

為強化「無油磁浮式製冷機」的維修保養服務作好準備

Preparing for Enhancement of Maintenance Servicing for Oil-free Chiller



總工程師/衛生工程潘國英先生(左三)帶領五位同事，在美國DTC Inc. 完成無油磁浮軸承壓縮機的技術培訓。
Mr. Raymond Poon, Chief Engineer/Health Sector (3rd from left), with five colleagues and their certificates for completing an oil-free compressor technology training at DTC Inc. in the United States.

「無油磁浮式製冷機」採用最新的無油磁浮軸承壓縮機技術，能大幅節省能源消耗量。無論是全新還是翻新的空調系統，採用「無油磁浮式製冷機」已成新的趨勢。

機電署致力為客戶提供優質服務並帶領業界引進新科技。為此，我們在2014年9月派出六位同事遠赴無油磁浮軸承壓縮機製造商 Danfoss Turbocor Compressor (DTC) Inc. 位於美國的基地學習有關重點技術，並與製造商建立聯繫，為日後的支援和培訓鋪路。

事實上，醫院管理局正計劃於未來三年逐步將公立醫院現有的92台老化風冷式製冷機更換為新的「無油磁浮式製冷機」。如試點項目成效滿意，長遠而言會計劃將大部分現有的老化製冷機，更換為節能的「無油磁浮式製冷機」。

在香港，「無油磁浮式製冷機」的市場發展迅速，對合資格維修人員的需求甚為殷切。為確保業界有足夠的合資格技術人員以滿足「無油磁浮式製冷機」的維修保養服務需求，機電署率先於2014年9月派員到美國接受培訓，並同時以用家及客戶的身分與 DTC Inc. 建立聯繫。該公司亦於2014年12月回訪機電署，雙方商定了今後的培訓合作安排。

DTC Inc. 表示，我們是全球首個主動接觸該公司並提出建立培訓合作安排的客戶。機電署亦會密切留意「無油磁浮式製冷機」技術的發展，在適當時候與業界分享有關經驗。

無油磁浮軸承壓縮機結合磁浮軸承和內置電腦控制，這項創新設計取代了傳統製冷機使用的潤滑油系統，並可按不同製冷要求調節壓縮機轉速，以達節能之效。

Oil-free chillers (OFCs), which make use of the latest technologies in oil-free magnetic levitation bearing type compressors, offer significant energy savings. OFC is becoming the trend in new and retrofitted air-conditioning plants.

EMSD is committed to providing excellent, quality services to our customers and leading the trade in new technologies. As such, we sent a team of six colleagues in September 2014 to Danfoss Turbocor Compressor (DTC) Inc. in the United States, the manufacturer of oil-free compressors, to learn the key technologies as well as to establish connection with the manufacturer to pave the way for future support and training.

In fact, the Hospital Authority is planning to replace 92 existing aged air-cooled chillers by new OFCs in public hospitals in the next three years. The long-term plan is to replace most of the existing aged chillers with energy efficient OFCs, depending on the performance evaluation of the pilot project.

In Hong Kong, the OFC market is developing so quickly that competent servicing personnel will be in great demand. To help ensure that the trade will have adequate competent personnel to satisfy the OFC market in future, EMSD has made the first move to establish contact with DTC Inc., in our capacity as a user client, via the U.S. training trip in September 2014. The company has also paid us a follow-up visit in December 2014, when both parties agreed on future training arrangements.

According to the company, we are their first client in the world to have initiated such contact and training arrangements. EMSD will keep a close eye on developments and share our OFC experiences with the trade in due course.

The OFC compressor is an innovative machine with a magnetic levitation bearing and built-in computerised control. Such design can eliminate the oil lubricating circuit in conventional refrigeration machines. The built-in control can also operate the compressor at variable speeds so as to suit different cooling demand, thereby saving significant energy.

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DTC Inc. 的應用工程環球總監(左五)及中國區總經理(左三)於2014年12月5日到訪機電署，跟進培訓合作安排。
DTC Inc.'s Global Director of Application Engineering (5th from left) and General Manager of China Branch (3rd from left) visited EMSD in Hong Kong on 5 December 2014 to follow up on training cooperation arrangements.