

航油管道铺设工程 创世界纪录 采用环保定向钻挖法

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



香港机场管理局於2018年第一季完成铺设两条各长约5.2公里、连接沙洲飞机燃料接收设施与香港国际机场的航油管道，工程创下采用环保定向钻挖法铺设最长管道的世界纪录。由於部分原有航油管道直接位於三跑道系统项目填海工程范围内的海床，因此须铺设新管道代替，以确保机场的持续燃油供应。

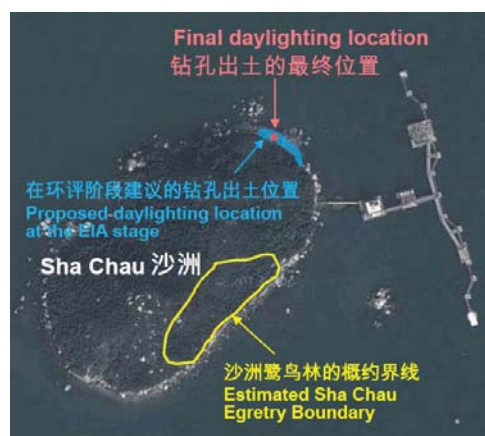
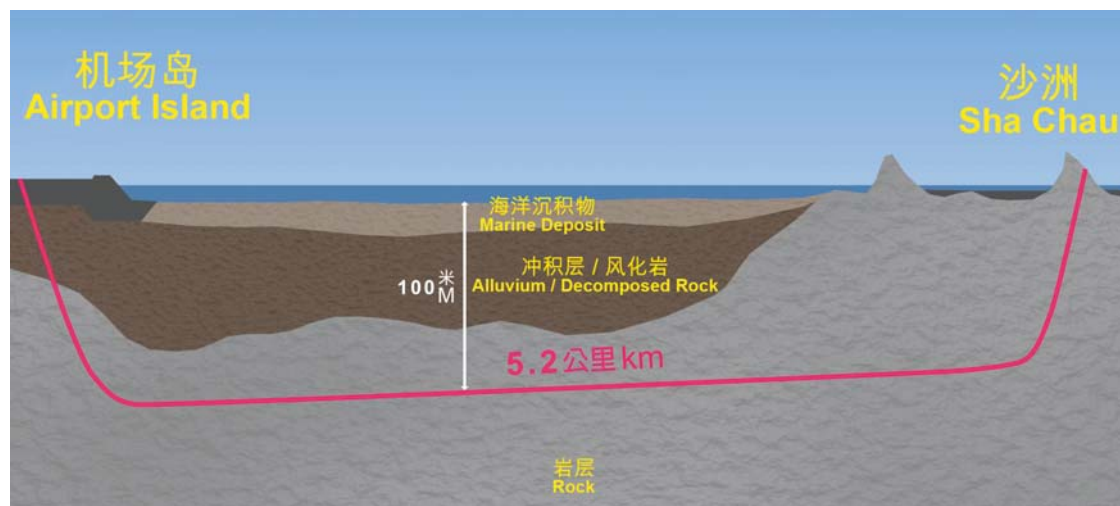
定向钻挖法在毋须挖掘海床的情况下，将新管道铺设於海床下约100米的岩层，避免对海洋环境造成影响，亦贯彻三跑道系统项目整体设计及施工的环保原则。

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.

在沙洲进行的工程采取了全面的环境缓解措施，包括：

- 进行了施工前鹭鸟林调查，并於工程展开前再作调查，以确定沙洲的钻孔出土位置尽量远离最新的鹭鸟林界线；
- 钻孔出土位置的钻挖范围限制在约10米乘10米内；
- 掩饰或遮盖设於钻孔附近的防漏坑；
- 在4月至7月鹭鸟繁殖季节暂停施工；
- 所有灯光照明只能向工地范围照射，并不得於夜间施工；
- 不得在沙洲及四周水域排放污水；
- 工程平面趸船的停泊地点不得侵入沙洲鹭鸟林；
- 不得在沙洲砍伐树木；及
- 定期进行生态及水质监察。



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.



定期进行生态及水质监察
Regular ecological and water quality monitoring

更多有关定向钻挖法的资讯: <https://www.threerunwaysystem.com/sc/information/videos>
More about HDD: <https://www.threerunwaysystem.com/en/information/videos>