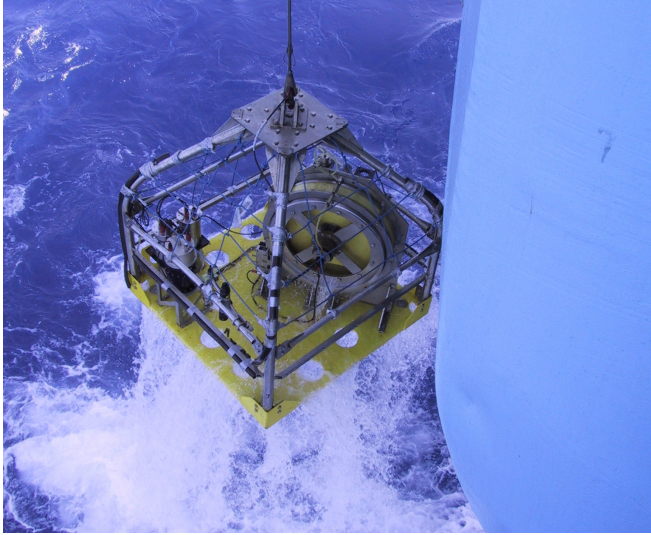


CASE STUDY

HKZM BRIDGE



PROJECT SPECIFICATION

LOCATION	Hong Kong
CLIENT	Lam Geotechnics
DATE OF WORKS	2011
TESTING UNDERTAKEN	CPT
RIG	Roson seabed CPT system

SEABED CPT FOR BRIDGES AND TUNNELS

The Hong Kong-Zhuhai-Macau (HKZM) Bridge will be the first major combined bridge and tunnel sea-crossing in China. When it opens in 2017, the link will reduce journey time between Hong Kong and Macau or Zhuhai from three hours to 30 minutes. The 38km link across the Pearl River Estuary includes three bridges (totalling 22.8km), a 6km long tunnel and two man-made islands.

Lankelma, working for Lam Geotechnics, provided specialist seabed CPT services using a Roson CPT system deployed from local Chinese vessels.

The CPT unit was lowered to the seabed and linked to the surface by an umbilical cable for data transfer. The system can operate in up to 2,000m of water and test to up to 40m below the seabed.

The success of the initial testing programme led the client, LAM Geotechnics, to extend Lankelma's contract to cover a much larger area, where the original plan had been to use drilling techniques.

This was the first time that seabed CPT had been successfully carried out in Completely Decomposed Granite to depths of 30m.

Lankelma also provided quality auditing and training to the Chinese main contractor CCCC-FHDI. This allowed the project to meet quality assurance and approval criteria set out by the Hong Kong Government's engineering team.