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Eidgenössisches Departement für Umwelt, Verkehr,
Energie und Kommunikation UVEK

Bundesamt für Verkehr (BAV)
Office fédéral des transports (OFT)
Ufficio federale dei trasporti UFT

Division Infrastruktur
Division Infrastructure
Divisione Infrastruttura

Sonderfälle (SF)
Cas Spécifiques (CS)
Casi Specifiche (CS)
Specific cases (SC)

CH-TSI-INF:
Teilsystem Infrastruktur
Sous-système Infrastructure
Sottosistema Infrastruttura
Infrastructure subsystem

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1 CH-TSI-INF Specific Cases (SC)

1.1 CH-TSI-INF-001 Compatibility of Swiss RailO gauges with international gauges

ID*	CH-TSI-INF-001	**State:**	Switzerland
Title:	Compatibility of Swiss RailO gauges with international gauges		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.3.1. paragraphs (1) and (3) and clause 4.2.3.2. paragraphs (1) and (3) in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 7		
Origin from (follow-up, other)	in place of NNTR TSI INF-001 and TSI INF-003		
Permanent Specific Case:	The compatibility of the Swiss RailO gauges with international gauges according to EN 15273-1:2013+A1:2016 is as follows: - Gauge G1: Unrestricted serviceability - Gauge GA: Restricted serviceability within RailO O1 gauge. The formula to be applied to calculate the kinematic gauge (upper levels) is the same as that of G1, for all height values h. The application for heights h above 3.250 m, as set out in EN 15273-2:2013+A1:2016, Annex B, B.3.3.1, B.3.4.1, B.3.5.1 and B.3.6.1, is not permitted in Switzerland. The transport of standard loads for gauge GA in accordance with UIC leaflet 506, Annex B, Section B.1.1. is permitted within RailO O1 gauge. - Gauge GB: Restricted serviceability within RailO O2 gauge. The formula to be applied to calculate the kinematic gauge (upper levels) is the same as that of G1, for all height values h. The application for heights h above 3.250 m, as set out in EN 15273-2:2013+A1:2016, Annex B , B.3.3.1, B.3.4.1, B.3.5.1 and B.3.6.1, is not permitted in Switzerland. The transport of standard loads for gauge GB in accordance with UIC leaflet 506, Annex B, Section B.1.1 is permitted within RailO O2 gauge. - Gauge GC: Unrestricted serviceability within RailO O4 gauge. The infrastructure gauge (upper levels) for all types of gauges (e.g. RailO O1, RailO O2, RailO O4) is calculated according to EN 15273-3:2013+A1:2016, Annex C, C.2.1, Table C1 (or Annex C, C.2.3, Table C4) depending on the kinematic reference profiles and the associated calculation rules. The application of the formulae according to EN 15273-3:2013+A1:2016, Annex C, Tables C.2 and C.3 (for heights h above 3.250 m) is not permitted in Switzerland. These provisions also have to be taken into account for the definition of the distance between track centres.		

Comments:	This specific case is related to the specific case LOC&PAS-017.

1.2 CH-TSI-INF-002 Doors and steps in the open position

ID*	CH-TSI-INF-002	**State:**	Switzerland
Title:	Doors and steps in the open position		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.3.1. paragraphs (1), (2) and (3) in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 7		
Origin from: (follow-up, other)	in place of NNTR TSI INF-002		
Permanent Specific Case:	In Switzerland the provisions for the implementation of the railways ordinance (IP-RailO), article 47.2, point 7 must be complied with, in addition to the conditions according to EN 15273-2:2013+A1:2016, Annex A, A3.14 "Specific rules for doors and steps in the open position". In accordance to these provisions, the exceedance of the maximum vehicle construction gauge by the value wi, without exceeding 0.035 m, can not be accepted below 0.6m above the rail. However, entrance doors that meet the conditions in UIC leaflet 560, paragraphs 1.1.4 to 1.1.4.3 are permitted.		
Comments:	This specific case is related to the specific case LOC&PAS-028.		

1.3 CH-TSI-INF-007 Small radii (R < 250 m) related acceptance procedure

ID*	CH-TSI-INF-007	**State:**	Switzerland
Title:	Small radii (R < 250 m) related acceptance procedure		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.6.3. in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 13		
Origin from: (follow-up, other)	in place of NNTR **TSI INF-007**		
Permanent Specific Case:	In order to allow using a line with a large number of radii < 250 m (see SBB R I-50127, clause 1.2), an acceptance procedure of running characteristics of railway vehicles for this range of radii is necessary. The specifications for test and assessment are defined in the regulation SBB R I-50127, based on EN 14363:2016+A1:2018. Vehicles that do meet these requirements, are not allowed to run on the defined lines with a large number of very small radii (see SBB R I-50127, clause 1.2).		
Comments:	This specific case is related to the NNTR LOC&PAS-003.		

1.4 CH-TSI-INF-008 Presence of tight deflection curves and switches

ID*	CH-TSI-INF-008	**State:**	Switzerland
Title:	Presence of tight deflection curves and switches		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.6.3. in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 13		
Origin from: (follow-up, other)	in place of NNTR TSI INF-008		
Permanent Specific Case:	The track layout in some station areas in Switzerland is technically difficult to use due to the presence of tight deflection curves (radii down to 160 m) and short intermediate sections of track with correspondingly small distance between track centres. Therefore, an acceptance procedure of assessment of vehicle behaviour in switches and crossings is necessary. EN 14363:2016+A1:2018 does not specify any requirements for the assessment of vehicle behaviour in switches and crossings. The specifications for test and assessment of vehicle behaviour in switches and crossings applicable in Switzerland are defined in the regulation SBB R I-50007. Vehicles that do not meet the requirements of the SBB R I-50007 regulation are not allowed to run in regular service on the Swiss rail network.		
Comments:	This specific case is related to the NNTR LOC&PAS-002.		

1.5 CH-TSI-INF-010 Permissible sum of guiding forces of vehicles per wheelset

ID*	CH-TSI-INF-010	**State:**	Switzerland
Title:	Permissible sum of guiding forces of vehicles per wheelset		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.6.3. paragraphs a) in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 13		
Origin from: (follow-up, other)	in place of NNTR TSI INF-010		
Permanent Specific Case:	The permissible track displacement resistance of the infrastructure limits the maximum permissible sum of guiding forces of vehicles per wheelset. Due to the design of the track superstructure, a coefficient of α = k1 = 0.85 has to be used in Switzerland as a standard value for the calculation of the maximum permissible sum of guiding forces of a tested vehicle. A coefficient of α = k1 = 1.0 can only be applied in exceptional cases and requires special clarifications. Track tests for the running dynamic have to be carried out based on α = k1 = 0.85.		
Comments:	This specific is related to the specific case LOC&PAS-004.		

1.6 CH-TSI-INF-013 Vehicles tests for Swiss cant deficiencies to guarantee safe operation

ID*	CH-TSI-INF-013	**State:**	Switzerland
Title:	Vehicles tests for Swiss cant deficiencies to guarantee safe operation		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.4.3. paragraphs (1) in conjunction with clause 4.1. paragraph (5) and Annex T, N°. 13		
Origin from: (follow-up, other)	in place of NNTR TSI INF-013		
Permanent Specific Case:	The definition of permissible speed on the Swiss rail network bases on cant deficiencies of 130 mm (standard for freight trains) or 150 mm (standard for passenger trains) which apply without further assessment. It is therefore mandatory to test vehicles for such cant deficiencies to guarantee safe operation. Vehicles not tested for these cant deficiency levels are not allowed to run on the Swiss railway network.		
Comments:	This specific case is related to the specific case LOC&PAS-005.		

1.7 CH-TSI-INF-014 Requirements with regard to minimal radius < 150 m

ID*	CH-TSI-INF-014	**State:**	Switzerland
Title:	Requirements with regard to minimal radius < 150 m		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.3.4. paragraph (1)		
Origin from: (follow-up, other)	in place of NNTR TSI INF-014		
Permanent Specific Case:	In Switzerland, the minimum radius, set out in the the regulation SBB R I-50007, for the free use of vehicles applies to: - train tracks: 150 m - shunting tracks: 135 m - connecting tracks: 80 m (free use of shunting locomotives and freight bogie wagons) and 35 m (smallest permitted radius of horizontal curve for certain wagons in extreme case) These radii base on the requirement according to UIC leaflet 645. Vehicles not meeting these requirements must expect restrictions in the usability of shunting and connecting tracks (e.g. very important for automatic coupling systems).		
Comments:	This specific case is related to the specific case LOC&PAS-017.		

1.8 CH-TSI-INF-017 Swiss Disability Equality Act requirements

ID*	CH-TSI-INF-017	**State:**	Switzerland
Title:	Swiss Disability Equality Act requirements		
Office responsible:	Federal Office of Transportation (FOT) Approvals and Rules Section	**Address:**	3003 Berne Switzerland
E-Mail:	_BAV-WeiterentwicklungRegelwerke@bav.admin.ch		
TSI concerned:	TSI INF: Regulation (EU) No 1299/2014, amended by Implementing Regulation (EU) 2019/776		
Referenced TSI clause:	Clause 4.2.4.2. paragraph (2), clause 4.2.9.2. paragraph (1), clause 4.2.9.3., clause 4.2.9.4. paragraph (1)		
Origin from: (follow-up, other)	in place of NNTR TSI INF-017		
Permanent Specific Case:	The specifications for the design of platforms, i.e. height, distance from the track centre line and track layout alongside the platform (minimum radius, maximum cant) are specified in the type approval ZR44TZ2009-02-0004, issued by the Federal office of Transport. Furthermore a platform height of 350 mm above the rail is permissible if a platform height of 550 mm (Standard platform height in Switzerland) cannot be realised along the geometric course of the track or cannot be realised at a reasonable cost (in that case partial platform heights are permissible). Platforms that are built according to the above mentionned type approval do respect the requirements of the lower part of the structure gauge according to clause 4.2.3.1, paragrah (2) of the TSI Infracstructure. There are therefore no restrictions on the passage of interoperable vehicles.		
Comment:	This specific case is related to the NNTR PRM-003.		