

KOWLOON SOUTHERN LINK

CHINA

Real time strut monitoring by strain gauge with a GPRS data transmission system

In the KCRC new railway project, Kowloon Southern Link, H-pile struts and cylindrical struts were used for supporting the sheet piles for excavation. SolData installed strain gauges to monitor the deformation of struts during the excavation.

4 strain gauges were installed on a single strut to measure its deformation at the top, bottom, left and right.

Strain gauges were connected to dataloggers and the measured data sent to the control room through the GPRS modems. Data were taken hourly, and the daily averaged values were input to the client's database. All these processes are automatic.

Hundreds of struts were being installed by welding, the struts were required to be pre-loaded before fixed. SolData carried out the pre-loading test to measure the deformation of the strut during pre-loading. Portable datalogger box and laptop computer were used to give the real-time reading to the Engineer.



CLIENT:

KOWLOO CANTON
RAILWAY CORPORATION

DATE OF WORKS :

FEB 2007 – JAN 2008

WORK DONE :

- Over 1000 strain gauges, 70 multiplexers and 10 dataloggers installed
- GPRS modem for data transmission
- Over 20 000 data transferring every day