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Railway applications — Platform barrier systems

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Contents

Page

Foreword

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This document was prepared by Technical Committee ISO/TC 269, *Railway applications*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 Purpose

Platform barrier systems provide a movable barrier between trains and other guided transit vehicles, and passengers waiting at stations and boarding points.

Platform barrier systems are used increasingly on metro and other rail networks to ensure the safety of passengers on the station platform who are waiting to board vehicles. Such systems are also used on “people-mover” guided systems for short-distance transits, for example at airports. Their use is recommended by IEC 62267 for any fully automated transit system.

In particular, platform barrier systems can be used to control the risk of:

— incursion by passengers or other persons on the railway track (deliberate or accidental); and

— contact between passengers and moving vehicles.

These risks can be especially significant where there is the possibility of overcrowding on station platforms at busy locations. Barriers can increase the safely useable space in the station for passengers waiting and circulating on the platforms.

Platform barrier systems integrate the operation of the platform barrier doors and gates with opening and closing of train doors and also assist in the management of station operations, to safely permit higher speeds for trains entering and exiting the stations.

Barrier installations can also be part of a continuous partition between the running tracks and the station areas for the purposes of:

— fire safety (including smoke management);

— tunnel and station ventilation (including reduction of the piston effect);

— trackside noise reduction; and

— passenger comfort at climate-controlled stations.

Additionally, the terminology used in connection with platform barrier systems, in particular to improve the specification and understanding of safety requirements, should be standardized.

0.2 National annex with relevant national standards

There are several standards required for the successful implementation of this document, relating to specific regions or countries, that are currently not suitable for inclusion within an international standard. As such, national standards bodies are encouraged to compile and document the standards, relevant to the region or country they represent, within a national annex. National annexes can also provide localized guidance and advice on how to implement this document for projects of varying complexity.

Railway applications — Platform barrier systems

1 Scope

This document specifies requirements for the design, construction and operation of platform barrier systems positioned at the edge of a station platform immediately adjacent to the rail or other guided vehicles in stations and boarding points for passenger services. This document includes:

— requirements for the fixed structure and fixed parts along the platform;

— physical requirements for the movable doors and gates normally used by passengers;

— requirements for emergency doors;

— requirements for driver access doors;

— requirements for platform extremity doors; and

— requirements for the management of safety risks that are particular to barrier systems.

NOTE This document provides requirements for doors and gates on conventional panel construction from platform level to the top of the door, or gate.

This document also gives requirements for the integration of barriers within the overall rail system, including:

— synchronization of vehicle and platform barrier doors/gates;

— audible and visible alerts;

— integrity of control systems;

— testing of the barrier installation;

— operational performance; and

— requirements relating to other interfacing sub-systems, notably signalling and vehicles.

This document does not cover barrier systems set back from the platform edge, which are used to control access to trains or for crowd management, however, relevant sections of the document can be used as guidance.

This document applies to rail services, e.g. metro, tram systems and main line railway system services as requested by a project specification. It applies to small systems, working in conjunction with a single vehicle, or with larger systems working with a complete train.

This document applies to platform barrier systems used at sub-surface stations, enclosed surface stations (e.g. those enclosed for the purposes of providing an air-conditioned environment for waiting passengers), and those fully in the open-air.

This document applies to all persons involved in the implementation and system integration of a platform barrier system, including infrastructure owners, designers, installers and operators.

This document does not cover barrier systems using doors/gates that utilize multiple panels, bars, ropes, etc. or which operate in a vertical direction.