

RAILTRACK

*Safety & Standards***SAFETY JUSTIFICATION****ISSUE: I****PART 1 - DOCUMENT INFORMATION**

Document Title:	Production and Management of Electrification Isolation Documents		
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PART 2 - EXECUTIVE SUMMARY

This is a new document, which amends and supersedes GM/RT1006. The changes to GM/RT1006 which have been incorporated into GL/RT1252 are principally linked to the change in risk due to the planned introduction of a new form of traction power supply system onto Railtrack controlled infrastructure. This system is required to provide the power requirements of higher speed operations and increased train paths. The primary objective of the redraft of the document was to make it generic and therefore applicable to any sort of traction power supply arrangement.

This safety justification describes the measures necessary to control the risk when different forms of traction power supplies are used particularly at the interfaces. It also addresses the need for standardisation of presentation of the isolation documents within an electrical control area to avoid confusion when implementing safe systems of work.

PART 3 - BACKGROUND**Need for change**

GM/RT1006 was reviewed against the background of higher speed (in excess of 125mile/h); tilting operations and the introduction of a new traction power supply system. This review identified the need to amend the Standard in three areas namely:

- The need to present the requirements so as not to preclude the use of an auto-transformer traction power supply system (or any other form of traction power supply);
- The need for the isolation documents to include the consideration of adjacent electrification systems to manage the risk of an incomplete isolation when working in the interface between adjacent electrification systems;

- Standardisation of format, graphics, nomenclature, content and presentation of the isolation documents.

Proposed changes

- Withdrawal of GM/RT1006 Issue One – Electrification Isolation Documents – Production and Modification
- Introduction of GL/RT1252 Issue One - Production and Management of Electrification Isolation Documents

The Standard has been categorised to reflect its application to multi-disciplinary infrastructure activities.

The title, scope and contents of the Standard have been revised to reflect that implementation of safe systems of work requires the production of validated isolation documents and this requires management.

The following aspects have been considered in the drafting of the standard:

- The consideration of adjacent electrification systems where they may affect safe working and also the need to identify hazards, and hence risks, at interfaces between different supply systems such as those between an auto-transformer systems and the conventional or classic electrification systems. The list of other neighbouring systems has therefore been expanded and clarified.
- The consideration of all points of isolation, including those in trackside buildings, structure-mounted switchgear etc, as well as those on the overhead line equipment itself. The definition of isolation documents has been revised so as not to preclude these.
- To standardise the format, graphics, nomenclature, content and presentation of all isolation documents

Controls and their function

These requirements have been incorporated in this new standard. Isolation documents are required in order to implement safe systems of working on electrification equipment. The specific definitions within the standard and the requirements have been chosen to manage the risks associated with inaccurate isolation documents and have deliberately been made generic in order that they are applicable to all known forms of electric traction supply.

Part 4 - COSTS AND BENEFITS

The proposals will ensure that Isolation Documents present all the necessary information to ensure a safe method of working on classic and auto-transformer electric traction power supply systems particularly the interfaces between these systems and to other supply systems which may have an electric connection. The proposals will also require standardisation of the presentation of the documents within an Electrical Control Area to minimise the risk of confusion. The requirements will apply when producing the Isolation Documents for new schemes and to existing documents when they require first amendment after the compliance date. These additional requirements are not expected to introduce further costs as the need for Isolation Documents is already mandated and the changes amplify and clarify the scope of these documents.

Part 5 – CONCLUSION

The proposals are necessary to control the risk of taking an incomplete isolation; they introduce no additional cost and implement what ostensibly is best practice.

Part 6 - REFERENCES

GM/RT1006 Issue 2
GM/RT1087
Electricity at Work Regulations 1989
BS EN 50110