

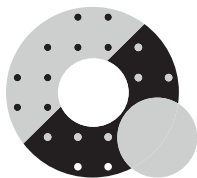


香港工商業獎
2023-24
HONG KONG
AWARDS FOR
INDUSTRIES



設備及機械設計 EQUIPMENT AND MACHINERY DESIGN


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



2023-24香港工商業獎：設備及機械設計 得獎產品名單

2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design
List of Winning Products



設備及機械設計大獎

Equipment and Machinery Design Grand Award

得獎公司 Winning Company

新發病毒診斷(香港)有限公司
Emerging Viral Diagnostics (HK) Limited

得獎產品 Winning Product

鎧耀全自動即時多重診斷系統
Avalon Automated Multiplex System



設備及機械設計獎

Equipment and Machinery Design Award

得獎公司 Winning Company

華潤科學技術研究院有限公司
China Resources Research Institute of Science and Technology Co Limited
漢機鑽岩機械有限公司
HD Engineering Ltd
香港應用科技研究院有限公司
Hong Kong Applied Science and Technology Research Institute Co Ltd
香港智能建造研發中心
Hong Kong Center for Construction Robotics
香港生產力促進局
Hong Kong Productivity Council
香港生產力促進局
Hong Kong Productivity Council

得獎產品 Winning Product

老年人活力恢復訓練智能機器人
Elderly Care AI Robotics
HD110 系列全液壓鑽孔機
HD110 Series All Hydraulic Drilling Rig
應用於3D半導體晶圓檢測的同軸光譜共聚焦3D感測技術
Coaxial Confocal 3D Sensing for 3D Semiconductor Wafer Inspection
扎鐵機械人
Rebar Tying Robot
自主雙臂多任務檢測和維護機械人
Autonomous Dual-arm Multitasking Inspection and Maintenance Robot
基於5G C-V2X通訊及AI的協作式自動無人駕駛道路工程車群組之開發
Development of Cooperative Autonomous Road Work Vehicle Cluster Using 5G C-V2X Communication and AI
超微過濾與油液質量實時在線監控設備
Micro-filtration with Real-time Oil Condition Monitoring Unit
KH2200TC 離子刻蝕微調機(獨立溫控)
KH2200TC Ion Etching System (Independent Temperature Control)
五軸動柱式龍門加工中心MCG5
5-axis Moving Column Gantry Machining Center MCG5
PET回收再用熱流道模具系統
PET Post Consumer Recycled Hot Runner Molding System
智能垂直連續電鍍機
Smart Hanger Carrier (Smart VCP)
領四合一聯動工作站
4-in-1 Robotic Collar Making Station



設備及機械設計優異證書

Equipment and Machinery Design Certificate of Merit

得獎公司 Winning Company

靜音科技集團有限公司
Acoustic Metamaterials Group Limited
躍動有限公司
Active Corporation Ltd
雅琪塑膠機器製造廠有限公司
Akei Plastic-Machine Manufactory Ltd
震雄集團有限公司
Chen Hsong Holdings Limited
C-MER RainsOptics Limited
香港應用科技研究院有限公司
Hong Kong Applied Science and Technology Research Institute Co Ltd
香港生產力促進局
Hong Kong Productivity Council
香港生產力促進局
Hong Kong Productivity Council
香港生產力促進局 | 和利鋼鐵有限公司
Hong Kong Productivity Council | Wo Lee Steel Co Ltd
國際安全技術有限公司
International Security Technology Limited
國際安全技術有限公司
International Security Technology Limited
正卓克萊門特香港有限公司
Jinchat Climaveneta Hong Kong Limited
啟勝管理服務有限公司 - 環球貿易廣場
Kai Shing Management Services Limited - International Commerce Centre
加達科技有限公司
Karta-X Technologies Limited
路邦康建有限公司
Roborn HC Limited
高瞻創新科技有限公司
Vista Innotech Limited

得獎產品 Winning Product

可穿戴式聲學超材料消音器
Acoustic Metamaterial Wearable Silencer
GrateTEC預製式合成槽蓋
GrateTEC Pre-fabricated Synthetic Grating / Channel Cover
全電動系列吹瓶機
All Electric Blow Molding Machine
超霸3600噸伺服驅動二板預熔射台超大型注塑機
SUPERMASTER 3600-ton Two-Platen Injection Moulding Machine with Over-Sized Shots
眼底通 - 智能手機眼底鏡
FundusLink - Pocket Smartphone Ophthalmoscope
用於綠色建築的可持續發展大規模直流照明系統
A Sustainable Large-scale DC Lighting System for Green Architecture Applications
製造多種金屬多孔結構材料的靈活物理發泡技術
Flexible Physical Foaming Technology for Multi Porous Metallic Materials
智能包裝@中藥
Smart Pact @ TCM
「鋼鐵巨匠」：革命性的自動多點定位鋼鐵焊接技術
"Steel Master": Revolutionary Autonomous Multi-point Positioning Technology for Steel Welding
智慧證照管理櫃
Intelligent Identity Document Management eCabinet System
智能多模態生物特徵識別模組
Intelligent Multimodal Biometrics Module
磁懸浮相變冷卻系統
New IT Cooling Solution "Phase Change Cooling System" for Data Centre
擴增實境維修管理系統
Augmented Reality Maintenance Management (ARMM)
SAFERAI@5GBC
遠端控制臨床醫療輔助機械人「Care」
Far End Control Clinical Operation Assistant Robot "Care"
三軸微型防抖雲台
3-Axis Micro Gimbal Stabilizer

香港中華廠商聯合會會長盧金榮博士 BBS 太平紳士獻詞

Message by Dr Wingco Lo, BBS, JP President, The Chinese Manufacturers' Association of Hong Kong



在香港特區政府的全力支持下，「香港工商業獎」已成為表彰本港工商界於各個領域取得卓越成就的盛事。香港中華廠商聯合會（廠商會）對於一直擔任「香港工商業獎 - 設備及機械設計」組別的主辦機構，感到十分榮幸。此項比賽展現本地企業在機械設備方面的創新精神和高水平，並啟發業界持續追求技術突破，以提升競爭力。

在全球供應鏈重塑的大變局下，香港正以發展「新質生產力」應對挑戰，運用科技煥發新動能，以產業升級構築國際競爭新優勢。廠商會積極配合，支援業界加緊邁向高端化、智能化和綠色化，以推動本港「新型工業化」發展。我們成立的科技商品化平台 CMA+、中試轉化中心 PMC，以及推出各類型 ESG 及品牌推廣項目，旨在協助企業掌握尖端技術和發展新趨勢，強化各項新質生產要素，實現可持續和高增值增長。

「香港工商業獎 - 設備及機械設計」正體現出香港工業創新發展的努力和成果。藉此機會，我謹代表廠商會向評審委員會致以衷心感謝，他們以專業與嚴謹的態度，甄選出本年度的傑出得獎者。同時，我亦要感謝所有參與企業和支持機構，為比賽的圓滿成功作出了重要貢獻。

最後，我熱烈祝賀所有得獎者。您的傑出成就不僅是企業自身的榮耀，更是激勵整個業界不斷奮勇向前的最佳示範！

香港中華廠商聯合會會長

盧金榮博士 BBS 太平紳士

With full support from the Hong Kong Special Administrative Region Government, the "Hong Kong Awards for Industries" (HKAI) has become a prestigious event that celebrates the remarkable achievements of the local business community across various sectors. The Chinese Manufacturers' Association of Hong Kong (CMA) is deeply honoured to organise the "Equipment and Machinery Design Competition". This competition not only highlights the innovative spirit and advanced expertise of local enterprises in equipment and mechanical design but also motivates the industry to continuously pursue technological breakthroughs, strengthening our global competitiveness.

In the face of significant shifts in the global supply chain, Hong Kong has boldly risen to the challenge, committing to the development of new quality productive forces and leveraging technology to inject fresh momentum into our industries. Through industrial upgrading, we are shaping new international competitive advantages. The CMA is actively supporting the industry's transition towards high-end, intelligent, and sustainable development, and promoting the robust advancement of "new industrialisation." We have established the technology commercialisation platform CMA+, launched the Pilot Manufacturing Centre (PMC), and initiated various ESG and brand promotion projects. These efforts aim to help enterprises embrace cutting-edge technologies and emerging trends, further enhancing sustainable growth and value creation.

The "Hong Kong Awards for Industries - Equipment and Machinery Design Competition" stands as a testament to Hong Kong's industrial innovation and development. On behalf of the CMA, I would like to express my sincere gratitude to the judging panel for their professionalism in selecting this year's outstanding winners. I also extend my heartfelt thanks to all participating enterprises and supporting organisations; your contributions have been instrumental in the success of this competition.

Lastly, I offer my warmest congratulations to all the winners! Your exceptional achievements are not only a personal honour but also serve as a powerful source of inspiration for the entire industry.

Dr Wingco Lo BBS JP

President

The Chinese Manufacturers'
Association of Hong Kong

2023-24 香港工商業獎：設備及機械設計組別最終評審委員會 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Final Judging Panel



左起：

黎少斌先生、唐珩博士（技術小組成員）、柯嘉倫博士、周健德工程師、駱百強先生、李惠光工程師、衛炳江教授（最終評審委員會主席）、任揚教授、潘國英先生、陳栢榮先生（工業貿易署助理署長（工商業支援部），非最終評審委員會成員）、潘江鵬教授、張福民教授、徐耀霖先生（香港中華廠商聯合會行政總裁，非最終評審委員會成員）

From left:

Mr LAI Shiao-bun, Edmond; Dr TONG Hang (Technical Team Member); Dr Kalun OR; Ir Alice CHOW Kin Tak; Mr LOK Pak Keung, Robert; Ir Sunny LEE Wai-kwong; Prof Ping-kong Alexander WAI (Chairman of the Final Judging Panel); Prof Yeung YAM; Mr Raymond POON; Mr Sunny CHAN (Assistant Director-General of Trade and Industry (Industries Support) – Not a Final Judging Panel Member); Prof PUN Kong Pang; Prof Fumin ZHANG; Mr William CHUI (CEO of CMA - Not a Final Judging Panel Member)

2023-24 香港工商業獎：設備及機械設計組別最終評審委員會

2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Final Judging Panel

衛炳江教授 太平紳士（最終評審委員會主席） **Prof Ping-kong Alexander WAI JP** (Chairman of the Final Judging Panel)

香港浸會大學校長
President and Vice-Chancellor
Hong Kong Baptist University

陳鏡昌教授 **Prof Keith K C CHAN**

香港理工大學工業及系統工程學系
製造工程講座教授及工程學院副院長
Chair Professor of Manufacturing Engineering and
Associate Dean of Faculty of Engineering
Department of Industrial and Systems Engineering
The Hong Kong Polytechnic University

周健德工程師 **Ir Alice CHOW Kin Tak**

香港工程師學會高級副會長
Senior Vice President
The Hong Kong Institution of Engineers

郭永新教授 **Prof Yongxin GUO**

香港城市大學電機工程學系電子工程學講座教授
Chair Professor of Electronic Engineering
Department of Electrical Engineering
City University of Hong Kong

黎少斌先生 **Mr LAI Shiao-bun, Edmond**

香港生產力促進局首席數碼總監
Chief Digital Officer
Hong Kong Productivity Council

李惠光工程師 銅紫荊星章 太平紳士 **Ir Sunny LEE Wai-kwong BBS JP**

香港應用科技研究院董事局主席
Chairman
Hong Kong Applied Science and Technology Research
Institute

駱百強先生 **Mr LOK Pak Keung, Robert**

香港中華廠商聯合會副會長
Vice President
The Chinese Manufacturers' Association of Hong Kong

柯嘉倫博士 **Dr Kalun OR**

香港大學數據與系統工程系副教授及助理系主任
Associate Professor & Assistant Head
Department of Data and Systems Engineering
The University of Hong Kong

潘國英先生 太平紳士 **Mr Raymond POON JP**

機電工程署署長
Director of Electrical and Mechanical Services
Electrical and Mechanical Services Department

潘江鵬教授 **Prof PUN Kong Pang**

香港中文大學電子工程學系教授
Professor & Department Vice-Chairman
Department of Electronic Engineering
The Chinese University of Hong Kong

潘國良教授 **Prof PUN Kwok Leung**

香港高等教育科技學院教授（企業課程計劃及發展）
Professor (Industry-engaged Programmes)
Technological and Higher Education Institute of
Hong Kong

任揚教授 **Prof Yeung YAM**

香港中文大學深圳研究院院長
香港中文大學機械及自動化工程學系教授（研究）
Director of CUHK Shenzhen Research Institute
Professor (Research) of Department of Mechanical &
Automation Engineering
The Chinese University of Hong Kong

張福民教授 **Prof Fumin ZHANG**

香港科技大學鄭家純機器人研究院院長
Director of HKUST Cheng Kar-Shun Robotics Institute

2023-24 香港工商業獎：設備及機械設計大獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Grand Award

產品名稱： 鎧耀全自動即時多重診斷系統
Product Name: Avalon Automated Multiplex System

公司名稱： 新發病毒診斷（香港）有限公司
Company Name: Emerging Viral Diagnostics (HK) Limited

設計者： 劉樂庭教授、曾鈺麟博士、朱聿熹先生、劉耀南醫生、
霍文遜醫生、袁國勇教授
Designer Name: Prof Terence Lok-ting LAU, Dr Parker Yuk-lun TSANG,
Mr Sunny Lut-hey CHU, Dr Johnson Yiu-nam LAU,
Dr Manson FOK, Prof Kwok-yung YUEN

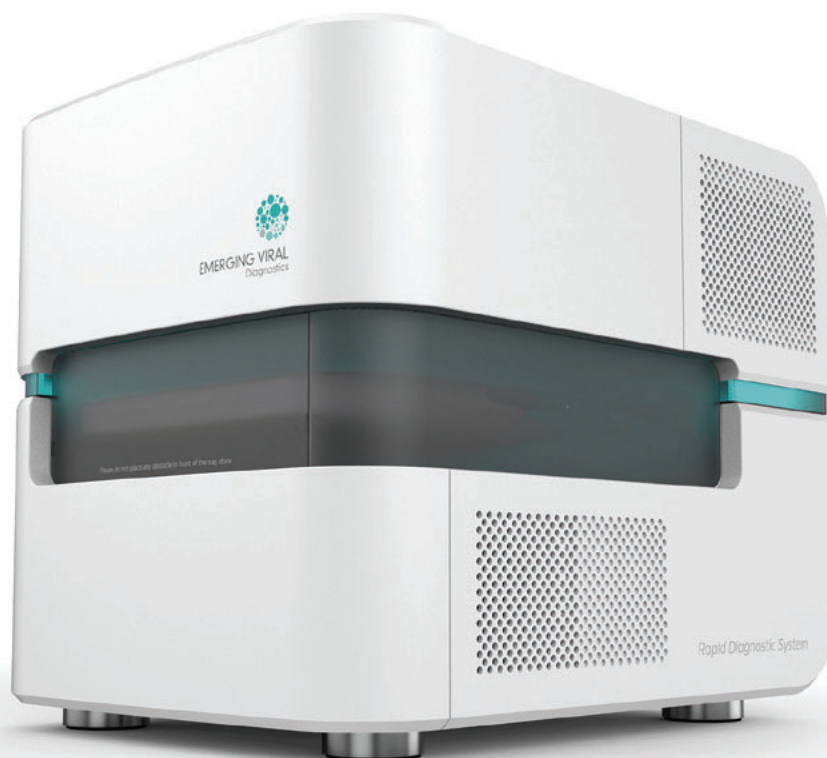
網址 /Website: www.emvdl.com

評審委員會意見：

鎧耀全自動即時多重診斷系統是一項傑出優秀的創新科技成果。系統全自動操作，能同時識別 40 種以上的呼吸道病原體，覆蓋病毒、細菌和真菌，並適合不同場景使用，使其成為全球同類型產品中最全面的解決方案，以應對各種疫情和傳染病防護。

產品設計具備高成本效益且高診斷靈敏度，未來還可擴展核酸標靶數目至多達 500 個。這項創新科技贏得了行業專家廣泛認可，包括最近成功獲批的創新科技署「產學研 1+ 計劃」撥款。

傳染病一直對全球構成嚴重威脅，這嶄新系統可望為社會帶來重大的影響。系統既能快速亦能準確地診斷各種呼吸道病原體，凸顯了產品背後的創新精神和卓越的工程技術。



2023-24 香港工商業獎：設備及機械設計大獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Grand Award

General Comments on the Product:

The Avalon Automated Multiplex System (AAMST) is an impressive innovation in the field of respiratory disease detection. This fully automated, multiplex point-of-care diagnostics system can simultaneously identify over 40 pathogens, including viruses, bacteria, and fungi, making it the most comprehensive solution of its kind worldwide.

Designed to be cost-effective and highly sensitive, the AAMST system can be expanded to detect up to 500 nucleic acid targets. This capability has earned it widespread recognition from industry experts, including the recent RAISE+ government funding award.

Given the ongoing global threat posed by communicable diseases, the AAMST is poised to generate substantial societal impact. Its ability to rapidly and accurately diagnose a wide range of respiratory pathogens is a testament to the innovative spirit and exceptional engineering behind this product.



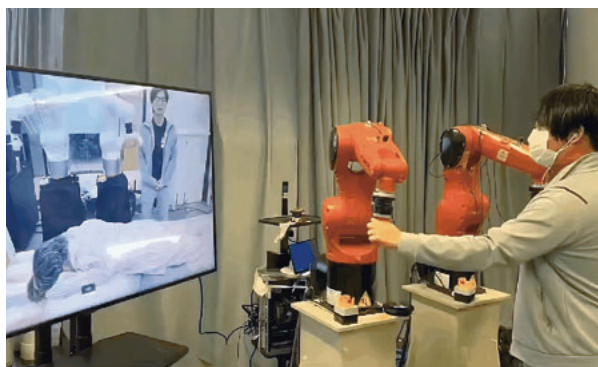
2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 老年人活力恢復訓練智能機器人
Product Name: Elderly Care AI Robotics

公司名稱： 華潤科學技術研究院有限公司
Company Name: China Resources Research Institute of Science and Technology Co Limited

設計者： 麥騫譽博士
Designer Name: Dr Mark MAK

網址 /Website: www.crist.com.hk



評審委員會意見：

這項智能養老科技的研發涉及了多個關鍵技術領域，包括機器人控制技術、遠程視訊通訊和理療治具設備等。特別是其雙臂 - 雙向遠端六軸力回饋機器人系統，顯示了團隊對於解決老年人康復治療所面臨的挑戰的創新思維和技術實力。遠程視訊會議機器人通過 5G 網路實現遠程數據資料低時延同步處理，可以實現物理治療師“治療服務千里外”的應用。此設計不僅填補了現有技術的空白，還為老年人提供了更高效、更貼心的康復治療方案。值得讚揚和肯定。

General Comments on the Product:

The research and development of this smart elderly care technology involves multiple key areas, including robotics, remote video communication and physical therapy equipment. In particular, its dual-arm bi-directional remote six-axis force feedback robot system demonstrates the team's innovation and technical strength in solving the challenges of rehabilitation treatment for the elderly.

This system utilizes 5G networks to achieve low-latency synchronous processing of remote data, enabling physical therapists to deliver "treatment services from miles away." This design not only fills the gap in existing technology, but also provides a more efficient and considerate rehabilitation treatment plan for the elderly.



2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： HD110 系列全液壓鑽孔機
Product Name: HD110 Series All Hydraulic Drilling Rig

公司名稱： 漢機鑽岩機械有限公司
Company Name: HD Engineering Ltd

設計者： 黃漢智先生及設計團體
Designer Name: Mr WONG Hon Chi & His Team

網址 /Website: www.hdengineering.com

評審委員會意見：

HD110 系列液壓鑽孔機是根據漢機鑽岩機械有限公司的持續研發及應用各項創新技術方針，如「按需求自動調節相應動力」的電子液壓系統、電子先導控制系統和模組化配置系統等。創新的技術應用包括高科技監控和數據記錄系統以及無線電遙控系統。

這系列鑽孔機應用在工字鋼樁柱和迷你基礎樁施工中受極大歡迎。漢機各型號的鑽機非常適合香港各項建築工地的條件，普遍為十分狹隘、斜坡面上和與堅硬土層的複雜地形。而安裝及使用上述各項創新的裝置，令施工更為安全、更為靈活快捷，同時可以收集工程的各項相關資料及數據，以供日後分析與將來新施工項目的預案使用。



General Comments on the Product:

The HD110 series Hydraulic Drilling Rig is based on HD Engineering Ltd's continuously developed innovations, such as "Power on Demand" electro hydraulic system, electronic pilot control system and modular system. The applications of technology include Hi-tech monitoring and data logging system and radio remote control system.

These machines are popular in steel H pile and Mini pile construction. Their models are very suitable for Hong Kong construction site conditions which normally very tight, sloping surface, tough soil condition. With the newly installed devices, it will be safer, faster and data can be collected for the future use.

2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 應用於 3D 半導體晶圓檢測的同軸光譜共聚焦 3D 感測技術
Product Name: Coaxial Confocal 3D Sensing for 3D Semiconductor Wafer Inspection

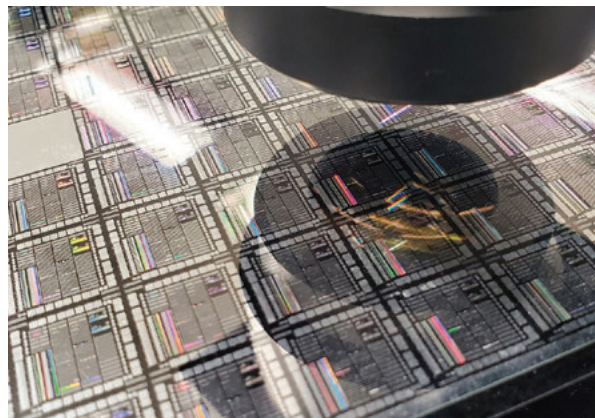
公司名稱： 香港應用科技研究院有限公司
Company Name: Hong Kong Applied Science and Technology Research Institute Co Ltd

設計者： 蔣金波博士、謝思凡先生、池勇博士、楊清乙博士、
唐學燕博士、王忠維先生、蔡振榮博士
Designer Name: Dr Jinbo JIANG, Mr Sifan XIE, Dr Yong CHI,
Dr Qingyi YANG, Dr Xueyan TANG,
Mr Chung Wai WONG, Dr Chen Jung TSAI

網址 /Website: www.astri.org

評審委員會意見：

這是一款高速高解析度的 3D 成像設備，主要用於 3D 封裝半導體的檢測。它能夠在多種場景下進行製造檢測，包括晶圓凸塊、PCB 深孔和多層透明物體。該設備提供高達 0.5 微米的空間解析度，深寬比可達 10，以及高達 10,000 條線 / 秒的掃描速度。其高性能是通過 ASTRI 的專利光學成像設備技術實現的。這項技術已在香港和中國大陸獲得許可，可以作為因地緣政治緊張局勢而成為國內的替代品。



General Comments on the Product:

This is a piece of high-speed high-resolution 3D imaging equipment mainly for inspection of 3D packaged semiconductors. It is capable of manufacturing inspection in multiple scenarios, including wafer bump, PCB deep holes, and multi-layer transparent objects. It offers a spatial resolution up to 0.5 μ m, an aspect ratio up to 10 and a scanning speed up to 10k lines/s. The high performance is achieved through ASTRI's patented optical imaging equipment techniques. The technology, which has been licensed in Hong Kong and mainland China, can serve as a domestic replacement that could be caused by geopolitical tensions.

2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 扎鐵機械人
Product Name: Rebar Tying Robot

公司名稱： 香港智能建造研發中心
Company Name: Hong Kong Center for Construction Robotics

設計者： 李昊臻先生、陳威霖先生、謝金台先生
Designer Name: Mr Haozhen LI, Mr Weilin CHEN, Mr Jintai XIE

網址 /Website: www.hkcrc.hk



評審委員會意見：

扎鐵機械人是一款解決建造業實質性問題的創新產品。它採用先進的人工智能和機械人技術，通過自主識別和定位、自動避障和自動換行，令機械人能夠在鋼筋網上安全可靠地“行走”。該機械人綁扎成功率高達99.6%，超過行業要求。

該機械人設計精良，重量少於25公斤，且單人即可操作。使用扎鐵機械人進行鋼筋綁扎，不但可以提高效率，還可以提高施工現場的工作安全性。鑒於建造業勞動力短缺和老齡化，該款機械人具有巨大的市場潛力。

General Comments on the Product:

The Rebar Tying Robot is an outstanding innovation that addresses real-world challenges in the construction industry. It employs advanced AI and robotics technologies, enabling the robot to “walk” safely and reliably on the rebar mesh. This is achieved through its autonomous identification and positioning, automatic obstacle avoidance, and automatic column change capabilities. The robot boasts a rebar tying success rate of 99.6%, surpassing the industry's required success rate.

The robot is also well-designed with a weight of 25 kg or less, making it manageable for a single person to handle. Using the Rebar Tying Robot for rebar tying not only enhances efficiency but also improves job safety on construction sites. Given the labor shortage and aging workforce in the construction industry, this robot has enormous market potential.



2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 自主雙臂多任務檢測和維護機械人
Product Name: Autonomous Dual-arm Multitasking Inspection and Maintenance Robot

公司名稱： 香港生產力促進局
Company Name: Hong Kong Productivity Council

設計者： 楊梓女士、吳士林先生、彭勃先生、王婷女士
Designer Name: Ms Lynda YANG, Mr Shilin WU, Mr Bo PENG, Ms Tiffany WANG

網址 /Website: www.hkpc.org

評審委員會意見：

該發明採用雙臂系統來檢查城市基礎設施，包括地鐵、橋樑和道路設施。該產品整合了移動底盤、雙機械臂、多種感測器和各種工具，以實現不同的操作目標。機器人具備先進的避障能力，通過自動化的車底檢查流程，機器人有效地提升了工作人員和公眾的安全性。其原型系統已展示其能有效降低基礎設施檢查與維護的人力強度，並在港鐵等進行試點測試驗證。該機器人還可用於卡車、巴士等其他類型的車輛，預期產品具有極大的市場潛力。



General Comments on the Product:

The invention employs a dual arm system for the inspection of urban infrastructures including the subway, bridges, and road utilities. The product integrates mobile chassis, dual robotic arms, multiple sensors, and various tools to serve different operation goals. The robot is equipped with advanced collision avoidance capacities. By automating underframe inspection routines, the robot positively improves the safety of workers and the public. The prototype system demonstrated can effectively reduce the intensity of human labor for infrastructure inspection and maintenance, which has been tested and verified in pilot applications in MTR. The robot can also be used for other types of vehicles, such as trucks, buses. The intended product has great marketing potential.

2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 基於 5G C-V2X 通訊及 AI 的協作式自動無人駕駛道路工程車群組之開發

Product Name: Development of Cooperative Autonomous Road Work Vehicle Cluster Using 5G C-V2X Communication and AI

公司名稱： 香港生產力促進局

Company Name: Hong Kong Productivity Council

設計者： 毛海輝先生，何亞卿博士

Designer Name: Mr Andrew MOU Hoi Fai, Dr Arthur HE Yaqing

網址 /Website: www.hkpc.org

評審委員會意見：

這款模組化設計的道路工程車使用了 5G 車聯網技術和人工智能技術，可在不同類型的工作環境中執行各種道路工程。該車輛具有高效率、低人力成本和高安全性的顯著優勢。根據實際應用情況，可在車輛上安裝合適的模組，以自主執行各種道路維護工作。車輛體積小巧，易於從一個地點行駛到另一個地點。

在香港，每天都有大量的道路維護工作。開發這種高度自動化和協作的道路工程車輛，十分符合智慧城市的概念。



General Comments on the Product:

This modularly designed vehicle is equipped with 5G mobile communication facility and AI technology to perform various road works in different types of work environments. The notable advantages of the application of this vehicle include high efficiency, low manpower cost and high safety level for carrying the road works. Depending on the actual application situations, suitable modules could be mounted on the vehicle to perform various road maintenance works autonomously. The size of the vehicle is not bulky and it should be convenient to relocate the vehicle from one location to another.

In Hong Kong, a lot of road maintenance works are being carried out every day. The development of such a high level of automated and cooperative roadwork vehicle aligns well with the concept of smart cities.



2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 超微過濾與油液質量實時在線監控設備
Product Name: **Micro-filtration with Real-time Oil Condition Monitoring Unit**

公司名稱： 真寶科技國際有限公司
Company Name: **Jumbo Technology International Ltd**

設計者： 樊月昇先生
Designer Name: **Mr FAN Yuet Shing**

網址 /Website: **www.demetergreen.com**

評審委員會意見：

參賽公司利用超微過濾與即時線上油質監測技術此項發明，能有效延長各類生產設備的壽命，提高生產效率，同時節約換油成本，減少環境污染，打破了歐洲、美國和日本等全球市場的壟斷，不僅成功應用於中國市場，還成功出口至東南亞、北美、南美、非洲等海外市場，並可應用於多個行業，幫助各行業利用該技術發展「新質生產力」。



General Comments on the Product:

The ultra-micro filtration and real-time online oil quality monitoring technology invented by the entrant can effectively extend the lifespan of various production equipment, thereby improving production efficiency. Additionally, it can reduce environmental impact by saving on oil changes. This product's invention breaks the dominance of the global market by players in Europe, the United States, and Japan. Besides its successful application in the Mainland China market, it has also been successfully exported to overseas markets such as Southeast Asia, North and South America, and Africa. This product can be applied in multiple industries, helping various sectors leverage this technology to develop new productive forces.

產品名稱： KH2200TC 離子刻蝕微調機（獨立溫控）
Product Name: KH2200TC Ion Etching System (Independent Temperature Control)

公司名稱： 科研精密科技有限公司
Company Name: Kolinker Precision Technology Limited

設計者： 陳國輝先生、何展傑先生、梁智高先生
Designer Name: Mr Kenneth CHAN, Mr Jay HO, Mr Michael LEUNG

網址 /Website: www.kolinker.com



評審委員會意見：

KH2200TC 離子蝕刻系統是首個採用獨立溫控離子蝕刻技術，用於生產高階恆溫石英晶體諧振器（OCXO）的頻率精度微調設備。

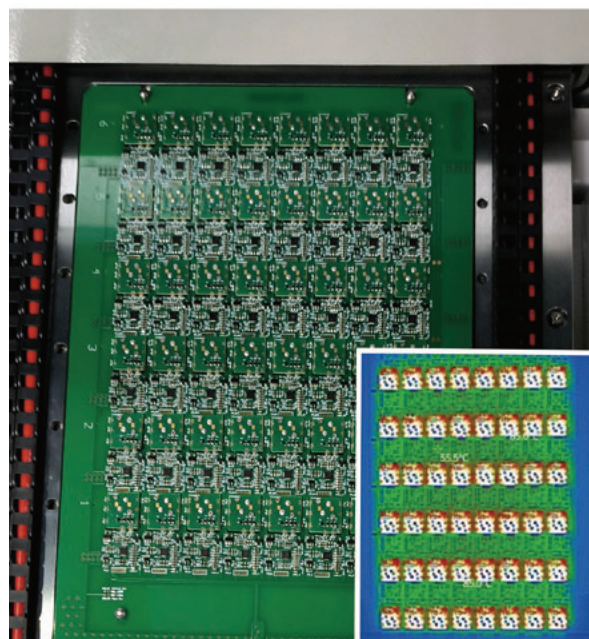
該系統由多個加熱元件的主機板和可拆卸的修整工具組成；可同時蝕刻托盤中 48 個位置的 8 個晶體。每個位置都有一個獨立溫度感測器用於測量晶體的實際溫度，還有一個獨立微處理器用以計算熱模型參數。憑藉這項創新功能，該產品比傳統 OCXO 微調系統有更出色更精準的性能，與此同時亦降低了生產成本。該產品還與德國和中國的製造商簽訂了採購合同，顯示出其市場潛力。

General Comments on the Product:

The KH2200TC Ion Etching System constitutes the first frequency accuracy adjustment equipment to incorporate independent temperature controlled ion etching technology for the production of high-end thermostatic quartz crystal resonators (OCXOs).

The system is consisted of a motherboard structure of multiple heating elements and detachable trimmer tools to enable simultaneous etching of eight crystals in a tray with 48 positions. A temperature sensor is located at each position to measure the actual temperature of the crystals and a separate microprocessor to calculate thermal model parameters.

With this innovative feature, the product has demonstrated improved performance over traditional OCXO systems with reduced production costs. The product has also landed purchase contract with German and mainland manufacturers as an indication of its marketability.



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產品名稱： 五軸動柱式龍門加工中心 MCG5
Product Name: 5-axis Moving Column Gantry Machining Center MCG5

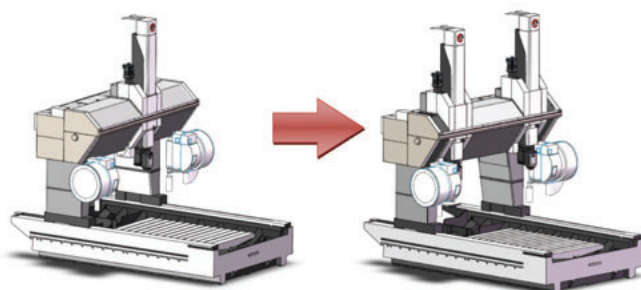
公司名稱： 力勁科技集團有限公司
Company Name: L.K. Technology Holdings Limited

設計者： 劉相尚先生及力勁技術研發團隊
Designer Name: Mr S S LIU & L.K. R&D Team

網址 /Website: www.lk.world

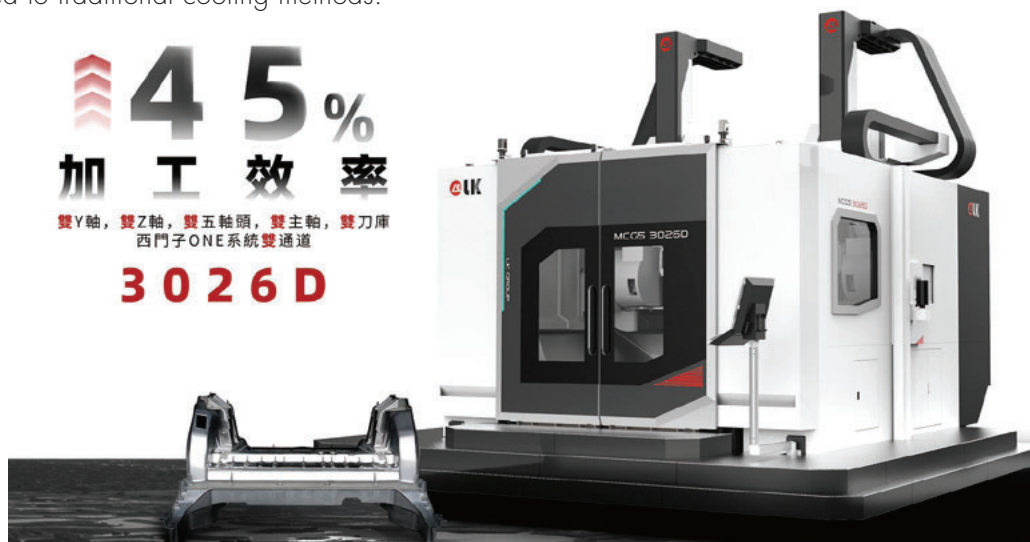
評審委員會意見：

力勁科技集團推出的 MCG5 系列龍門加工中心，作為確保一體壓鑄件在後加工階段精度和品質的關鍵解決方案，提升了新能源汽車的製造水準。MCG5 採用了單樑雙主軸（五軸頭）結構，XY 軸採用直線電機，Z 軸採用雙伺服螺桿驅動。其三軸位移速度已為同類產品之最，高達 70/70/50 米 / 分鐘。雙主軸生產相比單主軸，生產效率提高了 35%-45%。此外，該機床還配備了微量切削潤滑節能系統（MQL），不再需要冷卻液。冷卻油供給率降低至 80 毫升 / 小時。與傳統冷卻方法相比，每月可節省 2000 升冷卻液廢水。



General Comments on the Product:

L.K. Technology launched the MCG5 series gantry machining center as a key solution to ensure the accuracy and quality of integrated die casting parts in the post-processing stage, and in turn to elevate the manufacturing level of the new energy vehicles. The MCG5 incorporates a single-beam double spindle (five-axis head) architecture, featuring linear motors for XY axis and double servo screw drive for Z-axis. The three-axis displacement speed reaching 70/70/50m/min is the fastest among similar product. The double spindle production improves over the single spindle one with a 35%-45% increase in efficiency. Moreover, the machine has a micro-cutting lubrication (MQL) energy saving system which do not need any Coolant. Lubricant supply rate only need 80 ml/hour, saving 2000 liters/month of coolant waste water compared to traditional cooling methods.



產品名稱： PET 回收再用熱流道模具系統
Product Name: PET Post Consumer Recycled Hot Runner Molding System

公司名稱： 保科熱流道科技有限公司
Company Name: Polyflow Hot Runner Technology Limited

設計者： 黃維明先生
Designer Name: Mr WONG Wai Ming Daniel

網址 /Website: www.polyflow.net

評審委員會意見：

保科 (Polyflow) 這套專為 (再生 PET 塑膠) 設計的 RPET 熱流道射出成型系統，展示出再生塑料產品生產中的可持續方法及最新的環保應用技術。此熱流道系統可於傳統注塑設備系統上應用運行，並備有高性能加熱器。這套系統是採用 24 型腔閥針系統裝置配備來生產優質環保玩具，實現了 27 秒的穩定循環生產週期時間。這套保科 (Polyflow) 熱流道應用技術的永續性是使用回收塑膠再生，減少塑膠的浪費及棄物，令生產商增益增效、且同時保護環境。

保科 (Polyflow) 的熱流道技術永續性可應用於醫療產品、食品包裝、化妝品、汽車相關產品、辦公室自動化產品、玩具和家用電器等。



General Comments on the Product:

The Polyflow system is a hot runner molding system designed specifically for RPET (Recycled PET). It demonstrates a sustainable approach for eco-friendly applications in recycled plastic product production. This Hot Runner System operates as an injection molding system, with high performance heaters. During the demonstration, a 24-cavity configuration was utilized to produce premium toys, achieving a cycle time of 27 seconds. The Polyflow Hot Runner System can produce toy products with reduced scraps.

Its applications include medical products, food packaging, cosmetics, automotive-related products, office automation products, toys and home appliances.



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產品名稱： 智能垂直連續電鍍機
Product Name: Smart Hanger Carrier (Smart VCP)

公司名稱： 亞洲電鍍器材有限公司
Company Name: Process Automation International Ltd

設計者： 周苑詩女士、范家華先生、韓保羅先生、梁懿鏘先生
Designer Name: Ms CHOW Yuen Sze, Mr FAN Ka Wah,
Mr Paul HENINGTON, Mr LEUNG Yee Cheong

網址 /Website: www.palhk.com



評審委員會意見：

PAL 推出了一款全新智能垂直連續電鍍機（智能 VCP），專為高端 PCB 和 IC 基板的電鍍需求而設計。相較於傳統生產線，智能 VCP 利用具有獨立內置整流器的創新智能載體，實現對每個生產板兩側電流的獨立控制，顯著減少電鍍厚度的變化。此外，該設備具備自我監控、自我調整功能，並能合理安排維護和服務時間。這一先進設計徹底滿足高端電鍍工藝的要求，並已獲得兩項專利。

General Comments on the Product:

PAL has developed a new smart vertical continuous plater (VCP) for electroplating of high end PCBs and IC substrates. Compared to traditional production lines, the smart VCP is able to achieve independent control of the current on both sides of each production board through new smart carriers with independent built-in rectifiers. The VCP has the capacity to reduce the electroplating thickness variations between each production boards. It is also capable of self-monitoring, self-adjusting, and scheduling of maintenance and service times. Such new design has been shown to meet the requirements of high-end electroplating processes. Two patents have been granted for the smart VCP.



2023-24 香港工商業獎：設備及機械設計獎 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Award

產品名稱： 領四合一聯動工作站
Product Name: 4-in-1 Robotic Collar Making Station

公司名稱： 四方維科技有限公司
Company Name: Quaternion Hong Kong Limited

設計者： 張潤明先生、張玉田先生、黎秋鳳女士、夏仲開先生
Designer Name: Mr ZHANG Run Ming, Mr ZHANG Yu Tian,
Ms LI Qiu Feng, Mr XIA Zhong Kai

網址 /Website: www.qonvolv.com

評審委員會意見：

目前，全球的縫紉設備自動化大多局限於單一工序，市面上針對縫製過程的聯合和互動自動化解決方案非常有限。傳統工藝需要將縫料修剪後，再使用平縫設備進行縫合，這兩項操作都需要大量的人手工序。領四合一聯動工作站 WC004A 創新地利用機器人技術、縫紉夾具和包縫裝置，將修剪和縫合兩個工序合二為一，同時消除了人手操作帶來的傷害和風險。此外，WC004A 不僅能實現曲線弧度縫紉，還能控制縫料的定點獲取和送料，令固定的縫紉物在操作過程中可以靈活翻轉和移動。



General Comments on the Product:

At present, automation of sewing equipment in the world are mostly confined to single process. There are very limited automated solutions for joint and interactive sewing processes in the current market. The traditional process requires the sewing material to be trimmed together and then stitched with flat sewing equipment, both of which demand significant manual operations. The 4-in-1 Robot Center WC004A creatively uses a wrapping device to combine and complete the two processes of trimming and stitching. The solution also eliminates the risk of injury caused by manual procedures. Moreover, WC004A is able to realize curved sewing and also control the fixed point acquisition and feeding of the sewing materials. As a result, the fixed materials can be turned over and moved flexibly during the operations.

2023-24 香港工商業獎：設備及機械設計優異證書
2023-24 Hong Kong Awards for Industries:
Equipment and Machinery Design Certificate of Merit

產品名稱： 可穿戴式聲學超材料消音器
Product Name: Acoustic Metamaterial Wearable Silencer

公司名稱： 靜音科技集團有限公司
Company Name: Acoustic Metamaterials Group Limited

設計者： 楊旻博士、陳書宇博士、謝萌瑤女士、張曉男博士
Designer Name: Dr Min YANG, Dr Shuyu CHEN, Ms Mengyao XIE, Dr Xiaonan ZHANG

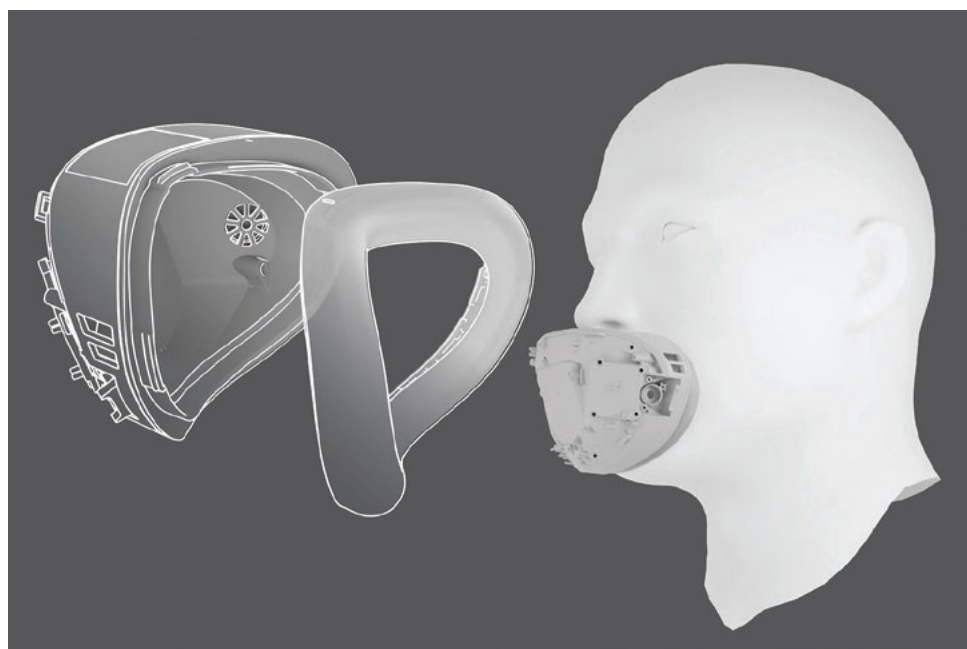
網址 /Website: www.metacoust.com

評審委員會意見：

這款聲學超材料可穿戴式消音器運用聲學原理，優化插損頻譜，提升信噪比，從而改善小型可穿戴設備中的語音接收效果。這種創新設備方便使用，能在其他人靠近使用者的情況下，提供相對保密的溝通環境。所選用的材料經過精心挑選，如選用易清潔的液態矽膠。體積輕巧，方便攜帶。

General Comments on the Product:

The design of this Acoustic Metamaterial Wearable Silencer applied acoustic knowledge to analyze an optional spectrum of insertion loss in order to improve the Signal-to-Noise Ratio, providing an improved voice reception in wearable devices. This innovative device is handy to use for providing a rather confidential environment during communication when other persons not involved in the meeting or discussion are present adjacent to the user. The use of material was carefully selected like the use of liquid silicone rubber for ease of cleaning. Its weight is light and the size is compact enough for the user to carry it easily.



2023-24 香港工商業獎：設備及機械設計優異證書
2023-24 Hong Kong Awards for Industries:
Equipment and Machinery Design Certificate of Merit

產品名稱：**GrateTEC 預製式合成槽蓋**
Product Name: **GrateTEC Pre-fabricated Synthetic Grating / Channel Cover**

公司名稱：**躍動有限公司**
Company Name: **Active Corporation Ltd**

設計者：**陳偉雄先生**
Designer Name: **Mr Anthony CHAN Wai Hung**

評審委員會意見：

這款產品是玻璃纖維合成槽蓋，可以替代傳統的金屬槽蓋，因產品成本較低及擁有非常高的耐用性，可根據客戶要求訂造不同尺寸及排水孔形狀，並按不同需要製造作範圍廣泛使用。該產品比市場上其他產品更環保且符合人體工學。該產品已經成熟並已大量在市場上銷售，反應良好。由於該產品的開發建基在成熟的技術和廣泛應用的製造流程之上，因而取得了一定的成功。

General Comments on the Product:

The products are fiberglass grate covers that can replace traditional metal grate covers with lower cost and higher durability. Cover can be customized into different patterns and different shapes for a broad range of applications. The product is more environmentally friendly and more ergonomic than other products in the market. Products are mature, many units have been sold on the market with good response. Given the measurable success, the product development is based on mature technology and commonly known manufacture processes.



2023-24 香港工商業獎：設備及機械設計優異證書 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design Certificate of Merit

產品名稱： 全電動系列吹瓶機
Product Name: All Electric Blow Molding Machine

公司名稱： 雅琪塑膠機器製造廠有限公司
Company Name: Akei Plastic-Machine Manufactory Ltd

設計者： 鄧潮聰先生、陳鏡華先生
Designer Name: Mr TANG Chiu Chung, Mr CHAN Kang Wah

網址 /Website: www.akei.com.hk

評審委員會意見：

該產品為全電動吹塑機。與依賴液壓油的傳統液壓驅動機器不同，這種全電動機器使用電力來驅動其部件。值得注意的是，它在生產效率方面優於液壓同行。

此外，該機器在節能、降噪、壽命和穩定性方面表現良好，大大降低了運營和維護成本。它還配備先進的 SCADA (Supervisory Control and Data Acquisition，即資料獲取與監視控制系統)，並符合“工業 4.0”標準，可增強連接性和自動化。

General Comments on the Product:

The product is an all-electric blow molding machine. Unlike traditional hydraulic-driven machines, which rely on hydraulic fluid, this all-electric machine operates using electricity to drive its components. Notably, it outperforms its hydraulic counterparts in terms of production efficiency.

Moreover, the machine performs well in terms of energy saving, noise reduction, lifespan, and stability, which significantly reduces the operating and maintenance costs. Additionally, it offers advanced SCADA (Supervisory Control and Data Acquisition) integration, aligning with the “Industry 4.0” standards for enhanced connectivity and automation.



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產品名稱： 超霸 3600 噸伺服驅動二板預熔射台超大型注塑機
Product Name: SUPERMASTER 3600-ton Two-Platen Injection Moulding Machine with Over-Sized Shots

公司名稱： 震雄集團有限公司
Company Name: Chen Hsong Holdings Limited

設計者： 梁健民先生、陳創鑫先生、黃文輝先生、
陳榮林先生、馬小亮先生
Designer Name: Mr Jianmin LIANG, Mr Chuangxin CHEN,
Mr Wenhui HUANG, Mr Ronglin CHEN, Mr Xiaoliang MA

網址 /Website: www.chenhsong.com

評審委員會意見：

震雄開發了一款 3600 噸兩板伺服電機驅動注塑機，採用預熔射台設計，適用於超大重量產品。該機器創新的止逆閥門設計使塑化與注射系統獨立且可靠，搭配高效液冷動力系統，能夠長時間保壓生產重達 200KG 的產品。獨特的射膠柱塞設計有效減少洩漏並清理殘留膠料，同時二次壓模功能確保成型產品的均勻密度和強度。結合震雄多年經驗，機器動作經過精細控制，提升整體品質並降低能耗，顯著提高生產效率和經濟效益。

General Comments on the Product:

The company has developed a new 3600-ton two platen servomotor-driven injection moulding machine. This machine includes a number of enhanced features and its major advantages include high speed in Clamp open/close, high efficiency servo motors which can reduce energy consumption and bring high precision and low noise operation, speedy setup, smaller machine size and high speed clamping pressure build up, etc.

Two-stage premelt injection moulding machines offer improved melt quality, reduced stress on materials, faster cycle times, enhanced product quality, and versatility. They are cost-effective, support complex mould designs for ultra-heavy products, and create strong bonds between materials, making them ideal for efficiently producing high-quality, durable, and precise plastic components.



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產品名稱： 眼底通 - 智能手機眼底鏡
Product Name: FundusLink - Pocket Smartphone Ophthalmoscope

公司名稱： C-MER RainsOptics Limited
Company Name:

設計者： 黎浩樺醫生、李碧華女士
Designer Name: Dr Kenny LAI Ho-wa, Ms Rain LEE Pik-wa

網址 /Website: www.cmerrainsoptics.com

評審委員會意見：

現時專業級的眼底普查，一般成本較高及費時頗長，而眼底通 - 智能手機眼底鏡在這方面提供了更簡便易用的另類選擇。產品輕便易攜，透過特製光學組件和智能手機的結合，可以拍攝眼底影像輔助診斷，實現低成本高效益。這產品可進一步與人工智能結合，提升普查準確度及認受性。最重要的是，這產品可以為需求殷切的發展中國家或偏遠地區，提供低廉可靠的眼底普查方案。

General Comments on the Product:

In the professional way for screening of retinal diseases, it is quite expensive and time consuming. FundusLink-the pocket Smartphone Ophthalmoscope provides the alternative option in an accessible and user-friendly way. The product is portable and by combining an optical measuring unit with a smartphone, it can capture a reliable diagnosis of the retina, which is cost-efficiency and convenience. The technology is going to empower and link up with AI capability which can enhance its accuracy and acceptability. Most importantly, it can be widely used in the poor countries and remote area which is desperately need to have the low-cost eye examination.



產品名稱： 用於綠色建築的可持續發展大規模直流照明系統
Product Name: A Sustainable Large-scale DC Lighting System for Green Architecture Applications

公司名稱： 香港應用科技研究院有限公司
Company Name: Hong Kong Applied Science and Technology Research Institute Co Ltd

設計者： 楊啟榮先生、張瑞蓬先生、李天河先生
Designer Name: Mr YEUNG Kai Wing, Mr CHEUNG Sui Pung, Mr LI Tin Ho

網址 /Website: www.astri.org

評審委員會意見：

該產品採用基於物聯網的交直流電源轉換器和固態數位直流斷路器，實現了 94% 以上的電源轉換效率和高可靠的大型照明系統，是新一代的可持續綠色照明技術。

系統安裝簡單，只需壁掛和自然通風。有利於遠端監控、控制和配置。透過雲端的資料存儲，可以輕鬆與現有 BMS 整合。適用於大型公共照明，為直流微電網應用做好準備。

General Comments on the Product:

The large-scale DC lighting system promotes sustainable green lighting technology. It adopts IoT-based AC/DC power converter and solid-state digital DC circuit breaker, achieved 94%+ power conversion efficiency and highly reliable large scale lighting systems.

The system installation only requires simple wall-mounted and naturally ventilated. It facilitates remote monitoring, control, and configuration. With cloud-based data storage, it can be easily integrated with existing BMS. The application is for public lighting applications, ready for DC microgrid applications.



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產品名稱： 製造多種金屬多孔結構材料的靈活物理發泡技術
Product Name: Flexible Physical Foaming Technology for Multi Porous Metallic Materials

公司名稱： 香港生產力促進局
Company Name: Hong Kong Productivity Council

設計者： 楊浩坤先生
Designer Name: Mr YANG Haokun

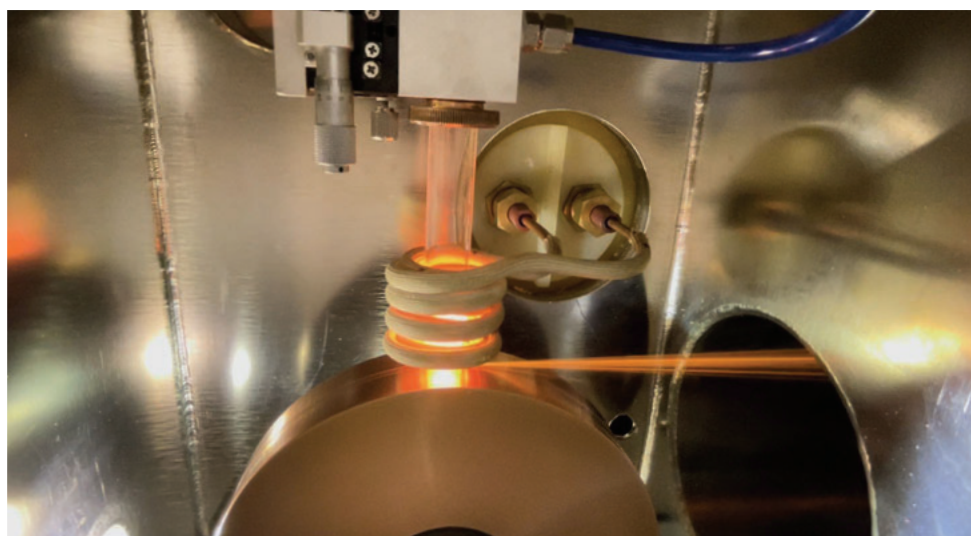
網址 /Website: www.hkpc.org

評審委員會意見：

隨著能源資源的短缺和全球對環保意識的提升，車輛、機械、通訊和消費性電子設備的關鍵零件需要輕量化設計，以減少燃料和能源消耗。生產力局在坩堝熔體萃取製程的基礎上，透過改造磨床，開發出一種生產金屬纖維的設備。該設備由表面有缺口和水冷通道的銅輥甩出金屬纖維。纖維經過收集後，可進行預壓和燒結，以獲得不同孔隙率的多孔金屬材料。該設備已獲得一項中國專利和一項香港專利。

General Comments on the Product:

With the shortage of energy resources and the rising global awareness for environmental protection, the critical components of vehicles, machinery, communication devices, and consumer electronics require a lightweight design to reduce fuel and energy consumption. Based on the crucible melt extraction process, HKPC has developed equipment for producing metallic fibers by retrofitting a grinding machine. The equipment consists of a spinning copper wheel with a notched surface and a water-cooling channel to fabricate the metallic fibers, which are then pre-compacted and sintered to achieve porous metallic materials with varying porosities. One China patent and one Hong Kong patent have been granted for this equipment.



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產品名稱： 智能包裝 @ 中藥
Product Name: Smart Pact @ TCM

公司名稱： 香港生產力促進局
Company Name: Hong Kong Productivity Council

設計者： 虞文盈女士
Designer Name: Ms Angela YU

網址 /Website: www.hkpc.org

評審委員會意見：

此產品是一個首創的智能包裝系統，結合多個工業機械人、智能視覺系統、攝像頭、傳感器及電腦軟件，提升並質檢整個包裝過程，確保產品的溯源性和完整性，並能節省人手達九成，使人手部署到各項工作，提升整體供應鏈管理效率。本發明為一間本地符合香港及澳洲生產質量管理規範、百年中成藥製造商而設計，並能應用於各大生命健康行業。

General Comments on the Product:

A fully automated system has been developed to streamline the packaging process. In the previous method, a considerable number of operators were required manually. However, this new automation system reduced reliance on operators by 90%. This Innovative design making use of technologies to solve the pain points of local companies in a novel manner by different applications of robots and visual systems. Custom-tailored for specific products within the company, the system enhances efficiency and reduces labor costs.



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產品名稱：「鋼鐵巨匠」：革命性的自動多點定位鋼鐵焊接技術
Product Name: "Steel Master": Revolutionary Autonomous Multi-point Positioning Technology for Steel Welding

公司名稱：香港生產力促進局 | 和利鋼鐵有限公司
Company Name: Hong Kong Productivity Council | Wo Lee Steel Co Ltd

設計者：陳偉倫先生、林浩生先生、桂田子小姐、黃偉釗先生、
蔡奕彪先生、黃子揚先生

Designer Name: Mr CHAN Wai Lun, Mr LAM Ho Sang,
Ms GUI Tianzi, Mr WONG Wai Chiu,
Mr TSOI Yik Piu, Mr WONG Tsz Yeung

網址 /Website: www.hkpc.org; www.wolee.com

評審委員會意見：

該產品設計了一種安裝在機器人手臂上的創新 3D 定位焊接系統，可於傳統的建築工地上進行日常焊接工作，減少工人在焊接時的危險性。該系統的原型已經在與和利鋼鐵有限公司的合作下進行測試和驗證，而且在取代建築行業中的傳統人手焊接方面具有良好的市場潛力，並利用了創新的機械設計和機器人結合來確保焊接質素。

General Comments on the Product:

The product designed a novel 3D position system installed on a robotic arm to perform arc-welding tasks at a typical construction site. This system can reduce the exposure of human workers to the hazards associated with arc-welding. A prototype has been tested and verified in association with the Wo-Lee Steel. The product has a good market potential replacing manual welding in construction industry. It leverages novel mechanical design and robotic planning to ensure welding quality.



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產品名稱：智慧證照管理櫃
Product Name: Intelligent Identity Document Management eCabinet System

公司名稱：國際安全技術有限公司
Company Name: International Security Technology Limited

設計者：王榜金先生、唐文奇先生、孫鵬先生、呂永禎先生、
龍泉先生、李紅波先生
Designer Name: Mr WANG Bangjin, Mr TANG Wenqi, Mr SUN Peng,
Mr LV Yongzhen, Mr LONG Quan, Mr LI Hongbo

網址 /Website: www.ist-china.com

評審委員會意見：

這款系統在證件管理領域技術上取得領先，產品是根據市場需求研發的一種自助取證終端，提供不同容量的自助發證機。設備系統融合了 AGV+RFID 智慧倉儲存技術和人臉及指紋生物識別技術，將先進科技理念融入了智能證件管理工作中，實現了證件智能化無人管理。該產品的獨特性和市場潛力值得肯定。

General Comments on the Product:

This system is technologically leading in the field of document management. In response to market demand, this is a self-service credential issuance terminal. It offers self-service document issuance systems with various capacities to accommodate different document sizes. The system combines AGV and RFID smart storage technology with facial and fingerprint recognition. This advanced technology innovation enables intelligent management of identification without human intervention. The product's uniqueness and market potential deserve recognition.



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產品名稱： 智能多模態生物特徵識別模組
Product Name: Intelligent Multimodal Biometrics Module

公司名稱： 國際安全技術有限公司
Company Name: International Security Technology Limited

設計者： 王榜金先生、謝曉女士、謝慶生先生、周峰先生、
劉漢斌先生、李黎先生
Designer Name: Mr WANG Bangjin, Ms XIE Xiao, Mr XIE Qingsheng,
Mr ZHOU Feng, Mr LIU Hanbin, Mr LI Li

網址 /Website: www.ist-china.com

評審委員會意見：

這款多模式生物識別設備結合了虹膜與人臉識別特徵，並利用專門設計的演算法，形成一個綜合向量，以克服單一生物識別的局限性。它提供了強大的穩定性和更精確的識別，可應用於閘道和安全檢查站。此設備具有檢測功能，可自動調整最佳掃描位置，從而減少識別時間，並提高獲取資訊的品質。此外，本產品的創新設計已獲得多項專利。

General Comments on the Product:

The multimodal biometrics device integrates iris and portrait biometric features together with the specially designed algorithms to form a comprehensive vector for overcoming the limitations of single biometric identification. It provides a robustness and more accurate identification that can be applied in gate channels and security checkpoints. There is a detection function of this device to automatically adjust the best scanning position, reducing the time of identification and enhancing a better quality of the captured information. Moreover, the product has obtained several patents for its innovative design.



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產品名稱：磁懸浮相變冷卻系統
Product Name: New IT Cooling Solution "Phase Change Cooling System" for Data Centre

公司名稱：正卓克萊門特香港有限公司
Company Name: Jinchat Climaveneta Hong Kong Limited

設計者：正卓克萊門特技術團隊、克萊門特捷聯技術部
Designer Name: Jinchat Climaveneta Technical Team,
Climaveneta Chat Union Technical Department

網址 /Website: www.jinchat.com

評審委員會意見：

磁懸浮相變冷卻系統是一種空氣冷卻系統，能夠有效節省營運成本，維護簡單且性能穩定。它提高了系統的蒸發溫度，增加了冷卻能力，顯著提升了效率。同時，產品採用蒸發冷卻技術，戶外機組能夠降低冷凝溫度，進而提高能源效率。此外，系統配備蒸發冷凝器的水泵，輸送距離較短，減少了電力消耗，並提高了系統的整體效率。此系統不僅經濟實用，還能在節能方面發揮重要作用。

General Comments on the Product:

The product is an air cooled system with no water consumption, so that it can save operating costs, maintenance is relatively simple and the performance is stable. It increases the system evaporating temperature, thus increase the cooling capacity and improves the efficiency of the system significantly.

The Evaporative Cooling Technology which enables the outdoor unit to decrease the condensation temperature and therefore, the energy efficiency can be increased. Moreover, the water pump equipped with evaporative condenser and the conveying distance is shorter. The power consumption is significantly reduced, which improves the system efficiency.



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產品名稱： 擴增實境維修管理系統
Product Name: **Augmented Reality Maintenance Management (ARMM)**

公司名稱： 啟勝管理服務有限公司 - 環球貿易廣場
Company Name: **Kai Shing Management Services Limited - International Commerce Centre**

設計者： 鄭尚文先生、利志豐先生、吳國強先生
Designer Name: **Mr CHENG Sheung Man, Mr LEE Chi Fung, Mr NG Kwok Keung**

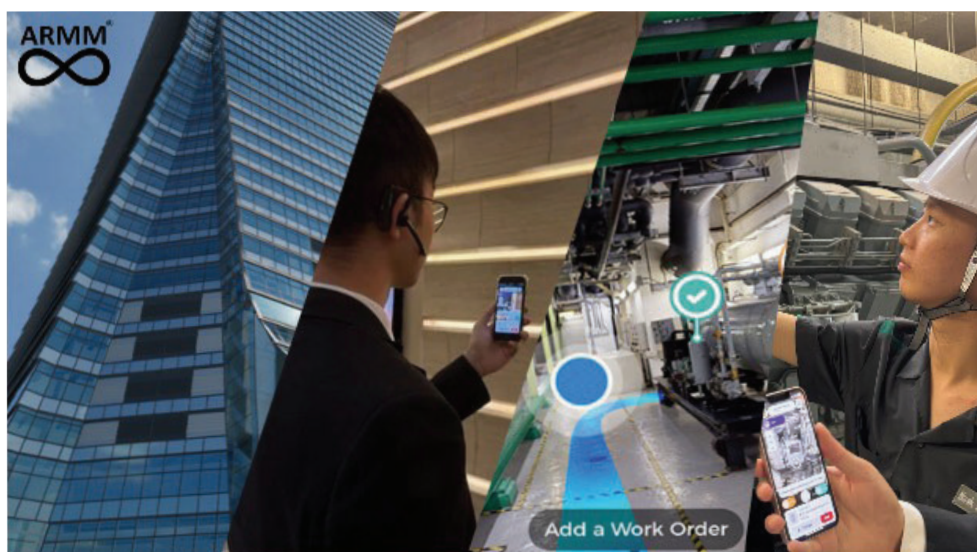
網址 /Website: **www.kaishing.hk; www.shkp-icc.com**

評審委員會意見：

環球貿易廣場團隊採用擴增實境維修管理系統，以優化物業管理流程。透過立體掃描技術，讓團隊透過虛擬操作介面，並運用遠程協助促進有效培訓與技能發展，智能化資產管理和團隊溝通，長遠提高運營效率。這項新科技結合了擴增實境功能、建築信息模型（BIM）和同步定位與地圖構建（SLAM），透過建立共同數據環境（CDE）及優化管理系統，增強物業管理服務的效率、可擴展性和可持續性。

General Comments on the Product:

The ARMM is adopted at ICC to optimize the facility maintenance process. By using 3D scanning technology, management team can monitor and operate facilities virtually using an ARMM interface, streamlining maintenance process, enabling remote assistance and facilitating efficient training and skill development. This technology promotes smarter asset management and communication, leading to improved operational efficiency in the long term. Leveraging augmented reality capabilities, Building Information Modeling (BIM), and Simultaneous Localization and Mapping (SLAM), this innovative technology is designed to enhance property management services by establishing a Common Data Environment (CDE) and optimizing management systems to enhance efficiency, scalability and sustainability.



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產品名稱：
Product Name: SAFERAI®5GBC

公司名稱：
Company Name: Karta-X Technologies Limited

設計者：
Designer Name: Mr PAAU Ying-ren, Warren

網址 /Website: **www.karta-x.com;**
www.hkstp.org/en/directory/karta-x-technologies-limited

評審委員會意見：

隨著建築行業對智能監控解決方案的需求增加，SaferAIR5GBC 提供了基於 5G 技術，具有智能 AI 攝像頭設備、內置電池和擴充數據存儲庫於一體，便攜尺寸，使得更容易進行部署、安裝和移動。它適用於任何具有複雜環境或多層的建築工地。通過結合邊緣 AI、5G 和雲端技術，它可以實現遙距自動化監控。這些無線設備可以配備太陽能電池板，通過可再生太陽能進行不間斷供電，更節能環保。該設備還可以為建築工程、建造施工市場提供了智能監控系統的 AI 專用模型。

General Comments on the Product:

With the high demand for smart monitoring solutions in construction industry, SaferAI5GBC provides the 5G-based technology for the smart AI camera device, and smart powered design with battery-based and built-in extended data storage. It is all-in-one design with portable size, easier to set up and quick to relocate. It can be used for any construction sites with sophisticated setup or multi floors. By using 5G and cloud technology, it allows the mobile automated monitoring. These wireless devices can be equipped with solar panels for uninterrupted power supply by renewable solar charging, which is more energy-saving and eco-friendly. This device offers the specialized AI models for smart monitoring system to the architecture, engineering and construction market.



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產品名稱： 遠端控制臨床醫療輔助機械人「Care」
Product Name: Far End Control Clinical Operation Assistant Robot
"Care"

公司名稱： 路邦康建有限公司
Company Name: Roborn HC Limited

設計者： 麥騫譽博士
Designer Name: Dr MAK Hin Yu

網址 /Website: www.roborn.com

評審委員會意見：

參賽者開發的遠端控制臨床醫療輔助機械人「Care」展示了創新設計與技術的卓越結合。這款機器人旨在減少醫療人員的繁瑣任務，使他們能夠將更多時間和精力投入到患者的護理中，從而提升醫療質量。其獨特功能在醫療領域中顯示出巨大的潛力，為醫療服務提供了寶貴的支援。此外，該產品在香港市場的未來應用也顯示出良好的市場前景。

General Comments on the Product:

The remotely controlled clinical medical assistance robot "Care" developed by the entrant demonstrates an excellent combination of innovative design and technology. This innovative robot aims to reduce trivial tasks, allowing healthcare staff to dedicate more time and attention to patients, ultimately enhancing the quantity and quality of clinical services provided. With its unique functions and applications, this robot has shown great potential in the medical field and provide valuable support to medical services. The product has a market potential for the future applications in the Hong Kong market.



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產品名稱：三軸微型防抖雲台
Product Name: 3-Axis Micro Gimbal Stabilizer

公司名稱：高瞻創新科技有限公司
Company Name: Vista Innotech Limited

設計者：麥練智博士
Designer Name: Dr MAK Lin Chi

網址 /Website: www.vit.com.hk

評審委員會意見：

3 軸微型防抖雲台 (MGS) 是現時最小的 3 軸微型雲台，其專利 MGS 設計僅由 4 滾珠軸承組成，遠少於傳統的 12 軸承。尺寸重量僅為傳統的 1/10 和 1/3，因此，可內置到多種行動裝置，讓裝置在低光和抖動條件下仍能提供出色的防抖性能，拍攝清晰圖像。

General Comments on the Product:

The 3-axis Micro Gimbal Stabilizer (MGS) is the world's smallest 3-axis gimbal camera. The size and weight of the 3-axis MGS are only 1/10 and 1/3 of the traditional 3-axis gimbal respectively. The 3-axis MGS is a patented motor structure consisting of only 4 ball bearings, which is much less than at least 12 ball bearings in the traditional 3-axis gimbal. The MGS can be embedded into various mobile devices with up to $\pm 8^\circ$ compensation angle, enabling extending the exposure time by 16 times and mobile devices to capture clear images even in low light and extreme conditions.



主辦機構 ORGANIZER



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

簡介

香港中華廠商聯合會創立於 1934 年，歷史悠久，90 年來歷經時代變遷，現已成為本港最大及最具代表性的非牟利工商團體之一，擁有會員企業 3,000 家，致力促進工商業發展。

宗旨

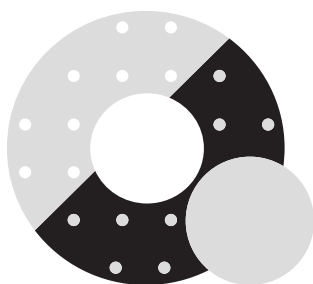
- 促進香港工業與貿易的發展
- 改善營商環境
- 代表工業界就政府政策的訂定與執行發表意見
- 參與社會發展工作
- 促進國際間的了解與合作
- 履行企業社會責任

INTRODUCTION

Established in 1934, the Chinese Manufacturers' Association of Hong Kong (CMA) is a non-profit making industrial organisation. In the past 90 years, CMA has grown significantly and is now one of the most representative industrial associations in Hong Kong. With some 3,000 member companies, CMA is committed to promoting Hong Kong's industrial and commercial development.

MISSION

- Promoting trade and industrial development
- Improving the business environment
- Representing the industrial sector in the formulation and implementation of Government policies
- Participating in community development work
- Fostering international understanding and co-operation
- Fulfilling corporate social responsibility



2023-24 香港工商業獎：設備及機械設計 2023-24 Hong Kong Awards for Industries: Equipment and Machinery Design

宗旨 OBJECTIVE

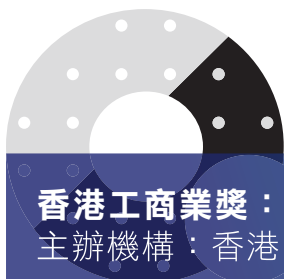
是項比賽旨在鼓勵和提高本港設備及機械的設計及生產水準，藉此提高產品競爭力，及對傑出的產品加以獎勵。

The objective of the competition is to encourage the upgrading of the design of equipment and machinery in Hong Kong so as to enhance competitiveness and to give recognition to outstanding products.

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 |
| • 安全程度 | Safety |
| • 對環境的影響 | Environmental impact |
| • 市場銷售性 | Marketability |

2023-24 香港工商業獎：設備及機械設計
2023-24 Hong Kong Awards for Industries:
Equipment and Machinery Design



查詢表格 Enquiry Form

香港工商業獎：設備及機械設計

主辦機構：香港中華廠商聯合會

**Hong Kong Awards for Industries:
Equipment and Machinery Design**

Organizer : The Chinese Manufacturers' Association of Hong Kong

Tel 電話：2542 8621/2542 8624 Fax 傳真：2541 8154

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I would like to have more information about the Hong Kong Awards for Industries: Equipment and Machinery 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

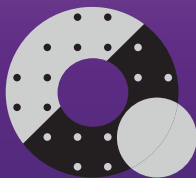
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二零二三至二四香港工商業獎籌備委員會

2023-24 Organising Committee of the Hong Kong Awards for Industries

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