



技術人員檢查臭氣產生器。 Technicians checking the ozone gas generators.

提升質素

年內，機械及電機科就直徑大至200毫米水錶的準確度測試，獲得香港實驗所認可計劃頒授全面認可資格。一如既往，該科會繼續加強品質管理制度，以期在明年為其維修保養工作取得ISO 9000品質認證。

為達致這個目標，該科的員工現正接受特別訓練，而有關的工作程序及常規亦正進行標準化。

同時，為使員工注重工作安全，該科現正根據ISO 14001的有關標準，在四個選定部組推行安全管理制度試驗計劃。

提高設施的可靠程度

為履行本署須確保市民獲得源源不絕優質供水的責任，該科特別著重提高水務設施的可靠程度和效率。

因此，該科現正展開計劃，逐步更換舊型及過時的機電設備和儀器。該計劃除可更新設備外，還可改善環境和提高安全程度及效率。

機械及電機科由一名助理署長掌管，轄下設有兩個部組，分別為工程計劃部、保養部、安全組和行政組，各司其職。



調校流量計。
Flow meter adjustment.



監控及資料收集系統的校正工作。
SCADA system calibration.

Advancing Quality

Apart from being fully accredited during the year by HOKLAS for calibration of water meters up to 200 mm in diameter, the Mechanical and Electrical Branch has been strengthening its quality management system with the aim of obtaining ISO 9000 certification for its maintenance activities by next year.

To achieve this, staff are undergoing special training and procedures and work practices are being standardised.

Meanwhile, to further staff emphasis on work safety, a pilot Safety Management System based on ISO 14001 for four selected divisions/sections is being implemented.

Upgrading for Reliability

Given its share of the WSD responsibility of ensuring a continuous and wholesome supply of water, the Branch places particular emphasis on upgrading waterworks plants for reliability and efficiency.

It is in the midst of a programme for the gradual replacement of old and obsolete plant and equipment. This will result also in improving the environment, as well as efficiency and safety.

The work of the Branch - headed by an Assistant Director - is divided among two divisions - Projects and Maintenance - and two units - Safety and Administration.

Projects Division

This Division designs and manages mechanical and electrical engineering projects. It deals also with procurement, installation, testing and commissioning of plant and equipment, and monitors the work carried out by consultants.

Among its tasks, the Division designs and installs mechanical and electrical plant and equipment in new treatment works, pumping stations and service reservoirs.

It is also responsible for the uprating and electrification of pumping stations, replacement of old and inefficient pumping plant and equipment, undertaking mechanical and electrical engineering work of extension of the fresh water supply to remote places and of the sea water flushing supply zone.



員工在分區監控中心內透過監控及資料收集系統，監察運作程序。

Staff monitoring operations through the SCADA system at a regional monitoring centre.



機械工場內運作中的巨型機床。

Giant lathe in operation in the mechanical workshop.

工程計劃部

工程計劃部負責設計和管理機電工程計劃、處理機電設備和儀器的採購、安裝、測試及啟用事宜，同時監察顧問公司執行的工作。

此外，又負責設計及安裝新濾水廠、抽水站及配水庫的機電設備和儀器。

該部亦會改良抽水站的設備及改用電動抽水裝置、更換舊式和效率低的抽水設備和儀器、負責為偏僻村落獲供應自來水和拓展沖廁海水供應範圍進行機電工程。

其他的工作，包括為海水抽水站的加氯裝置換上電解產氯機、把現有濾水廠設施轉為自動化及機械化，並改善水質監測系統。

該部現正為大型氯氣設施進行風險評估，防患未然。

保養部

年內，經由保養部修理和全面檢修的機電儀器及設備，共計約達44 000部，較去年增加1 000部。

該部負責為供水系統各項抽水、濾水和監控設備進行一切有關的維修保養，確保這些設備安全可靠，時刻可供應用。。

此外，該部亦為水錶、機械、電機和電子設備，提供測試和修理服務。

除了執行多項其他職務外，該部還要肩負一項特別責任，透過制定有關保養工作的政策、標準和程序，進行抽水設備效率測試和能源審核，以及密切監察水務設施的用電情況以爭取最佳能源效益，來達致盡量節約能源及電費的目標。

該部還會更新舊式濾水廠的輔助儀器和設備，更換老化的抽水泵組和機器，以及改良遙測設施。

安全組

安全組現正著手為新界西及荃灣區、機械及電機工場、測漏組及抄錶組制定安全管理制度試驗計劃。

該組主要負責部門員工的職業健康和安全管理事宜，定期在工地進行安全視察，並舉辦訓練課程以提高員工的工作安全意識。此外，該組繼續支援工務局，制定新的建築地盤安全政策。

就定期合約承建商進行的工程而言，該部為提高及推廣地盤安全意識，已把建造合約安全獎勵計劃擴大至包括一九九九年批出的三份水務設施維修保養合約。

行政組

行政組負責處理機械及電機科約1 200名員工的一般行政管理事宜及向有關職系的管理層提供支援。



技術人員測試一個大型水錶的準確程度。

Technicians performing accuracy test on a large size water meter.

Other work includes replacement of the gas chlorination plant with electro-chlorinators at sea water pumping stations, automation and mechanisation of existing treatment works, and upgrading of water quality monitoring systems.

As a precaution against possible hazard, an assessment is being carried out at the major chlorine installations.

Maintenance Division

Some 44 000 items of mechanical, electrical and instrumentation equipment - 1 000 more than the year before - were repaired and overhauled by the Maintenance Division.

The Division is responsible for all such work in ensuring the optimum reliability and availability of plant for the pumping, treatment, control and monitoring of the water supply systems at all times.

Services are also provided for the testing

and repair of water meters, mechanical, electrical and electronic equipment.

Among its many other activities, the Division has the unique responsibility of minimising energy consumption and electricity costs of the Department through formulating policies, standards and procedures on maintenance work, conducting efficiency tests on pumping plant and energy audits, and closely monitoring the use of electricity in installations for maximum benefit.

It also worked on reprovisioning of the auxiliary equipment and instruments in the older treatment works, replacing aging pumpsets and plant and upgrading the telemetry facilities.

Safety Unit

In the Safety Unit, work began on the development of a pilot safety management system at the Mainland North West Region, Mechanical and Electrical Workshop, Leak Detection Section and Meter Reading Section.

Being responsible generally for the occupational health and safety of departmental staff, the Unit carries out regular safety inspections at work sites and conducts training courses to promote staff awareness of the subject at work. It also continued to support the Works Bureau in formulating new policies on construction site safety.

To improve and promote site safety for works carried out by term contractors, the Pay for Safety Scheme for construction contracts has been extended to include the three waterworks maintenance term contracts awarded in 1999.

Administration Unit

The Administration Unit deals with general administrative matters and provides support for grade management of some 1 200 branch staff.

海水抽水站內電解產氯機組的校正工作。

Calibration of the electro-chlorinators at a sea water pumping station.



經常進行校正以確保儀器準確無誤。

Calibration is regularly carried out to ensure accuracy of instruments.

