordination with the architect, consultants, main contractor and between all trades.

The use of the 3D model has also enabled a high level of pre-fabrication and

modularization to be achieved as the 3D model mitigates risk of potential clashes before implementation of the works on site. Pre-fabricated cable containment, switch room modules, air duct and mechanical piping are introduced in the project.

The increased content of works carried out off-site has reduced the numbers of operatives on site and reduced installation durations. With this clear layout plan of plant room, accessories such as water valves and sensors could be located more precisely.

This approach improves overall production efficiency and helps maintain a consistent quality of workmanship. From facility



management point of view, the equipments can be installed at the exact location as stated in the as-fitted drawing. With this 3D model, the maintenance area for equipment can be precisely considered.

ONE ISLAND EAST



Pre-fabricated Approach

This approach does not only reduce labour hours on site and achieves high standard of workmanship, but also prevents labour congestion in congested plant rooms. Chilled water piping system assemblies are pre-fabricated at off-site factory being labeled prior to delivery. Welding is not required on site - only physical assembly works. Air handling unit (AHU) with motor control panels, DDC control panels, and valve train are installed at factory and integrated into AHU. Units are delivered to site as a whole.



Project Summary

Client	: Swire Properties Ltd.
Architect	: Wong & Ouyang (HK) Ltd.
Structural Engineer	: Ove Arup & Partners HK Ltd.
M&E Engineer	: Meinhardt (M&E) Ltd.
Quality Surveyor	: Rider Levett Bucknall Ltd.
Main Contractor	: Gammon Construction Ltd.
M&E Package Contractor	: Balfour Beatty E&M Ltd. •



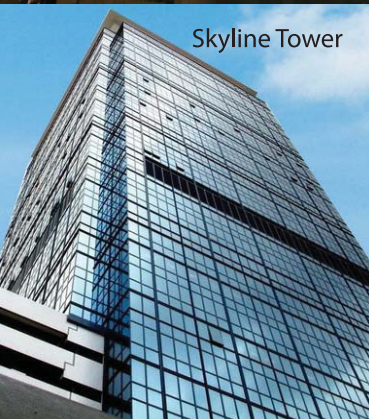
Automatic Tube Cleaning System



CEDD Building



Three Pacific Place



Skyline Tower



New Town Plaza Phase 3



Kwai Chung Hospital, Plant B



One Central Macau

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System Installation
Testing & Commissioning
Measurement & Verification Services
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19/F., Skyline Tower, 18 Tong Mi Road, Kln., HONG KONG.

Email : flhk@flhk.com.hk ☎ 2393-7773

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The University of Hong Kong



Science Park Phase 2 Area A, B & A2



Western Park Sports Centre



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Link The Best Company Limited

Sales Office: Flat 12, 11/F, Block A, Merit Ind. Centre,
94 Tokwawan Road, Kowloon, Hong Kong
Factory: 188 Tai Po Tin, Fanling, NT, Hong Kong

Tel: (852) 2568 4092
Fax: (852) 2423 7829