

航油管道鋪設工程 創世界紀錄 採用環保定向鑽挖法

Installation of Aviation Fuel Pipelines Sets World Record Using Environmentally Friendly Horizontal Directional Drilling Method



香港機場管理局於2018年第一季完成鋪設兩條各長約5.2公里、連接沙洲飛機燃料接收設施與香港國際機場的航油管道，工程創下採用環保定向鑽挖法鋪設最長管道的世界紀錄。由於部分原有航油管道直接位於三跑道系統項目填海工程範圍內的海床，因此須鋪設新管道代替，以確保機場的持續燃油供應。

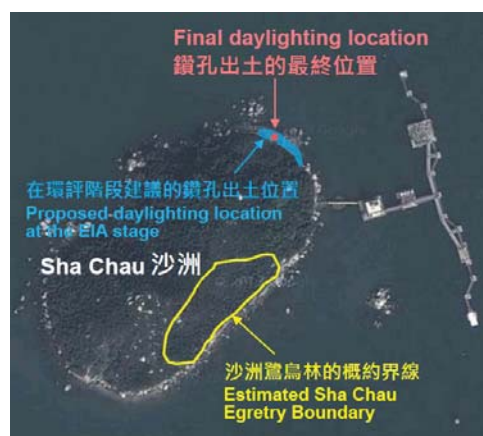
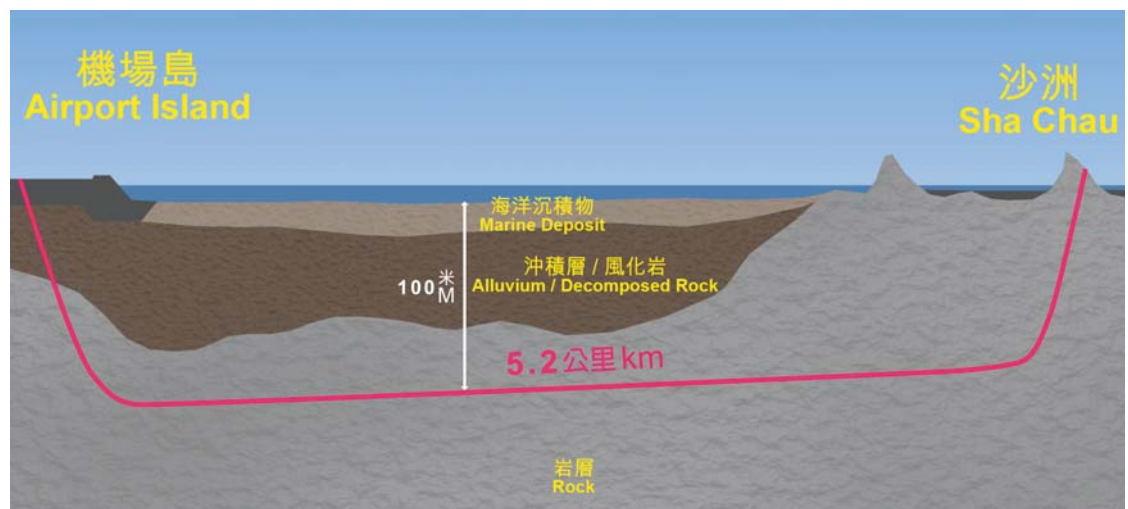
定向鑽挖法在毋須挖掘海床的情況下，將新管道鋪設於海床下約100米的岩層，避免對海洋環境造成影響，亦貫徹三跑道系統項目整體設計及施工的環保原則。

Airport Authority Hong Kong completed the installation of two about 5.2km aviation fuel pipelines connecting the Aviation Fuel Receiving Facility at Sha Chau with Hong Kong International Airport in the first quarter of 2018, setting a new record of the world's longest pipeline installation using the environmentally friendly horizontal directional drilling (HDD) method. As some sections of the original fuel pipelines are directly under the seabed of reclamation footprint of the Three-runway System (3RS) project, new pipelines are required to take over the continuous supply of fuel from the original ones.

With the HDD method, which does not involve any dredging of the seabed, the new pipelines are installed at the rock layer about 100 metres below the seabed, thus posing no disturbance on the marine environment, following the 3RS project's environmentally friendly design and construction principles.

在沙洲進行的工程採取了全面的環境緩解措施，包括：

- 進行了施工前鷺鳥林調查，並於工程展開前再作調查，以確定沙洲的鑽孔出土位置盡量遠離最新的鷺鳥林界線；
- 鑽孔出土位置的鑽挖範圍限制在約10米乘10米內；
- 掩飾或遮蓋設於鑽孔附近的防漏坑；
- 在4月至7月鷺鳥繁殖季節暫停施工；
- 所有燈光明照只能向工地範圍照射，並不得於夜間施工；
- 不得在沙洲及四周水域排放污水；
- 工程平面躉船的停泊地點不得侵入沙洲鷺鳥林；
- 不得在沙洲砍伐樹木；及
- 定期進行生態及水質監察。



Comprehensive environmental mitigation measures were adopted at Sha Chau including:

- Pre-construction egretty surveys were conducted and subsequently repeated before commencement of construction works to confirm daylighting location at Sha Chau to be as far away from the latest egretty boundary as practicable;
- Works area at the daylighting location restricted to about 10 metres x 10 metres;
- Containment pit constructed around the drilling hole was camouflaged or covered;
- Construction works were suspended during the ardeids' breeding season between April and July;
- Artificial lighting was confined within the site, and no night-time construction works were carried out;
- No discharge of effluent was allowed at Sha Chau and its surrounding water;
- The mooring of construction flat top barge did not encroach into the Sha Chau Egretty;
- No tree was felled on Sha Chau; &
- Implemented regular ecological and water quality monitoring.



定期進行生態及水質監察
Regular ecological and water quality monitoring

更多有關定向鑽挖法的資訊: <https://www.threerunwaysystem.com/tc/information/videos>
More about HDD: <https://www.threerunwaysystem.com/en/information/videos>