AS 7722:2016

Australian STANDARD®

EMC Management

RISSB
RAIL INDUSTRY SAFETY AND STANDARDS BOARD

Train Control Systems Standard

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This Australian Standard® AS 7722 EMC Management was prepared by a RISSB Development Group consisting of representatives from the following organisations:

- Asset Standards Authority (TfNSW)
- ARTC
- Metro Trains Melbourne
- John Aitken & Partners

The Standard was approved by the Development Group and the Train Control Systems Standing Committee in May, 2016. On June 15, 2016 the RISSB Board approved the Standard for release.

This standard was issued for public review and was independently validated before being approved.

Development of the standard was undertaken in accordance with RISSB's accredited process, which includes the independent validation mentioned earlier. As part of the approval process, the Standing Committee verified that proper process was followed in developing the standard.

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this standard. Their efforts ranged from membership of the EMC Development Group through to individuals providing comment on a draft of the standard during the public review.

I commend this standard to the Australasian Rail Industry as it represents industry good practice and has been developed through a rigorous process.

Paul Daly
Chief Executive Officer
Rail Industry Safety and Standards Board

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Document Control

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Authoring and Approval

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1 Introduction

1.1 Purpose

The purpose of this standard is to define requirements for the management of electromagnetic emissions and susceptibility of devices used in the railway so that all systems used in the railway are electromagnetically compatible.

These requirements define the minimum effort required to manage the risk associated with EMC and to ensure compliance with legal and regulatory, safety and reliability requirements; particular situations may require more detailed assessment.

Advisory information is also provided to support mandatory requirements

Rail Transport Operators (RTOs) remain responsible for ensuring that any EMC risks introduced by new or altered systems and products are controlled so far as is reasonably practicable (SFAIRP).

1.2 Scope

The scope of this document covers requirements for the management of EMC as applicable to:

- (a) Planning EMC management
- (b) Introduction of new rail assets (new products or integrated systems)
- (c) Alterations to existing rail assets (existing products or integrated systems)
- (d) Novel alterations to existing rail system configurations or layouts
- (e) Maintenance of operational rail systems
- (f) Decommissioning of rail systems

The scope of this standard is limited to rail systems and assets under the scope and control of the Australian railway networks. This scope includes potential EMC issues existing or introduced between the Australian railway network and any third parties, as a result of action by Australian railway network assets, for example as discussed in AS 2344.

This document will assist RTOs to apply harmonised management of EMC risks to meet their legal and regulatory obligations.

Heritage railways are excluded from this standard, unless there is a physical and operational interface with a non-heritage railway that may affect EMC.

1.3 Application

This standard applies to organisations engaged in provision of engineering services over the full asset lifecycle for the whole railway, covering all internal and external interfaces.

This standard is intended to be applied by Railway Infrastructure Managers (RIM), Rolling Stock Operators (RSO) and the supply chain involved in provision of railway systems and products.

This standard is intended to be applied for introducing new or altered systems and products; it is not intended to be applied retrospectively.

Not all requirements in this standard will apply to every organisation on every project. The need for compliance depends on where in the asset lifecycle the engineering services are provided, and the type of systems or products to be implemented.

While the management of EMC rests predominantly with electrical and electronic systems, it is important to note that other infrastructure has an impact on establishing and maintaining EMC