

香港中華廠商聯合會會長黃友嘉博士 JP 獻詞

Message by Dr David Y K Wong JP

President, The Chinese Manufacturers' Association of Hong Kong

廠商會一直堅持工業應作多元化發展，產品質素及設計更應力求完美和創新。本會十分高興能繼續參與由特區政府主辦的「香港工商業獎」，並作為「機器及機械工具設計」的主辦機構，藉此鼓勵和提高本港在機器及機械工具的設計水準，加強競爭力，並對傑出的產品予以獎勵。

香港的機器及機械工具製造商一向以生產靈活見稱，產品質素高而價格極具競爭力。廠商應抓緊綠色環保和高增值的新興趨勢，研發生產高精度且環保的機器和機械工具，並提供優質的售後服務，進一步提高競爭力。

今年的參賽產品中，不少產品兼具創新思維、成本效益、科技應用、及環保方面皆表現卓越。除價格合理外，品質更達國際標準。

在此，本人謹向評審委員會各委員致以衷心感謝，並特別感謝評審委員會主席徐立之校長領導委員會完成艱辛的評審工作，同時感謝各位參賽者和贊助機構，希望您們繼續支持這項意義非凡的比賽。

最後，本人謹向所有得獎公司致以熱烈祝賀。

香港中華廠商聯合會會長
黃友嘉博士 JP

The Chinese Manufacturers' Association of Hong Kong has long been a strong advocate of industrial diversification and of product quality and design. We are honoured to take part in the "Hong Kong Awards for Industries" organized by the HKSAR Government and to be the organizer of the 'Machinery and Machine Tools Design Competition'. This competition aims, firstly, at encouraging the upgrading of the design of machinery and machine tools in Hong Kong with a view to enhancing our product competitiveness, and, secondly, at giving appropriate recognition to outstanding entries.

Hong Kong manufacturers of machinery and machine tools are well known for their flexibility in production. They are likewise highly acclaimed for their quality and competitive pricing. Grasping the current trend of green and high value-added products, manufacturers would do well to focus on applied research with a view to producing high precision and environmentally friendly machinery and machine tools. Prompt and quality after-sales service is also important in improving competitiveness.

We are greatly encouraged to note that this year's participants in our 'Machinery and Machine Tools Design Competition' have all demonstrated their outstanding achievements in terms of innovation, cost effectiveness, application of technology and environmental protection. Indeed, pricing edge aside, the quality of our machinery and machine tools has reached world-class standards.

We wish to pay special tribute to the Judging Panel under the distinguished chairmanship of Professor Lap-Chee Tsui. The success of the Competition this year is due in no small measure to the dedication, professionalism and patience of each and every member of the Judging Panel, for which we are truly grateful.

We would also like to say a big "thank you" to all entrants and of course our sponsors whose support was at once welcomed and essential. We look forward to your continued support to this meaningful event in future.

Finally, we would like to congratulate all winners of the Competition.

Dr David Y K Wong JP
President
The Chinese Manufacturers'
Association of Hong Kong

2011 香港工商業獎：機器及機械工具設計組別最終評審委員會

2011 Hong Kong Awards for Industries:

Machinery and Machine Tools Design Final Judging Panel

陳福祥博士、楊家強教授、麥啟寧教授、徐立之教授(最終評審委員會主席)、陳帆太平紳士、郭始剛教授

潘永生先生(技術小組成員)、曾漢奇教授、任揚教授、羅兆榮先生(技術小組成員)、阮邦志教授

Ir Dr F C Chan; Prof David Young; Prof K L Mak; Prof Lap-Chee Tsui (Chairman of the Final Judging Panel);
Mr Chan Fan, Frank, JP; Prof Paul Kwok

Mr Joseph Poon (Technical Team Member); Prof Hon Tsang; Prof Yeung Yam; Mr Daniel Lo (Technical Team
Member); Prof P C Yuen

2011 香港工商業獎：機器及機械工具設計組別最終評審委員會

2011 Hong Kong Awards for Industries:

Machinery and Machine Tools Design Final Judging Panel

徐立之教授

Prof Lap-Chee TSUI

最終評審委員會主席

Chairman of the Final Judging Panel

香港大學校長

Vice-Chancellor and President

The University of Hong Kong

陳帆太平紳士

Mr CHAN Fan, Frank, JP

機電工程署副署長 / 規管服務

Deputy Director / Regulatory Services

Electrical and Mechanical Services Department

陳福祥博士

Ir Dr F C CHAN

香港工程師學會高級副會長

Senior Vice President

The Hong Kong Institution of Engineers

鍾寶璇教授

Prof P S CHUNG, JP

香港城市大學電子工程學系講座教授

Professor (Chair)

Department of Electronic Engineering

City University of Hong Kong

郭始剛教授

Prof Paul KWOK

香港公開大學全日制本科生院署理院長

Acting Director, College of Full-time Studies

The Open University of Hong Kong

勞虔基博士

Dr K K LO CEng, FIET

聯業訓練局高級副執行董事

Senior Deputy Executive Director

Vocational Training Council

麥鄧碧儀女士
Mrs Agnes MAK
香港生產力促進局總裁
Executive Director
Hong Kong Productivity Council

麥啟寧教授
Prof K L MAK
香港大學工程學院副院長
Associate Dean, Faculty of Engineering,
The University of Hong Kong

曾漢奇教授
Prof Hon TSANG
香港中文大學電子工程學系教授，系主任
Professor and Chairman, Department of
Electronic Engineering
The Chinese University of Hong Kong

任揚教授
Prof Yeung YAM
香港中文大學機械與自動化工程學系系主任
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Professor, Department of Computer Science
Hong Kong Baptist University

張大鵬教授
Prof ZHANG Dapeng David
香港理工大學電子計算學系講座教授
Chair Professor
Department of Computing
The Hong Kong Polytechnic University

2011 香港工商業獎：機器及機械工具設計大獎

2011 Hong Kong Awards for Industries:

Machinery and Machine Tools Design Grand Award

產品名稱 *Product name :*

KH2000 離子刻蝕微調機

KH2000 Ion Etching System

公司名稱：科研工業器材有限公司

Company name : Kolinker Industrial Equipments Limited

設計者：姚志偉先生，陳肇佳先生，劉士強先生

Designer name : Mr C W Yiu, Mr Simon Chan, Mr Terry Lau

評審委員會意見：

此產品具有創新的設計意念。開發商以高精度、高效能及易維護為目標。於石英晶體的頻率微調工序上，創新地應用了自行研發的陽極層離子槍。在石英晶體的表面進行極精確的刻蝕。陽極層離子槍以環迴跑道的形式產生正離子，因此刻蝕面積大，達致效能高的目標。同時又省卻傳統考夫曼原理的離子槍那損耗性的鎢絲，陽極層離子槍電源亦祇需要一個直流電源，具有易於維護的優點。整個系統設計上功能齊備。無論硬件或軟件，均採用了先進的技術。其多工同步處理技術對效能的提升有着重要的地位。此設備亦是首台能同步處理多達 32 個石英晶體的離子刻蝕系統，其成本效益超越市場上其他同類產品。

此產品在設計時亦考慮到使用安全性。於系統各個閘門上均安裝了感應器，必須在安全狀態下才能運作，防止使用者誤觸而產生意外。在環保概念上，開發商選擇陽極層離子槍，相對傳統的考夫曼原理的離子槍，有較高的能源效益之餘，又免除了鎢絲的損耗。

此產品具有極佳市場銷售性，隨著石英晶體於現今電子產品的需求日增，此設備的銷售額勢必上升。加上此設備提供多國語言，以應付不同的市場需求，使這設備具有甚高的市場價值。

General comments on the product :

The system is innovative. The company is the first manufacturer to apply an anode layer ion source for the large scale crystal final frequency adjustment. The anode layer ion source, has a race track shaped beam pattern which covers a larger etching area. Since no filaments are required in the design, very little maintenance is needed. The ion source only needs a simple DC supply to operate. On the other hand, the system has employed a significant amount of technology and has very good functionality. The system's parallel processing capability (both software and hardware) increases its throughput significantly. Up to now, it is the first system which can process 32 pieces of crystal units simultaneously. It has very good cost performance when compare with similar systems currently available in the market.

Moreover, the system is safety conscientious and environmental friendly. Sensors are equipped in the system to ensure the gates and doors are in proper positions before operations can start, and to avoid fire hazards. In addition, the use of anode layer ion source consumes a lot less electricity than the traditional Kaufman ion source, and requires no replacement of filaments.

The product has good marketability because of the good performance-cost ratio and of the increasing demand of quartz crystal products. The multilingual user interface can also enhance the system's marketability.

2011 香港工商業獎：機器及機械工具設計獎

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Award

產品名稱 *Product name :*

麥哲歐舞動控制台

Macho Hoist Controller

公司名稱：祐圖香港有限公司

Company name : Macoster Hong Kong Limited

設計者：祐圖研發部

Designer name : Macostar R & D Department

評審委員會意見：

麥哲歐舞動控制台是大型播演室燈光控制系統的核心及重要的元素。產品的創新基礎和應用聚焦於一套研發得來的「移動狀態分析器」MSAE，她能同步地、一致的把高達 255 套交流馬達驅動的高精確繩索吊掛系統運行於 ± 5 毫米以內。

因為採用了 CAN 總線傳輸協議的技術，所以應用這智能控制系統亦節省了大量銅電纜數量，她亦大幅增加了使用大量配重物繩索系統的大型演播室遙控與監督的安全性，從而降低了員工在危險演區工作時的風險。

General comments on the product :

Macho Hoist Controller is the core and enabling element of a lighting control system aiming at large broadcasting studio environment. Fundamental innovation and application of technology focused on the R&D of a Motion Status Arithmetic Engine (MSAE) which provides the simultaneous and synchronization of up to 255 AC motors which in turn provide high precision control of suspension cable to ± 5 mm. The use of intelligent control technology also reduces the use of large amount of copper wires by adopting industrial CAN bus technology. It also increases the safety factors on site in large studios with many heavily counter-balanced cable systems which are remotely monitored and controlled, thereby reducing the presence of human operators in the danger zone.

2011 香港工商業獎：機器及機械工具設計獎

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Award

產品名稱 *Product name :*

煤氣“Blueflame”涼廚四寶

Town Gas Blueflame 4-Treasure

公司名稱：香港中華煤氣有限公司

Company name : The Hong Kong and China Gas Company Limited

設計者：陳永盛工程師

Designer name : Ir Ricky W S Chan

評審委員會意見：

煤氣“Blueflame”涼廚四寶系列的設計意念是以回收在廢氣或蒸氣中的熱能來進一步提高煮食爐具的效能。

四種主要在食肆使用的爐具包括蒸爐、蒸櫃、平底爐及炒鑊，都應用了不同的熱能回收技術來提升效能。

當中最欣賞他們在設計給炒鑊用的「導煙碟」過程時，利用了科學方法來定出其形狀；包括考慮到(一)市場上不同炒鑊的弧度，及(二)如何平衡更好的熱交換及保持良好的煤氣燃燒來決定炒鑊與導煙碟間的距離。

General comments on the product :

The product suite of the “Town Gas Blueflame 4-Treasure” is designed to recover some of the energy from the hot flue exhaust or steam to improve the efficiency of a stove. Different heat recovery techniques are employed to four key types of gas appliances : Food Steamer, Steam Cabinet, Stockpot and Wok Range.

It is particularly impressed by the scientific approach adopted to (i) design the shape and geometry of the flue disk used at Wok Range, taking into account of the different radius of curvature of commercial kitchen woks; (ii) the gap between the flue disk and the wok, to balance the improvement in heat transfer efficiency against the proper combustion of the gas.

2011 香港工商業獎：機器及機械工具設計優異證書

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 *Product name :*

空氣病毒分解器(風機盤管系列)

Air Sterilization Unit (Fan Coil Series)

公司名稱：田壹科技有限公司

Company name : A-oneTech Limited

設計者：徐奕偉博士

Designer name : Dr Herman Tsui

評審委員會意見：

為確保清潔的生活環境，該產品能有效地分解空氣病毒，以防止病菌交叉感染。產品內所產生的等離子具高殺菌效能，能有效殺滅空氣中的微生物，例如流感病毒，退伍軍人菌及肺結核菌。產品的費用很低，約每月每平方尺為港幣 0.5 元，適合所有室內環境使用，其中包括醫院，保健中心，機場及其他公共場所。

General comments on the product :

This product addresses the need for effective air sterilization to ensure a clean living environment against cross-infection. By creating sterilizing plasma inside the unit, it achieves a high disinfection rate and is effective against microbes such as flu virus, Legionella, and Tuberculosis. It has a low monthly cost of about HK\$0.5 per square foot and is suitable for all indoor environments, including hospital, health care centre, airport and other public places.

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2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 Product name :

ThermoTick™ C300

公司名稱：柏訊科技有限公司

Company name : Autovision Technology Ltd

設計者：陳鎮光先生、黃逸培先生

Designer name : Mr Chan Chun Kong Joseph, Mr Wong Yat Pui

評審委員會意見：

ThermoTick™採用紅外線技術，使用者只需站在 ThermoTick™前約 40 厘米即可量度前額溫度。產品設計美觀，結合了自動掃瞄攝像機追蹤人體額頭位置，另備有軟件及射頻識別(RFID)掃瞄器，可配合使用企業之職員證，自動記錄儲存相關數據。

General comments on the product :

The product employs a thermopile (infrared technology) to measure the temperature of the human forehead which is placed at a distance of about 40cm away from the device. The system is well designed, with an integrated automatic scanning camera to aim the sensor the human forehead, and software which allows integration of the system with RFID scanners for use with corporate ID passes and automatic logging of data.

2011 香港工商業獎：機器及機械工具設計優異證書

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 Product name :

R650 橡膠輪胎注射硫化成型多工位元聯合機組

R650 Solid Rubber Tyre Injection Vulcanized Moulding Multi-station Production Line

公司名稱：德科摩國際有限公司

Company name : Dekuma International Limited

設計者：孟自華先生、王桂秋先生、蘇西慶先生、劉華飛先生、黃應鵬先生、劉建森先生

Designer name : Mr Meng Zi Hua, Mr Wang Gui Qiu, Mr Su Xi Qing, Mr Liu Hua Fei, Mr Huang Ying Peng, Mr Liu Jian Sen.

評審委員會意見：

德科摩國際有限公司 R650 生產線，成功應用橡膠注射成型技術於橡膠輪胎生產製造，代替傳統勞動力密集的人工送料工作，以及縮短了長時間的硫化過程，並且能夠同時性生產八款不同規格的橡膠輪胎。另外，高自動化生產過程能節省 1/4 生產勞動力，相比美國與加拿大同類型生產系統，R650 不僅價格較低，也是中國首先應用相關技術的輪胎生產線，所以相信將會在國內外擁有巨大的市場潛力。

General comments on the product :

The Dekuma R650 Production Line successfully applied rubber injection moulding technology to the manufacturing of rubber tyres, replacing the traditional labor intensive manual filling and long vulcanizing process. Eight different models of tyre can be manufactured simultaneously. The highly automated process also cuts manpower need by a factor of four. R650 is the first application of such technology in China with a cheaper price compared with similar system from the US and Canada, it has great potential in both domestic and overseas markets.

2011 香港工商業獎：機器及機械工具設計優異證書

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 *Product name :*

食品加工業使用的自動化液體速凍系統

Automatic Liquid Freezing System for Food Processing Industry

公司名稱：香港生產力促進局材料科技部

Company name : Materials Technology Division, Hong Kong Productivity Council

設計者：林子聰博士及陳敏強先生

Designer name : Dr Lam Chi Chung, Mr Raymond Chan

評審委員會意見：

本全自動化液態冷凍系統為全港首個應用於食品加工業的液態冷凍技術系統。此冷凍系統的特點是能廣泛應用於不同種類及型態的包裝食品，而其浸泡冷凍技術採用了丙二醇(Propylene glycol — PG)，一種既便宜、安全及可循環利用的食品添加劑，作為其冷凍溶液。

General comments on the product :

The “Automatic Liquid Freezing System for Food Processing Industry” is the first automatic liquid freezer system for the food industry in Hong Kong. It is designed to freeze a wide variety of packaged food products, regardless of its phase, content and shape. The immersion freezing technology is adopted in the system and Propylene glycol (PG) which is a recognized safe food additive and a relatively cheap and recyclable aqueous solution, is used as the refrigerant (freezing medium) in the system.

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2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 *Product name :*

智能展盤

MegaTray

公司名稱：萬誠電子科技有限公司

Company name : Megabyte Limited

設計者：文振聲先生

Designer name : Mr Matthew Man

評審委員會意見：

MegaTray 智能展盤，主要應用於珠寶零售領域。它通過內置 RFID 讀寫器追蹤商品在銷售過程中從展櫃到展盤的移動情況。通過識別貨品上的電子標籤定位商品位置。如果有任何貨品從展盤上取走，監控系統會立即促動警報，以確保貨品安全。通過智能展盤上的貨品動態分析，還可以為 CRM 系統管理提供客戶行為分析。

General comments on the product :

The MegaTray is an intelligent tray used in the jewelry retail business. It incorporates an RFID reader to track the jewelry pieces taken out from the display cabinet to the tray by the salesman for perusal by the customer. The tray identifies the RFID tagged items placed on it and an immediate alert will be triggered if any item is removed from the tray to ensure the security of the jewelry items. At the same time, it is also part of a stock control and CRM system to log the behaviour of the visitors to the shop.

2011 香港工商業獎：機器及機械工具設計優異證書

2011 Hong Kong Awards for Industries: Machinery and Machine Tools Design Certificate of Merit

產品名稱 Product name :

六軸首飾鐘錶自動換刀CNC 批花機

6-Axis Auto-Tool Changing CNC Carving Machine for Jewelry & Watch

公司名稱：精日科技工程有限公司

Company name : Prime Precision Engineering Ltd

設計者：顏誠希先生

Designer name : Mr Ngan Shing Hei

評審委員會意見：

此台多軸電腦數控機器結合了批花及雕銑加工的功能，提供從設計到生產的全套解決方案。最難得的是參賽者的設計方法，有效地結合了多角度銑加工、360°批花及鑽石切割於同一機器上，減少了重覆擺放工件於不同位置的工序，並且大大提高了重覆定位精度。該機更採用了設計簡潔及經濟實用的自動換刀儀，並配合了數控工具調節功能。

General comments on the product :

The product has integrated the carving and milling functionalities on a multi axes CNC machine that offers a total solution from design to production. It is impressive that the entrant's design approach has effectively combined machining operations of multi-angle milling, 360° carving and diamond cutting on one machine to eliminate the repositioning of the work piece hence higher repeatability can be achieved. The machine also adopts a neat and economical design of the auto tool changer with digital tool adjustment feature.

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產品名稱 *Product name :*

能源再生蒸櫃

Energy Recovery Steamer

公司名稱：環球爐業工程有限公司

Company name : Universal Electrical Machine Works Co. Ltd.

設計者：林潤強先生

Designer name : Mr To Yun Keung

評審委員會意見：

中式酒樓使用蒸櫃產生的蒸汽加熱食物，餘下變成環境中的廢蒸汽。此產品可回收大部份廚餘蒸汽熱能去加熱自來水，再轉送給廚房使用。能源再生蒸櫃的成本效益表現令人鼓舞。根據其中一位用家的資料顯示，每月平均節省電費約港幣 40,000 元，每月平均節省水費約港幣 4,000 元。

General comments on the product :

The steamer used in a Chinese restaurant kitchen produces steam that heats up the food and then escapes as exhaust to the environment. The product recovers some of the heat energy of the exhaust steam to preheat water for general use by the kitchen. The cost-performance of the product is impressive. According to the information provided by one of the users, the average electricity cost saving is about HK\$40,000 / month; while water supply cost saving is about HK\$4000 / month.

2011 香港工商業獎：機器及機械工具設計

2011 Hong Kong Awards for Industries:

Machinery and Machine Tools Design

主辦機構

Organizer

香港中華廠商聯合會
**The Chinese Manufacturers'
Association of Hong Kong**

宗旨

Objectives

是項比賽旨在鼓勵和提高本港生產機器及機械工具設計的水準，藉此提高產品競爭力，及對傑出的產品加以獎勵。

The competition aims to encourage and upgrade the design and promotion of machinery and machine tools in Hong Kong so as to improve competitiveness and to give recognition to outstanding achievement.

評審標準

Judging Criteria

創新 Innovation

應用新技術 Application of technology

性能 Functionality

方便使用 Ergonomics

成本效益 Cost-performance

安全 Safety

對環境的影響 Environmental impact

市場銷售性 Marketability

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查詢表格 Enquiry Form

2012 年香港工商業獎：機器及機械工具設計

主辦機構：香港中華廠商聯合會

2012 Hong Kong Awards for Industries:

Machinery and Machine Tools Design

Organizer : The Chinese Manufacturers' Association of Hong Kong

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我想獲得更多有關 2012 香港工商業獎：機器及機械工具設計的資料

I would like to have more information about the 2012 Hong Kong Awards for Industries:
Machinery and Machine Tools Design

公司名稱

Name of Company

業務性質

Nature of Business

地址

Address

聯絡人

Contact Person

電話

Telephone

傳真

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End of the Form

表格完結

鳴謝 ACKNOWLEDGEMENTS

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