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Railway applications — Fire protection on railway vehicles —

Part 1: General

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Partie 1: Généralités

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The ISO 9828 series specifies fire protection measures for railway vehicles based on the Operation and Design Categories established in this document.

The measures and requirements specified in the ISO 9828 series are intended to protect passengers and staff in railway vehicles in the event of a fire on board. The protection of passengers and staff is essentially based on measures to

— prevent fires occurring due to technical faults and due to equipment design or vehicle layout,

— minimize the possibility of ignition of materials installed on railway vehicles due to accidents or vandalism (acts of damaging public property),

— detect the occurrence of a fire,

— limit the spread of fire by specification of materials according to the Operational Categories (and by measures for containment);

— minimize the effects of fire in terms of heat, smoke and toxic gases on passengers or staff through the specification of materials installed on railway vehicles;

— control and manage a fire, for example, by means of fire detection, suppression and/or emergency energy shut down.

The aim of this document is to ensure the safety of passengers and staff in the event of a fire in or on a vehicle or vehicles comprising a passenger carrying train. Fire safety in this environment depends upon a range of interdependent measures, such as:

— preventive measures;

— in-built precautions to mitigate the development of any incipient fire;

— fire detection and alarm/warning systems;

— manual or automatic fire suppression systems;

— emergency lighting and way-guidance systems;

— provisions for the availability and safe use of means of escape and egress (e.g. escape route or exit door widths);

— measures to assist safety interventions by the fire and rescue services;

— places of safety and relative safety;

— occupancy levels;

— normal supervision;

— control of materials used in the manufacture of the vehicle;

— ventilation;

— use of fire barriers;

— fire resistance of parts and products.

Each of these precautionary and preventive measures are defined in other parts of the ISO 9828 series.

This document describes the measures to be taken in the design of the vehicles in the context of each country’s infrastructure.