



SUP DC TRACTION POWER UPGRADE

Project Location: London, various LUL sub-stations and underground stations

Project Timeframes: October 2013 to 2018

Client: London Underground Ltd (4LM)

AmcoGiffen Discipline/Sector:
Rail, DC power

Project Overview

As part of London Underground's larger scheme to upgrade the Sub-Surface Lines (SSL) to enable the operation of new S-Stock trains, AmcoGiffen were contracted to upgrade the power supply system at various London Underground sub-stations and underground stations, to increase the nominal mainline voltage from 630v to 750v Direct Current (DC).

AmcoGiffen's Scope of Works

We were selected to deliver the reinforcement of the DC track feeder cables that deliver the traction supply from each sub-station to the sub-surface railway through the installation of an additional 935mm traction cables per pole, installation of track isolating switches and the associated Cable Route Management System (CRMS).

Our further scope of works included:

- Design works where required
- Termination of negative and positive traction continuity links to conductor rails
- Installation of bespoke CRMS
- Minor civils work
- Fire stopping of cable penetrations to London Underground Standard 1-083 (2 hour fire protection)
- Testing and commissioning of DC feeder cables and all installations
- Production of O&M manuals, as-built drawings and test sheets
- Decommissioning, removal and disposal of existing non-compliant DC track feeder cables and track isolating switches
- Replacement of PILC/PIAC cables where present



I would like to express my gratitude to the [AmcoGiffen] project team responsible for the delivery of the DC Power Package 2 works as part of the 4LM DC ETE Project... The project team proved themselves to be competent and reliable suppliers for this project and should be proud of their achievements.

Kenneth Sloan, 4LM Power Portfolio



Innovation Applied

Continually embracing and implementing new and more effective ways of providing enhanced project delivery, AmcoGiffen created and installed a bespoke Cable Route Management System at Embankment Station.

Customising our system design to seamlessly integrate with the infrastructure to allow for increased mainline voltage, we successfully delivered a superior and innovative solution.

Benefits Provided

Facilitating the continuation of London Underground's Sub-Surface Upgrade Programme (SUP), our team liaised efficiently with the client to ensure the successful delivery of the upgrade, on time and to budget.

Benefits of the project include:

- Reduction in journey time for passengers
- Assist in the instigation of new, larger S-Stock trains which will increase capacity to support the projected growth for London's population
- Modernise London Underground travel

Further benefits provided by AmcoGiffen:

- A robust and comprehensive understanding of the technical scope
- A strong commitment to around the clock health and safety
- The ability to promptly adjust to project modifications
- A client-first commitment and excellence driven philosophy



Project Contact

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