



## Cathodic Protection of Steel H-Piles in Hong Kong

This project is a good example of how cathodic protection can prolong the service life of a structure and /or reduce its overall construction cost.

Conventionally, a sacrificial thickness is allowed in the design of steel H-piles to cater for corrosion loss in time, leading to the use of much larger piles and hence substantial cost increase. In this project, an impressed current cathodic protection system (ICCP) was designed and installed to protect 242 pieces of underground steel H-piles with a design life of 100 years. The average length of the piles is about 45m and the section is 305mmx305mmx223kg/m. With this method, the size of the steel H-piles are reduced with substantial savings in material and construction costs.

- The scope of works included the following: Detailed design and preparation of workshop drawings for the ICCP system
- Supply and installation of ICCP system, including anodes, reference electrodes, cables, junction boxes and transformer rectifiers
- Testing and commissioning of cathodic protection system