

Message by Dr David Y K Wong
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。除價格廉宜外，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，希望你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

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 environmental 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.

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

2009 Hong Kong Awards for Industries:
Machinery and Machine Tools Design Final Judging Panel



前排左起：

麥啟寧教授、任揚教授、徐立之教授（最終評審委員會主席）、顏慶義教授、楊家強教授、羅兆榮先生（技術小組成員）

後排左起：

朱立強博士（技術小組成員）、陳福祥博士、梁世華先生，SBS（香港中華廠商聯合會代表—非評審委員會成員）、陳帆先生，JP、郭始剛教授、潘永生先生（技術小組成員）

First row from left:

Prof K L Mak; Prof Yeung Yam; Prof Lap-Chee Tsui (Chairman of the Final Judging Panel); Prof Ngan King Ng; Prof David Young; Mr Daniel Lo (Technical Team Member)

Second row from left:

Dr L K Chu (Technical Team Member); Ir Dr F C Chan; Mr Paul Leung, SBS (Representative of CMA – non-judging Panel Member); Mr Chan Fan, JP; Prof Paul Kwok, Mr Joseph Poon (Technical Team Member)

徐立之教授 (主席)

Prof Lap-Chee TSUI (Chairman)

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

香港工程師學會副會長
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

馮永業先生

Mr Wilson FUNG

香港生產力促進局總裁
Executive Director,
Hong Kong Productivity Council

郭始剛教授

Prof Paul KWOK

香港公開大學科技學院教授
Professor, School of Science & Technology,
Open University of Hong Kong

勞虔基博士

Dr K K LO CEng, FIET

職業訓練局高級副執行幹事
Senior Deputy Executive Director
Vocational Training Council

麥啟寧教授

Prof K L MAK

香港大學工業及製造系統工程系系主任
Head of Department, Department of Industrial
and Manufacturing Systems Engineering,
The University of Hong Kong

顏慶義教授

Prof NGAN King Ngi

香港中文大學電子工程學系系主任
Chairman,
Department of Electronic Engineering,
The Chinese University of Hong Kong

黃肅亮教授

Prof Joshua WONG

香港理工大學電子及資訊工程學系榮休教授
Professor Emeritus, Department of Electronic
and Information Engineering,
The Hong Kong Polytechnic University

任揚教授

Prof Yeung YAM

香港中文大學機械與自動化工程學系教授及
系主任
Professor and Chairman, Department of
Mechanical and Automation Engineering,
The Chinese University of Hong Kong

楊家強教授

Prof David YOUNG

香港科技大學嵌入式系統設計院院長
Director, Embedded Systems Institute,
The Hong Kong University of Science and
Technology

阮邦志教授

Prof YUEN Pong Chi

香港浸會大學計算機科學系教授
Professor, Department of Computer Science,
Hong Kong Baptist University

Green System At Customer Place



Green Pad Printer



Eco-product
(Green Ink Cup)

Customer Work Floor

Eco Laser Plate
(Green Plate)



Green Pad Print Success Stories



Mr. Rene Theil (Holland) introduce his Hong Kong new factory

產品名稱：**環保移印系統**
Product name: **Green Pad Printing System**



公司名稱：**堅毅工程有限公司**
Company name: **Kent Engineering Co Ltd**

設計者：**堅毅科研開發部**
Designer name: **Kent R & D Team**

評審委員會意見：

環保移印系統是一套融合多種創新設計、關注環境保護的生產系統。該系統包括專利密封油杯，激光蝕刻機，及UV油墨工藝。密封油杯設計可節省油墨和開油水的使用；激光蝕刻機代替舊式使用菲林和酸的化學蝕刻過程，直接標刻印刷板，配合CAD系統，保證印刷圖案定位精準無誤；UV油墨減少75%開油水的使用，及達到快乾的效果。該系統同時可快速轉換印刷工作。

該產品設計靈活，是一個環保，經濟，高效的系統。

General comments on the product:

The Green Pad Printing System incorporated a number of novel features working together for an efficient and environmental friendly pad printing process. These features include the patented sealed ink cup design, a laser-engrave machine, and the application of UV ink technology. The ink cup design allows an economic use of ink/solvent. The laser-engraving machine replaces the old chemical etching process and the use of films and acids by directly etching the pattern on the printing plate. The computer-guided process is supported by a CAD system that ensures both the design and positioning of the pattern before engraving. The UV ink technology serves to eliminate the use of 75% ink solvent and produce a fast drying process. The system is also very user-friendly and highly adaptable to job changes.

The product is a very well-designed system that delivers drastic reduction on solvent and chemical usages and at the same time operates with high ergonomics, efficiency and operational cost saving.



產品名稱：	研能環保節能照明管理系統
Product name:	T&K Lighting Management System (T&K LMS)
公司名稱：	研能照明有限公司
Company name:	e.Energy Lighting Ltd
設計者：	鍾樹鴻教授
Designer name:	Prof Henry Chung

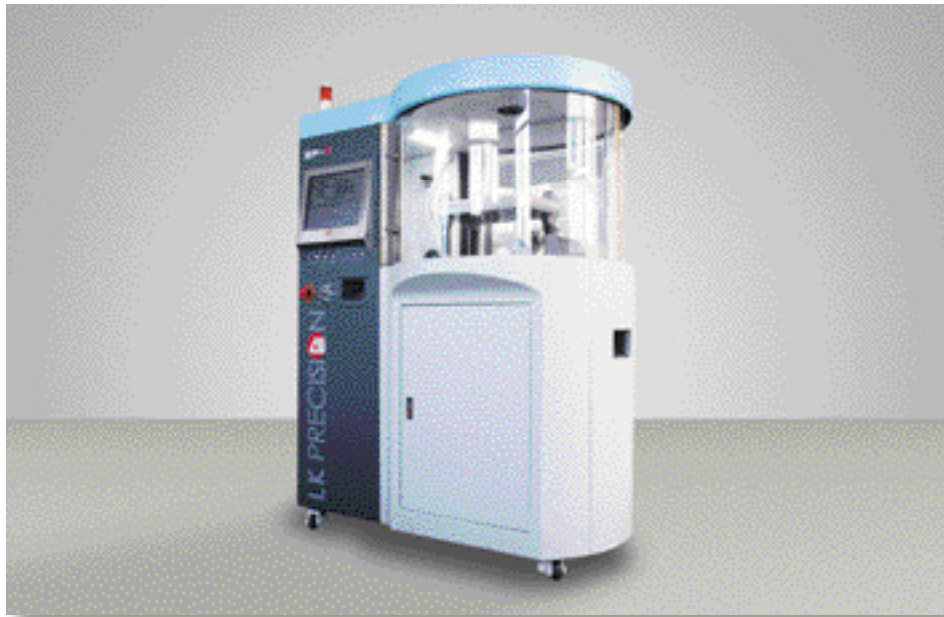
評審委員會意見：

此照明節能系統，擁有專利節能技術，把“不可調光系統”轉變為“可調光”並且自動控制照明電壓而不需對線路造成重大改變。這系統可與所有鎮流器和不同種類的放射燈相容。用戶能依據自身需求安排調壓模式，而速度是以每一伏去調控。漸進式變壓使眼睛容易適應光暗的轉變，亦會延長電燈的壽命。此系統外型小巧，可以安裝於電錶房，而電源耗量亦較變壓器低。

General comments on the product:

The product is an energy saving device based on a patented inverter circuit which is designed to operate in existing lighting infrastructure without major modification. It turns non-dimmable lights into dimmable by regulating the voltage volt by volt and is compatible with all types of electromagnetic ballasts and discharge lamps. The electronic voltage regulation profile is schedulable. The gradually voltage regulation will help to prolong the life of lamps and is also easy for human eye adaptation to the change. With electronic control, the device is compact in size to fit into the meter room to control a large number of lamps. The device also consumes very little power compared with a transformer-based solution.





- 產品名稱：** 微型注塑機
Product name: Micro Injection Molding Machine
- 公司名稱：** 力勁精密機械有限公司
Company name: L.K. Precision Machinery Company Ltd.
- 設計者：** 容啟亮教授、劉幹修博士、關福延博士、陳祉樺女士、黃世浩先生、陳志梁先生
Designer name: Prof K L Yung, Dr K S Lau, Dr F Y Kwan, Ms C W Chan, Mr S H Wong, Mr Z L Chen

評審委員會意見：

此產品主要是針對生產高附加值的微型塑膠產品而開發出的一台設計創新、垂直上射式微型注塑機。設計特點包括垂直向上射膠、免閥門塑化器、自適應垂直鎖模和配合保護微型模具的監察系統及全自動機器手作自動化生產。此機器主要為針對微型注塑行業、電子工業、光學產業、手錶產業和醫學工業，提供一個高速，低損耗和高效的整套解決方案。

此機器的技術性能等各方面，在業內都具備很高的競爭能力。

General comments on the product:

The product is an innovative vertical injection moulding machine developed locally for the manufacturing of micro plastics parts required in higher value-added products of the manufacturing industries. Innovative features include vertical injection module, valve-less plasticizing module, adaptive clamping module and vision-integrated robot arm. The machine provides a high speed, low wastage and cost-effective solution for manufacturing of plastic micro-components coping with the demand on upgrading of products typically by electronic industry, optical industry, watch industry and medical industry.

The product is also highly competitive in price compared to existing machines.

產品名稱： AccuFACE 嵌入式面部識別系統
Product name: AccuFACE Embedded Facial Recognition System

公司名稱： 盈泰安有限公司
Company name: PSP Security Company Limited

設計者： 關植恩先生、林凡生先生、江爭先生
Designer name: Mr Ian Kwan, Mr Vincent Lin, Mr Tom Kong

評審委員會意見：

此面部識別系統採用了紅外線攝錄機，是面部識別工業的新技術。使用紅外線面部識別技術可在光線環境改變下準確識別登記用戶的面部。系統的創新性包括三方面：簡單而有效的雙重濾光鏡紅外線攝錄機能有效提升系統的準確性、系統的硬件平台從錄像作面部識別，可靈活地配合其他識別器使用、系統的體積輕巧細小及低耗電量。

General comments on the product:

This face recognition system employs near infrared camera, which is a new technique in face recognition community. The use of infrared-based facial recognition technology enables accurate recognition under different light conditions. The novelty of this application is three-fold: the design of the simple but effective two-filter lens system for near infrared camera can optimize cost performance with a proper selection of infrared light; the hardware is designed for face recognition from video, which provides flexibility in changing the recognition engine in future; the device is also compact in size and with low energy consumption.





產品名稱：富利牌環保中式炒爐系列
Product name: Flame-Mate Environmental Cooking Range Series

公司名稱：裕寶工程有限公司
Company name: Yue Po Engineering Co. Ltd.

設計者：黃泰來先生、張道嶺先生
Designer name: Mr Wong Tai Loi, Mr Zhang Dao Ling

評審委員會意見：

這個產品是設計供中式烹調使用，為廚師提供一個更安全和舒適的工作環境。此產品在使用較少燃料的情況下，能提供相同的煮食效果，達到節省營運成本和減小對環境的傷害。

這個產品在中式商用爐具上結合了兩個新的技術，分別是：電子火焰感應及全不鏽鋼預混爐頭。感應器能將熄火保護時間縮短至三秒，大大提升安全水平。而預混爐頭在減低燃燒噪音的情況下，效率亦得以提升。其他功能包括一按式點火，獨立風機，無縫式台面及一體式爐膽磚，方便使用和維修。

General comments on the product:

The product is designed for production Chinese kitchen to provide a safer and more comfortable working environment to the chefs. The cooking range ensures the same cooking result with less energy consumed, thereby lowering the operating cost and reducing the environmental impact.

Two innovative features are implemented including the stainless steel premix burner and the rectification flame detector. The combustion noise is reduced while thermal efficiency is improved. Detection time of flame failure is shortened to 3 seconds, which highly reduce the danger of gas leakage. Other special features including one touch ignition, individual blowers (in a two burner system), extruded seamless table top, one piece molded fire brick lining improve the ease of use and maintenance.

產品名稱： eH880 安全智能卡終端
Product name: eH880 eHealth Smart Card Terminal

公司名稱： 龍傑智能卡有限公司
Company name: Advanced Card Systems Ltd

設計者： 李錦榮先生、鄧天祐先生、麥卓朗先生、呂樹鑫先生
Designer name: Mr Eric Lee, Mr Otto Tang, Mr Cheuk-Long Mak,
Mr Terry Lui

評審委員會意見：

eH880是一款安全智能卡終端，專為全球電子醫療市場而設計。這款設備能夠實現相互安全驗證功能，按照卡片的不同權限顯示卡中的詳細資料，並有助於通過個人和公共網路基礎設施進行各種交易。eH880的設計十分人性化，而且還能加入WiFi和指紋模塊。

General comments on the product:

The product is a secure smart card terminal dedicated to eHealth market. The device is capable of facilitating secure mutual authentication, displaying detailed multi-layered information, facilitating transactions through both private and public network infrastructures. The product is ergonomically designed and supports hosting of additional features like WiFi access and biometric fingerprint sensor.





- 產品名稱：** 超能在線測試儀 T800FV
Product name: Supertest In-Circuit Tester T800FV
- 公司名稱：** 振華科技有限公司
Company name: Concord Technology Limited
- 設計者：** 李日生先生及工程發展團隊
Designer name: Mr Lawrence Li Yat Sang & Engineering Team

評審委員會意見：

此設備能有效檢測裝配電子線路板，創新的特點包括：超級調試方式、有專利登記的信號波形分析儀、易掃描、GPIB介面等，保證高速、準確和可靠的測試。設備操作簡單，可由非技術或不熟練的工人操作，減低經營運成本。設備亦可加入其他額外功能：視覺和功能檢查，邊界掃描和在線燒錄，為裝配電子線路板提供一種全面測試方案，而且價格極具競爭力。

General comments on the product:

The device enables effective testing of electronic circuit board. Innovative features including Super debug mode, patented Waveform Analyzer, eScan, GPIB Interface etc to ensure high-speed, accurate and reliable testing. The product is easy to learn and simple to operate for unskilled personnel which reduce operation cost. Together with the optional add-on features: Vision Capture, Functional test, Boundary Scan and In System Program, the Equipment provides a comprehensive testing solution for electronic circuit board with a highly competitive price.

產品名稱：	EleVisor™
Product name:	EleVisor™
公司名稱：	富迪系統有限公司
Company name:	Futac Systems Limited
設計者：	富迪研發部
Designer name:	Futac R & D Team

評審委員會意見：

此系統主要應用於升降機內，除了能顯示升降樓層及相關訊號，還可發放精選時事、娛樂及推廣花絮。其設計重點是利用特製的光纖設備，能以極高速及零干擾的情況下將文字及影像數據作傳輸。結合置於管理中心內的內容管理系統，不同的資訊內容經由中央處理後，能有效地發放至某一特定，群組或所有升降機內的處理器，然後即時展現於顯示屏上。

General comments on the product:

The product is an LCD display system showing lift information as well as infotainment information in lift car. The infotainment is broadcasted by a central controller and transmitted to the lifts by durable and reliable optical fibre, which enable a high-speed, real time transmission of video data. The host server is able to consolidate the content from multiple sources and support the narrowcasting to single, groups and/or all display. The content administration and remote management station is installed in the building management office which allows easy administration control.





產品名稱： 新開發循環式低溫冷凍設備
Product name: **New Development on Close-Looped Cryogenic Treatment Facility**

公司名稱： 香港生產力促進局 - 材料科技部
Company name: **Hong Kong Productivity Council, Materials Technology Division**

設計者： 楊利堅博士、陳敏強先生、陳柏年先生
Designer name: **Dr Yeung Lee Kin, Mr Raymond Chan, Mr Kevin Chan**

評審委員會意見：

此深冷處理設備利用低溫方法強化，處理鎢碳鋼及高合金鋼材，利用循環式氦的冷凍方法，令鋼材的“奧氏體”晶粒轉為“馬氏體”晶粒。

處理槽更可因應材料特性而調節合適的低溫冷凍程序，與傳統方法比較，此氦冷凍設計更具經濟及環保效益。

General comments on the product:

The facility is developed for low-temperature heat treatment of carbide and high alloy steels. It is a cooling chamber with Helium used as the refrigerant in a close-loop system. The transformation of austenite to martensite within the chamber is effective and complete as the cooling is performed according to the desired cooling profile of the materials.

Compared to traditional approaches, the facility uses Helium as the refrigerant is more cost effective and environmental friendly.

產品名稱： 高精度自動化控制的球磨法單層及多層鍍層測厚儀
Product name: **Precise Automatic Controlled Crater Grinding Device for Determining Mono and Multi-Layer Thin Coating Thickness**

公司名稱： 香港生產力促進局 - 材料科技部
Company name: **Hong Kong Productivity Council, Materials Technology Division**

設計者： 楊利堅博士、高松年博士、盧偉賢博士、陳啟華先生、
易敏龍先生、劉耀鴻先生、陳偉國先生
Designer name: **Dr Yeung Lee Kin, Dr Ko Chung Nin, Dr W Y Lo, Mr Chan Kai Wa, Mr Yick Man Lung, Mr Lau Yiu Hung, Mr Chan Wai Kwok**

評審委員會意見：

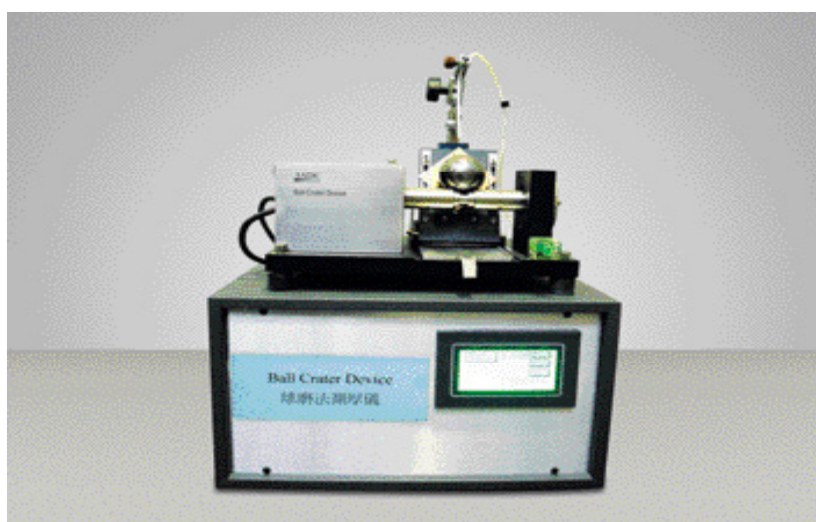
球磨法鍍層測厚儀供量度單層及多層鍍層的厚度、品質等功能。球磨測厚儀應用了先進定扭力及定轉速的控制系統以改善量度的準確性、可重複性及其自動化。

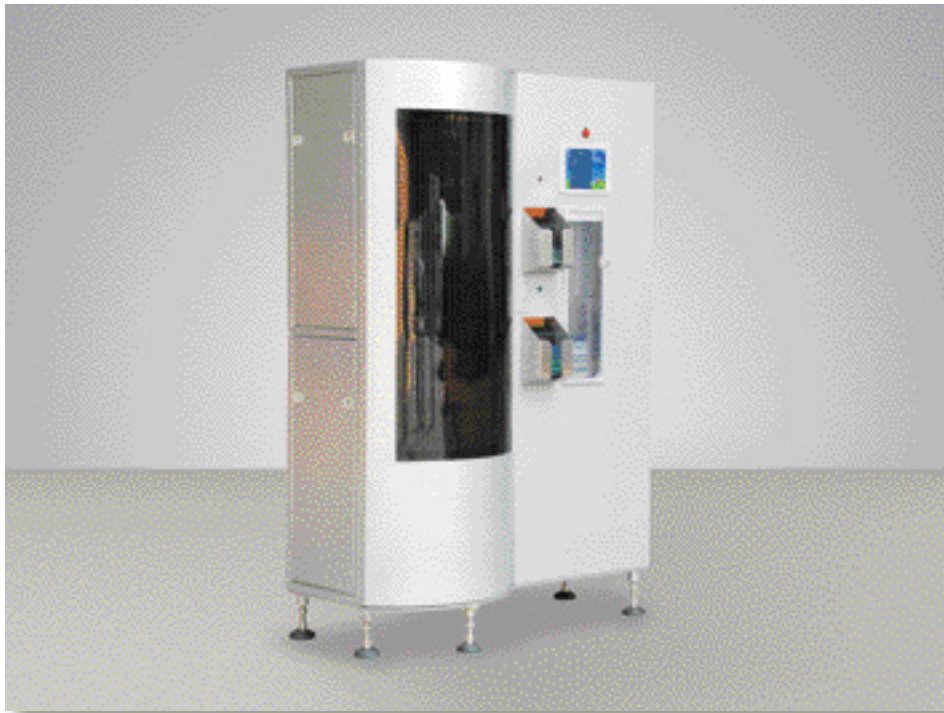
比較其他的鍍層厚度測試方法，球磨測厚儀更具成本效益，並維持同樣水平的功能及準確度。

General comments on the product:

The device is designed to quantify the thickness, quality and performance of the mono- and multi-layer thin coating. The crater grinding device applies advanced control system for constant torque and constant angular velocity to improve the measurement in terms of accuracy, repeatability and automation.

Compared to other coating thickness measuring instrument, the device is highly cost-effective while performing same functionalities and accuracy.





產品名稱： 電子護照存取系統（E櫃）
Product name: **Automated Dispensing & Inventory System for Electronic Travel Document (eCabinet)**

公司名稱： 國際安全技術有限公司
Company name: **International Security Technology Ltd**

設計者： 嚴金波先生、霍長虹先生、何嘉良先生
Designer name: **Mr Yan Jinbo, Mr Huo Changhong, Mr Ho Kaleung Eric**

評審委員會意見：

E櫃集合了電腦資料庫、無線射頻和機械手自動控制技術，可為電子護照存取分發提供高效安全的解決方案。每台E櫃最多可存貯1000本電子護照，存取和盤點每本護照時間少於6秒，自動化操作減少人為出錯率，提高工作效率。隨著世界各地越來越多的國家開始使用電子護照，E櫃市場潛力巨大。

General comments on the product:

The eCabinet is an integration of database, RFID technology and robot arm application, providing effective and secure solution for dispensing and storing electronic passports. The device is compact in size and can store 1000 booklets with high-speed check-in, check-out and stock taking time. The automatic system can also minimize human errors. With the increase use of ePassport around the world, the market potential is huge.

產品名稱： 紫外光乾燥型五色自動印刷機
Product name: **Multi-Color Silk Screen Printing UV Machine**

公司名稱： 先達科技印刷有限公司
Company name: **Pioneer Printing Technology Ltd**

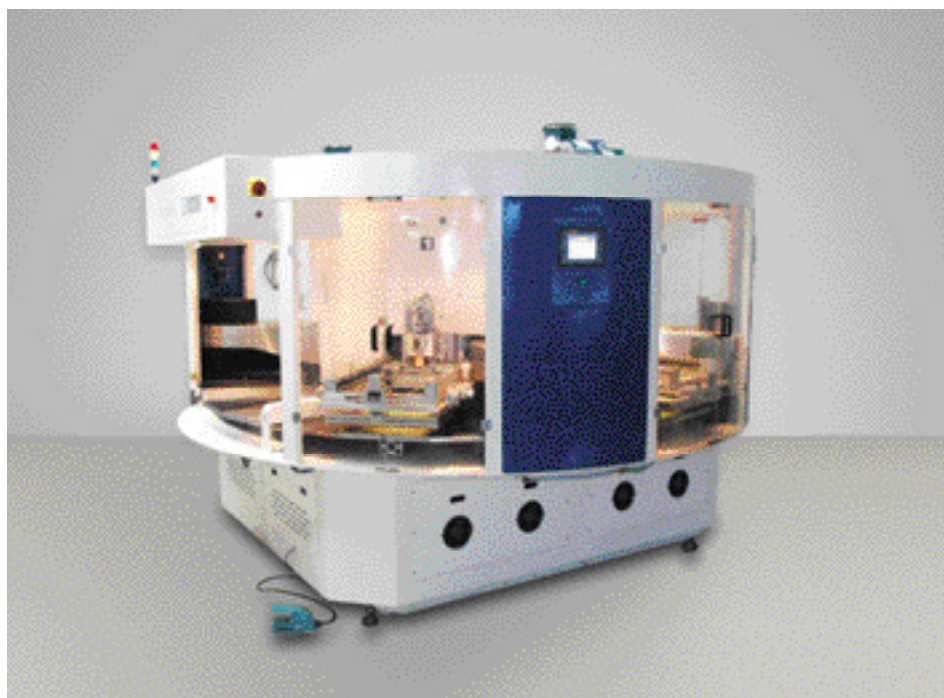
設計者： 周敏先生
Designer name: **Mr Chow Man**

評審委員會意見：

該機器為高品質多色自動絲網印刷的領域中提供了一個新的方案。創新的功能包括能以最高效率達到精高準度和循環精確定位，以及可程式調節印刷尺寸以達最佳能源效能。該機器也加快了印刷動作及傳輸以達到較短的週轉時間。環保油墨的運用及封閉式安全門能減少在工作環境釋放揮發性有機化合物。

General comments on the product:

The machine offers an ingenious solution for high quality automatic multi-colour silk screen printing. Innovative features including precision positioning for high accuracy and repeatability, programmable moving UV light for optimum power consumption. The machine achieves shorter cycle time by optimizing the transfer and printing motions. The use of environmental friendly inks and with an enclosure can minimize the release of volatile organic compound to the working environment.





- 產品名稱：** 高性能掌紋安防系統
Product name: **High-Performance Palmprint-Based Security System**
- 公司名稱：** 香港理工大學電子計算學系
Company name: **The Hong Kong Polytechnic University, Department of Computing**
- 設計者：** 張大鵬教授，盧光明博士，張磊博士，尤佳博士，
郭振華先生，駱南先生
Designer name: **Prof David Zhang, Dr Guangming Lu, Dr Lei Zhang, Dr Jane You, Mr Denis Guo, Mr Nan Luo**

評審委員會意見：

該系統是一個把圖像處理技術應用於生物特辨識的傑出範例。它包括掌紋圖像採集，辨識和輸入輸出模塊，並利用特有的數據採集裝置和先進的處理演算法，以測量掌紋上的主線和紋理特徵。該系統能夠以低成本實現高效準確的身份識別。

General comments on the product:

The system is a fine example of the application of image processing technology in biometric recognition device. The system includes palmprint image collection, recognition and output-input modules, employs proprietary data collection device and advanced processing algorithm to measure stable lines and texture features on the palm. The system performs efficient and accurate identification with a competitive cost.

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



查詢表格 Enquiry Form

2010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

**2010 Hong Kong Awards for Industries:
Machinery and Machine Tools Design**

Organizer : The Chinese Manufacturers' Association of Hong Kong

Fax 傳真：2541 8154

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I would like to have more information about the 2010 Hong Kong Awards for Industries: Machinery and Machine Tools Design

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Name of Company

業務性質

Nature of Business

地址

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聯絡人

Contact Person

電話

Telephone

傳真

Facsimile

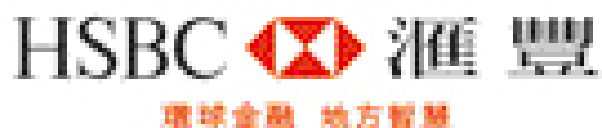
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