

ITT2B-Scenario: Rolling Stock Specialist Investigation/testing Support

Question

Provision of specialist engineering analysis and testing support to TfL rolling stock engineering that will establish cause of failure and predict life expectancy of operational items.

The supplier will need to demonstrate specialist knowledge and understanding of all professional engineering matters relating to railway rolling stock technical investigations and be able to apply them to the operation of an underground Metro (London Underground), light rail operations (DLR and Tram operations) and heavy rail operations (TfL Rail, London Overground, etc.).

The delivery of successful rolling stock specialist investigation support requires the skills, knowledge and experience of specific outsourced technical investigation services, for example:

- a) Materials analysis
- b) Metallurgy
- c) Fire performance of materials
- d) Other scientific analyses
- e) Fracture analysis
- f) Specialist NDT testing
- g) RAM and Safety Analysis
- h) Maintenance optimisation
- i) Life cycle/vibration testing items such as Switches, valves, doors, bogies.
- j) Derailment mechanics

These activities include requirement for:-

1. Validation of project and stakeholder request
2. Liaising closely with TfL specialist rolling stock engineers and maintenance staff during the investigation process
3. Work closely with TfL engineering to align testing requirements with actual operational requirements
4. Carrying out any necessary visits to depots to investigate rolling stock failure modes, examine reports, analyse results to fully understand functional / operational environment in collaboration with fleet engineers and specialist rolling stock engineers.
5. Knowledge of, or obtaining knowledge of and apply London Underground rolling stock design standards and assurance arrangements
6. Delivering all investigation documentation to enable TfL Engineering to make fully informed decisions regarding replacement, modifications and /or mitigation measures necessary to maintain safe operations whilst longer term solutions are being implemented
7. Technical support and management of 1 to 6 above

The supplier will be expected to supply a wide range of specialist investigation support services and deliverables, including, studies, surveys, investigation reports and analyses which will in turn rely and depend on specialist investigation skills, competence and capabilities in areas including but not limited to the list shown above:

In no more than 1500 words contained in a maximum of 4 sides of A4 (pictures, diagrams etc. may be included in the sides of A4 limit) describe your company's capability to provide rolling stock specialist engineering services described above.