



GATWICK AIRPORT STATION LONDON REDEVELOPMENT

FLAT & HYDRAULIC JACKING WORKS

HEAVY DUTY JACKING SYSTEMS

CONTRACT SERVICES - HIRE - SALES

PROJECTS

www.hydra-capsule.com

PROJECT DESCRIPTION

Gatwick has the fastest route by rail into central London from any London airport.

Through this scheme, the station facilities will have a much needed face-lift. This will complement the investments being made by the Airport Operator, Gatwick Airport Limited.

Hydra Capsule were approached by a subcontractor to manufacture, supply and install a complete jacking system to approved temporary work scheme, for bassetting the earing replacement works

“Complete controlled hydraulic movement, throughout a “live” railway station, one of the busiest within the United Kingdom”



In addition, once all the piers had all the remedial works and bearing replacement completed. Hydra Capsule re-attended site to de-energise and transfer the existing loads back-through the newly installed elastomeric and fixed bearings.

The operation was completed by re-energising the jack loads (as previously pre-loaded), and then lowered by a controlled hydraulic pumps.

Which was monitored by incorporating electronic load sensors and LDVTs displacement gauges. Allowing Hydra Capsule to fully control the lowering of each pier bridge deck and distribute the loads fully through the



PROJECT WORKS

Due to the height restraints based on the temporary support works numerous load capacity jacks (ranging from 400 kNs to 2100 kNs per jack) were used to pre-load, support and lift (approx +5.00mm) each bearing / pier location.

The jacks were linked in sets of 2, 4 and 6 at each pier and controlled by individual by separate pumps, due to the differential loadings between each jack and interlinked hydraulic circuit.

This allowed each pier to be loaded and synchronously lifted to the specifications, without over-stressing the existing structure connections. Once completed the jacks were locked-off whilst the remedial and bearing replacement works were carried out.



Client

Gatwick Airport Limited
(Network Rail)

Type of Works

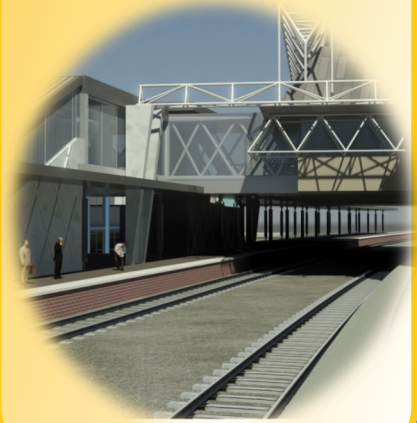
Hydraulic Jacking
Flat Jacking
Synchronised Control System
Design and Manufacturing of
Jacks

Commence Date

April 2013

Completion Date

March 2014



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