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~~Title (Railway infrastructure_ — Rail mounted construction,
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type)~~

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Contents

Forewordviii

Introduction..... ix

1 Scope.....1

2 Normative references1

3 Terms and definitions2

3.1 Machine type.....2

3.2 Operational modes4

3.3 General.....4

4 Modes of operation.....5

4.1 General.....5

4.2 Working mode.....5

4.3 Travelling mode.....6

4.4 Running mode.....7

5 Generic types of machine10

5.1 General.....10

5.1.1 Classification10

5.1.2 Railbound machines with running mode.....10

5.1.3 Railbound machines without running mode.....11

5.1.4 Road-rail machines.....12

5.1.5 Lightweight demountable machines.....12

5.1.6 Trolleys and portable machines.....13

5.1.7 Demountable modules.....13

5.1.8 Attachments.....13

5.1.9 Machines without rail wheels13

5.1.10 Locomotives and wagons14

5.2 Classification of rail mounted machines14

5.2.1 Classification method.....14

5.2.2 Machines with a running mode.....14

5.2.3 Machines with a road mode14

5.2.4 Ways for the machine to move along the track.....14

5.2.5 Combination of questions14

6 Acceptance of machines.....15

6.1 General.....15

6.2 Machinery standards.....16

6.3 Railway standards16

6.4 Acceptance to work on the railway16

Annex A (informative) Examples of machine types.....17

ISO-#####-#####(X/DTR 8941:(en)

A.1	General	17
A.2	Railbound machine with running mode	17
A.2.1	Railbound machine with running mode - Category A	17
A.2.2	Railbound machine with running mode - Category B	25
A.2.3	Railbound machine with running mode - Category C	33
A.2.4	Railbound machine with running mode - Category D	35
A.2.5	Environmental and emergency machines	37
A.3	Railbound machine without running mode	39
A.3.1	Non-demountable machine	39
A.3.2	Demountable machine	41
A.3.3	Trailer	50
A.4	Road-rail machine	51
A.4.1	Road-rail machine with running mode	51
A.4.2	Road-rail machine without running mode	56
A.4.3	Road-rail trailer	66
A.5	Lightweight demountable machine	70
A.6	Trolley	71
A.7	Portable machine	72
A.8	Demountable module	73
A.9	Machines without rail wheels	77

Foreword — v

Introduction — vi

1 — Scope — 1

2 — Normative references — 1

3 — Terms and definitions — 2

4 — Modes of operation — 5

4.1 — Introduction — 5

4.2 — Working mode — 5

4.3 — Travelling mode — 6

4.4 — Running mode — 6

5 — Generic types of machine — 8

5.1 — Introduction — 8

5.1.1 — Classification — general — 8

5.1.2 — Railbound machines with running mode — 8

5.1.3 — Railbound machines without running mode — 9

5.1.4 — Road-rail machines — 10

5.1.5 — Lightweight demountable machines — 10

ISO #####-#####(X/DTR 8941:(en)

5.1.6	Trolleys and portable machines	11
5.1.7	Demountable modules	11
5.1.8	Attachments	11
5.1.9	Machines without rail wheels	11
5.1.10	Locomotives and wagons	11
5.2	Classification of rail mounted machines	12
5.2.1	Classification method	12
5.2.2	Machines with a running mode	12
5.2.3	Machines with a road mode	12
5.2.4	How does the machine move along the track	12
5.2.5	Combination of questions	12
6	Acceptance of machines	13
6.1	Introduction	13
6.2	Machinery standards	13
6.3	Railway standards	13
6.4	Acceptance to work on the railway	13
Annex A	(informative) Examples of machine types	14
A.1	General	14
A.2	Railbound machine with running mode	14
A.2.1	Railbound machine with running mode Category A	14
A.2.2	Railbound machine with running mode Category B	18
A.2.3	Railbound machine with running mode Category C	23
A.2.4	Railbound machine with running mode Category D	24
A.2.5	Environmental and emergency machines	25
A.2.5.1	Environmental machines	25
A.2.5.2	Emergency machines	25
A.3	Railbound machine without running mode	26
A.3.1	Non demountable	26
A.3.2	Demountable machine	27
A.3.3	Trailer	32
A.4	Road rail machine	33
A.4.1	Road rail machine with running mode	33
A.4.2	Road rail machine without running mode	35
A.4.2.1	Road rail machine without running mode Type A	35
A.4.2.2	Road rail machine without running mode Type B	37
A.4.2.3	Road rail machine without running mode Type C	38
A.4.3	Road rail trailer	42
A.5	Lightweight demountable machine	44
A.6	Trolley	45

~~ISO #####-#####(X/DTR 8941:(en)~~

- ~~A.7 Portable machine 46~~
- ~~A.8 Demountable module 47~~
- ~~A.9 Machines without rail wheels 50~~

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ISO/DTR 8941

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 269, Railway ~~Applications~~ applications, Subcommittee SC 1, Infrastructure.

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

This document is intended ~~as an explanatory guide to~~ provide information on machines that are fitted with rail wheels. ~~The purpose of this document is written~~ to clarify the complex variety of machines that are used for the construction, maintenance, inspection, repair and renewal of railway infrastructure. It is intended to be used as an introduction to ~~and application guide for~~, the various types of rail mounted maintenance and infrastructure inspection machines. It is also intended as an aid to clarify the complexity caused by machines which are designed and intended for a specific working purpose but also have the ability to operate as a railway vehicle as an additional function.

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Railway infrastructure — Rail mounted construction, maintenance and inspection machines — Explanation of machine type

1 Scope

This document ~~explains~~describes the different modes of operation and the classification of machine types.

This document covers machines fitted with rail wheels that are used for the construction, maintenance, inspection, repair and renewal of railway infrastructure. These include:

- ~~On-track Machines~~machines (OTMs), which are specially designed for construction and maintenance of the track and infrastructure;
- ~~Infrastructure~~infrastructure inspection vehicles, which are utilised to monitor the condition of the infrastructure;

~~Environment~~NOTE — Inspection of the infrastructure includes measurement.

- environment vehicles, which are designed for clearance of the track from environmental conditions such as snow clearance machines;
- ~~Emergency~~emergency vehicles, which are designed for a specific emergency use such as evacuation, firefighting, and recovery of trains (including breakdown cranes);
- ~~Road-Railroad-rail~~ machines, which are able to move on railway track and on the ground;
- ~~Trolley~~trolleys and portable machines that are manually moved along the railway track.

~~NOTE~~ — Inspection of the infrastructure includes measurement

32 Normative references

There are no normative references in this document.

ISO/DTR 8941

<https://standards.iteh.ai/catalog/standards/iso/0cf7ff75-feca-4f20-a6da-d59dcc6361b4/iso-dtr-8941>

53 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Machine type

3.1.1

rail mounted machine

generic term for the collection of all machines which have wheels suitable for running on railway tracks and are intended for the construction, maintenance, inspection, repair and renewal of railway infrastructure

Note_1_to_entry: It is also applicable to machines used for emergency rescue purposes on railway infrastructure.

3.1.2

Machine type

3.2.1

railbound machine with running mode

~~machine~~ machine intended to operate track signalling and control systems which only has wheels suitable for running on railway tracks and is intended for the construction, maintenance, inspection, repair and renewal of railway infrastructure

3.2.1.1

railbound machine with running mode

3.2.1.1.1

on-track machine

OTM

railbound machine with running mode specially designed for construction and maintenance of the track and infrastructure, running on its own rail wheels and designed and intended to operate signalling systems

Note_1_to_entry: Such machines have running mode and travelling and working modes.

Note_2_to_entry: Such machines are either self-propelled in running mode or hauled in running mode (hauled machines are permitted to have a self-propelled option in working/travelling mode).

3.2.1.1.24

infrastructure inspection machine

self-propelled or hauled railbound machine with running mode used to monitor the condition of the infrastructure, running on its own rail wheels, and designed and intended to operate signalling systems

Note_1_to_entry: These machines are considered to be OTM unless they are intended to be incorporated in passenger or freight trains.

3.2.1.25

-railbound machine without running mode

3.2.1.2.1

-railbound machine without running mode

machine that can travel and work only on rail and which is not intended to operate track signalling and control systems, but is not able to travel on the ground

ISO/DTR 8941:(en)

Note_1_to_entry_: Such a machine is permitted to work on the railway only under special operating conditions and travel under special conditions, i.e. it does not have a running mode.

3.2.1.2.26

non-demountable machine

self-propelled railbound machine without running mode that is not designed to get on and off track by its own means nor by other lifting equipment

3.2.1.2.37

demountable machine

self-propelled railbound machine without running mode that is designed to get on and off track by its own means or by other lifting equipment

Note_1_to_entry_: In the case of demounting by its own means, these are not intended for operating on the ground.

3.2.1.2.48

trailer

non-self-propelled railbound machine without running mode that can be towed on rail wheels and is not intended to operate track signalling and control systems

Note_1_to_entry_: Trailers are not designed to have a running mode.

Note_2_to_entry_: Trailers are hauled by 3.2.1.2.4 railbound machine without running mode (3.1.5), non-demountable machine (3.1.6) or 3.2.1.2.2 or 3.2.3.1 machines.

3.2.3

road-rail machine (3.1.9).

3.2.3.1.9

road-rail machine

self-propelled machine that can move on railway track and ground

Note_1_to_entry_: It is normally a road vehicle adapted for moving on rail also, but can also be a specially designed rail vehicle for moving on the ground also.

Note_2_to_entry_: It does not imply that the machine is suitable for use on the public road.

3.2.3.21.10

road-rail trailer

trailer that can be towed on railway track and ground

3.2.4.1.11

lightweight demountable machine

machine with rail wheels which is designed so that it can be manually placed on or off the track and is either self-propelled or towed along the railway track

3.2.5.1.12

trolley

equipment moved along track on wheels or runners by human force only, which is designed so that it can be manually placed on or off the track; uses include transport of materials, tools and/or various equipment

ISO/DTR 8941:(en)

3.2.61.13

portable machine

machine designed or adapted for use on the track which is propelled by manual effort (i.e., no powered drive system), but has a lifting capability and/or incorporates a power system (e.g. internal combustion, electro-mechanical, hydraulic, pneumatic energy sources or from an external supply) for specific work applications

3.3

associated equipment

a device which, after the putting into service of the Operational machine, is connected to that machine

Note 1 to entry: Specific examples of associated equipment are described in 5.1.7 and 5.1.8, but anything plugged into the host machine is considered to be associated.

3.4

5.63.2 operational modes

3.42.1

running mode

configuration of a machine when it allows movement along the track, all moveable parts stowed within the applicable gauge, with the machine interacting with the signalling and control systems

Note_1_to_entry: — A fuller explanation is given in [4.4.4.4](#).

3.42.2

travelling mode

configuration of a machine when it allows movement along the working track, all moveable parts stowed (but not secured) within the applicable gauge, and when the machine does not require to interact with the signalling and control systems (in this condition, there is no need to ensure operation of signalling systems or for cab-based signalling equipment)

Note_1_to_entry: — A fuller explanation is given in [4.3.4.3](#).

Note_2_to_entry: A machine in travelling mode does not need to meet the operational requirements for the movement of trains on the railway network.

3.42.3

working mode

mode when the machine is used to perform any of its permitted designed working tasks

Note_1_to_entry: — A fuller explanation is given in [4.2.4.2](#).

3.3 General

3.53.1

Infrastructure Manager

infrastructure manager

body or undertaking responsible for establishing and maintaining railway infrastructure, as well as for operating the railway control and safety systems