Tank Installation & Compliance

Client – British Airways C/O Carillion Heathrow Airport

Project – Testing of Tanks and Upgrade of Fuel System

KpH were contracted to test the existing five below ground fuel storage tanks, including fuel lines and upgrade the installation to meet current legislation. The tanks and fuel lines all passed test, however due to the age of the tank installation, the client instructed replacement of the existing steel pipework and upgrading the alarm and gauging systems. It was essential the site remained operational, therefore a temporary oil supply line was installed to allow a continuous supply of oil at all times. The project went extremely smoothly with one unforeseen problem being encountered, in that whilst breaking out the concrete housing surrounding the pipework into the plant room, steel plates were encountered embedded within the concrete with the pipe work welded to the plates. On instruction from the client the plates were broken out and the pipework renewed and the internal manifold replaced.

The scope of works included:

- Initial integrity testing of the 5 nr below ground fuel storage tanks, including all associated supply and fill lines
- Installation of a temporary fuel supply line to allow the site to remain operational
- Carefully breakout reinforced concrete to allow removal of pipework entering the plant room and tank chambers, prior to removal of the concrete templates were formed from plywood to ensure the new pipework would be installed in the identical positions
- Remove unforeseen steel plates embedded in concrete and the manifold system within the plant room
- Dismantling and removal of existing pipework from all five oil storage tanks
- KpH's in house expertise fabricated over 100 six metre lengths of 50mm steel barrel with mechanical flanges, each length was coated with rust preventer and pressure tested to 1.0 bar prior to leaving KpH's fabrication workshop
- Installation of 700 metres of new 50mm steel pipework, pressure test lines and commission
- Reinstate manifold system within the plant room and fit new gaskets
- Reinstate reinforced concrete within tank chambers and plant room using plywood shuttering templates taken earlier during the project
- Upgrading of the system also included the relocation of the existing overfill alarm panel, to be extended and relocated within the fill point cabinet
- The system also required the replacement of corroded capillaries to the gauging system