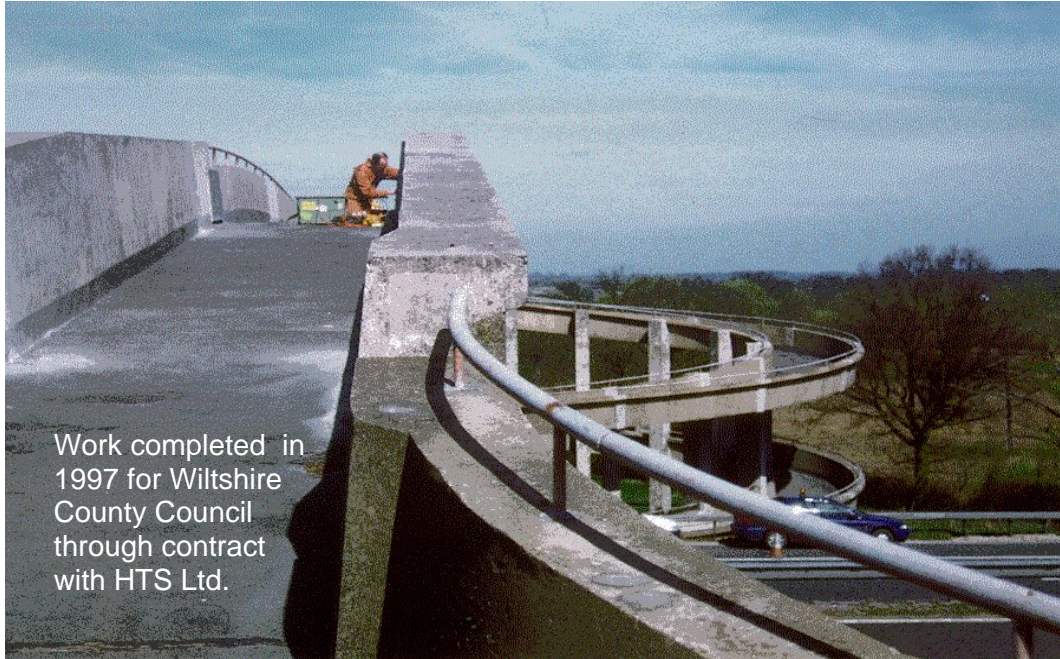


PT Bridge Tendon Load Measurement



Work completed in 1997 for Wiltshire County Council through contract with HTS Ltd.

Strain gauges with 1.6mm diameter, 1mm deep hole drilled in tendon



Hodson Footbridge is located on the M4 motorway east of Swindon, Wiltshire. It is one of a group of four motorway overbridges that were subject of a Special Inspection in accordance with BA50/93.

The structure comprises post-tensioned trough section cantilever side spans with a suspended midspan section.

STRAINSTALL were sub-contracted to the testing contractor, HTS Ltd, to complete a programme of testing to determine the in situ loads in selected tendons using the centre hole method of stress relief.

The following key information was provided in a concise report for each bridge:

- Review of tendon type and dimensions
- Numerical value of load in each of the tendons that were tested. Accompanying drawing identified locations of tests
- Comparison of in-situ tendon load against yield load and ultimate load (using library of tendon manufacturers' data)

Additionally, one tendon was discovered to have a significantly lower load than anticipated and this was highlighted to the Client.

Strainstall's team of experienced engineers operate from offices in Cowes, Bath and Aberdeen (UK) and Tønsberg (Norway).



Strainstall

- 'Centre hole' strain relief drilling technique
- Calculation of tendon load from measurement of surface strain relief

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