

AEbt Angewandte Eisenbahntechnik
(Applied Railway Technology)

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(Applied Railway Technology)

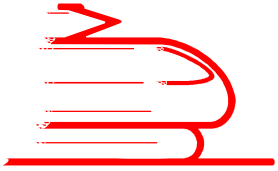
International Requirement List

AEbt Angewandte Eisenbahntechnik GmbH

**Laufertorgraben 4
90489 Nuremberg, Germany**

www.aebt.eu

- ISO 9001 Certified -



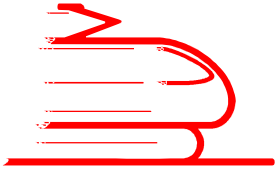
TFI Group and the source from the Safety Specifications

The ministries of the 5 countries

- Austria, Italy, Switzerland, Netherlands and Germany

are represented by the TFI-Group

- BAV (Swiss Federal Office of Transport)
- BMVIT (Austrian Federal Ministry of Transport, Innovation and Technology)
- DB Netz AG network operator
- EBA (German Federal Railway Authority)
- IVW (Dutch Transport and Water Management Inspectorate)
- ÖBB - Infrastruktur Betrieb AG, Operational Standards – certification authority
- RFI - DT - Cesifer (Rete Ferroviaria Italiana S.p.A., Direzione tecnica Certificazione Sicurezza Imprese Ferroviarie, Italian Rail Network)
- SBB CFF FFS (Schweizerische Bundesbahnen)



Project Aims and Objectives

The **I**nternational **R**equirement **L**ist

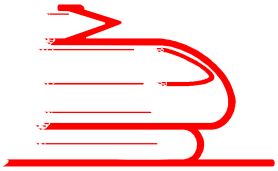
- simplify the national certification process for the safety authorities and the applicants
- reduce the amount of work for all involved organisations
- contains all the requirements from the **n**ational **s**afety **a**uthorities

AEbt's function

- Development of the IRL catalog
- Professional compilation of all national requirements

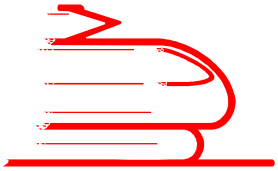
Safety Requirements for the IRL

- No requirements may be omitted (no requirements forget!)
- No requirements may be added
- No requirements may be changed, either in terms of content or context



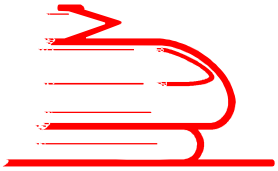
What does IRL Stand For?

International **R**equirement **L**ist

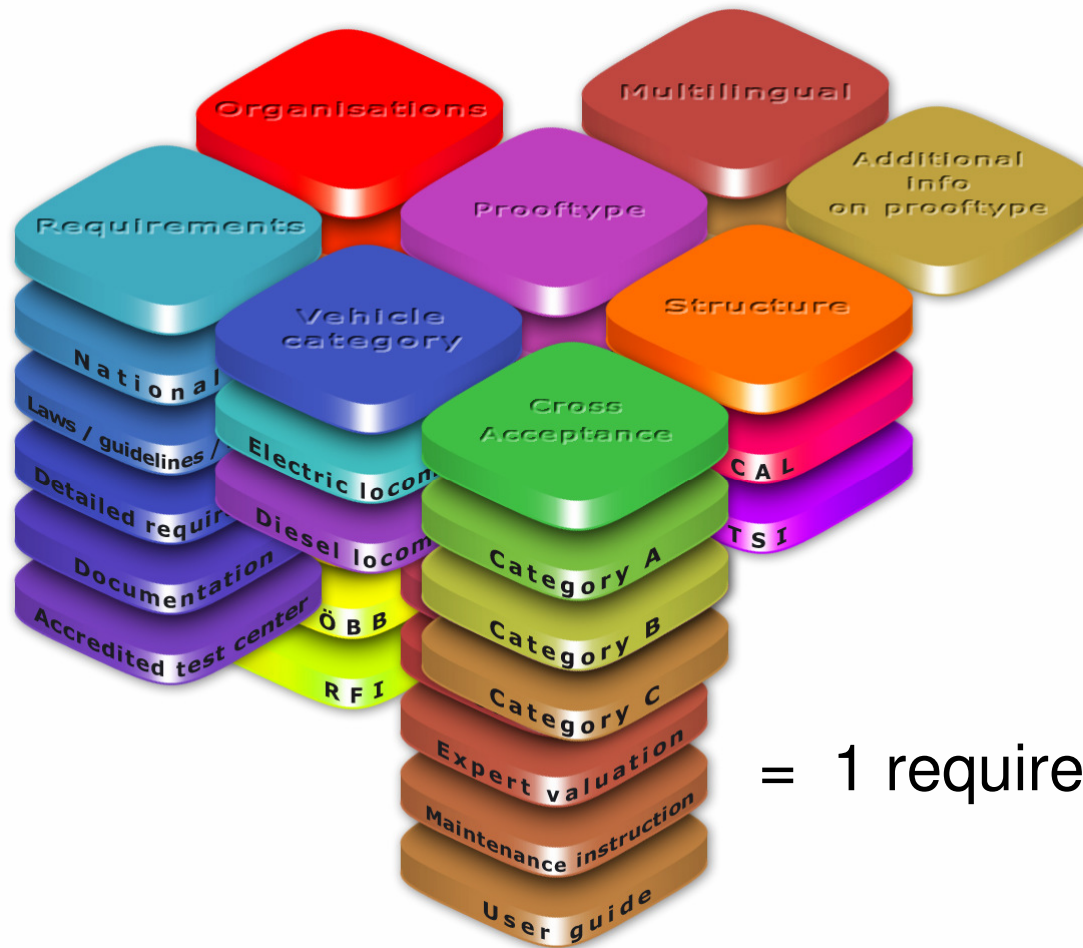


International Requirement List

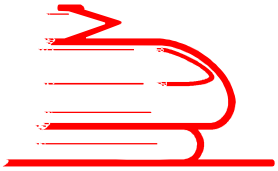




International Requirement List

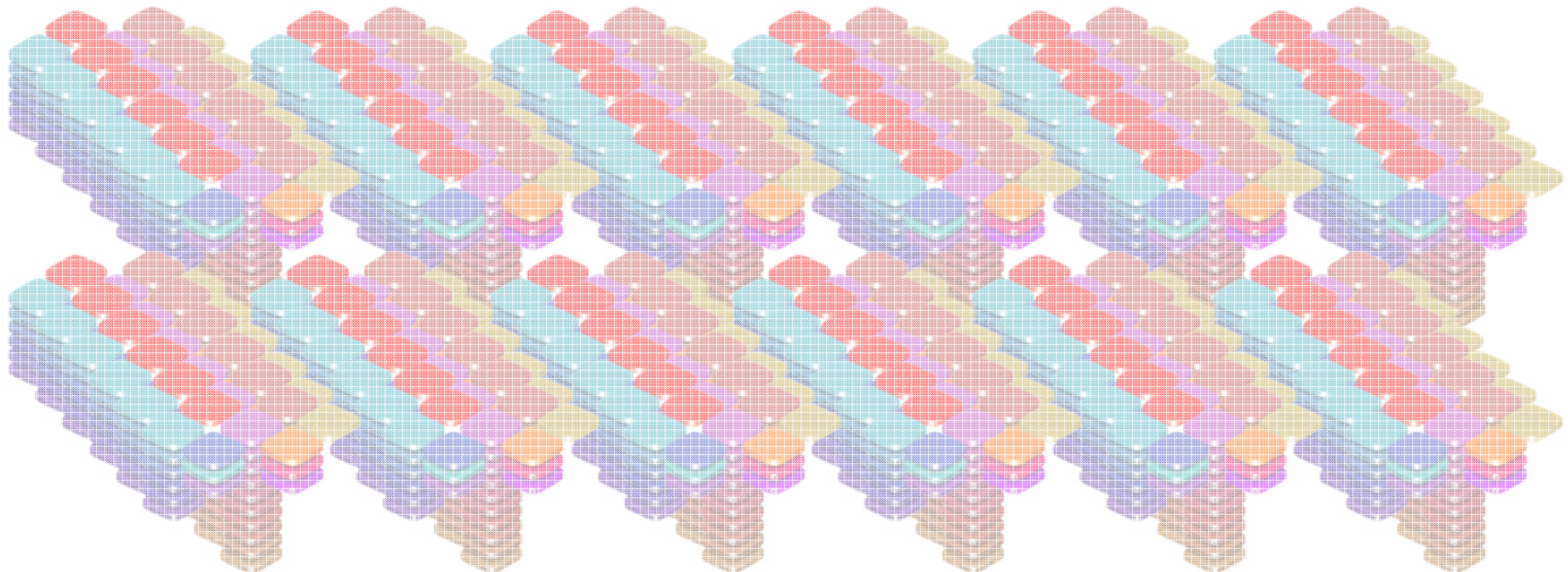


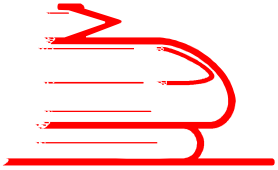
= 1 requirement in the IRL



International Requirement List

But the IRL contains 976 national requirements
with translations 2928 data records



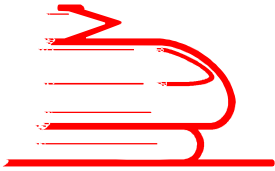


International Requirement List

Practical demonstration:

www.rail-irl.eu

Working since March 2008!



IRL web portal with login

I n t e r n a t i o n a l R e q u i r e m e n t L i s t

Welcome to the IRL portal.

The IRL (international requirement list) is a Task Force Interoperability (TFI) project.

- 🇨🇭 BAV (Bundesamt für Verkehr)
- 🇩🇪 BMVIT (Bundesministerium für Verkehr, Innovation und Technologie)
- 🇩🇪 DB Netz AG, Technischer Netzzugang für Fahrzeuge
- 🇩🇪 EBA (Eisenbahn-Bundesamt)
- 🇳🇱 IVW (Inspectie Verkeer en Waterstaat)
- 🇦🇹 ÖBB - Infrastruktur Betrieb AG, Operational Standards
- 🇮🇹 RFI - DT - Cesifer (Rete Ferroviaria Italiana S.p.A., Direzione tecnica Certificazione Sicurezza Imprese Ferroviarie)
- 🇨🇭 SBB CFF FFS (Schweizerische Bundesbahnen)

The IRL is a jointly agreed requirement list for railway vehicles. The IRL contains all of the requirements of the certification authorities and network operators from Germany, Italy, the Netherlands, Austria and Switzerland.

IRL Webportal Login

Username:

Password:

Use secure connection (SSL)

Language:

🇩🇪 | 🇨🇭 | 🇩🇪 | 🇮🇹 | 🇳🇱 | 🇬🇧

- [Impressum](#)
- [Anmelden - Alle Infos](#)
- [Publications](#)
- [Contact \(Info@rail-IRL.eu\)](#)

Swiss homologation requirements

Italian homologation requirements

German homologation Requirements

Austrian homologation requirements

Dutch homologation requirements

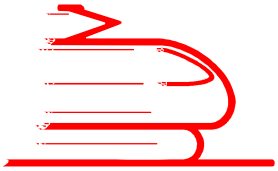
CROSS ACCEPTANCE

Logos for participating organizations: OBB, IVW, RFI, bmvit, Eisenbahn-Bundesamt, Die Bahn DB, Bundesamt für Verkehr, SBB CFF FFS.

Concept, Design & Database Management by AEbt

<http://rail-irl.eu>

3 languages



General information

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

Wichtige Hinweise

Im Rahmen des Zulassungsprozesses gelten in dem jeweiligen Land nach wie vor die nationalen Gesetze!

Die IRL wird regelmäßig aber in kontrollierten Abständen aktualisiert. Es entsteht dadurch eine natürliche Nachlaufzeit bezogen auf Änderungen nationaler Anforderungen. Die IRL Enthält zum 01/03/2008 folgende Inhalte:

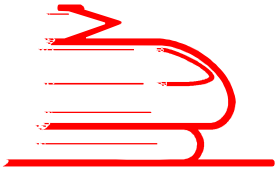
BAV (Bundesamt für Verkehr)

- Verordnung vom 23. November 1983 über Bau und Betrieb der Eisenbahnen (Eisenbahnverordnung, EBV), SR 742.141.1
Stand: 09.12.2003
- Ausführungsbestimmungen zur Eisenbahnverordnung AB-EBV (SR 742.141.11)
Stand: 02.07.2006
- Verordnung vom 5. Dezember 1994 über elektrische Anlagen von Bahnen (VEAB) SR 734.42)
Stand: 05.12.1994
- Ausführungsbestimmungen zur Verordnung über elektrische Anlagen von Bahnen (SR 734.42)
Stand: 31.05.1995

BMVIT (Bundesministerium für Verkehr, Innovation und Technologie)

- Eisenbahnbehördliche Einreichung für elektrische Hochleistungslokomotive
Stand: April 2007
- Eisenbahnbehördliche Einreichung für dieselelektrische / -hydraulische Lokomotive

detailed
informations
about the
content of
the IRL



Railcars categories

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

Vehicle category
no selection

Catalogstructure

Structure

Version / Stand
27/08/2008, 09:39
[More Informations](#)
[Hide]

Schnelleinstieg:

1. Fahrzeugart auswählen

2. Struktur auswählen

3. Thema auswählen

Unter "Struktur" wählen sie, nach welcher Struktur sie den Katalog Gegenwärtig kann der Katalog nach der "CAL" und nach der "TSI RST" werden.
CAL (CrossAcceptanceList): eine abgestimmte Liste der TFI Mitglie
TSI HS RST: Themen- und Kapitelstruktur der TSI HS RST - Versio
Die Struktur erscheint erst nach Schritt 2.

Vehicle category

Electric locomotive

no selection

Electric locomotive

Diesel locomotive

Catalogstructure

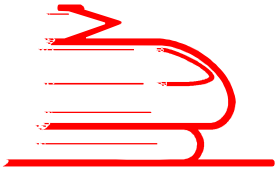
CAL

no selection

CAL

TSI HS RST

Expand Collapse



Requirements

International Requirement List
CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Webportal draft version
Welcome

Requirement Catalog
Search
List of standards
History
Members of TFI

Vehicle category

Diesel locomotive

Catalogstructure

CAL

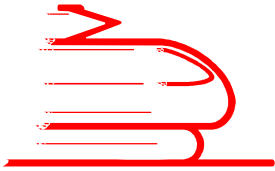
Structure

Expand Collapse

- CAL
- 00 General information
- 01 Vehicle dynamics
- 02 Vehicle superstructure
- 03 Draw and buffer gear
- 04 Bogie and running gear
- 05 Wheel set / wheel set bear
- 06 Brake equipment
- 07 Technical systems requiring
- 08 Pantographs
- 09 Front / side windows
- 10 Doors
- 12 On board energy / EMC
- 13 Command control

Subject: Connecting structures between bogies and the vehicle body				
Identnumber: 4.2	EBA	BMVIT	BAV	RFI
National Id	04/4.2.3	A/1.12, A/1.16, A/1.3, A/1.36, A/1.4, A/3.1	EBV Art. 48 Abs.2	30-07/1.12
Law, guidelines, standards	EN 12663, UIC 615-1	EN 12663, EN 15227, UIC 515, UIC 615-1	EN 12663, UIC 515, EN 15227, UIC 615-1	
Detailed requirement	Connecting structure between the bogies and the carriage bodies. FEM calculation incl. component testing to prove that the material's physical limits are not exceeded.	Wheel (drive side and non-drive side) Bogie/locomotive body (e.g. tie rod/plunger) Calculation of the locomotive body suspension Drive torque resistance Torque resistance of the power transmission	EBV Clause 48 Para. 2 – Design principles 2. The vehicle must be suspended on their axles. Under no permissible load conditions may the weight distribution over the axles pose a risk of derailment. Implementation regulations for the Railway Ordinance EBV art. 48 Para. 2/AB EBV 48.2 ... Detailed requirement	Bogies and materials used The following requirements apply to r stock put into service before these instructions were issued as the "test r contained in Annex 3 are not availabl a) The operating condition must be k b) There must not have been any ac due to the dynamic behaviour of the stock in the past; c) The rolling stock must have a docu Detailed
Prooftype				
Application				
Technical description	X	X		X
Certificate of conformity				X
Drawing / parts list		X	A	X
Test report	X	X	X	X
Calculation	X	X	A	X
Maintenance instruction				X
Notification of homologation				
Expert opinion		X	A	A
Data sheet				
Safety case				
User guide				
Proof			X	
Validation			X	
Cross Acceptance				
A	IVW, RFI, BAV, BMVIT	IVW, RFI, BAV, EBA	IVW, RFI, BMVIT, EBA	IVW, BAV, BMVIT, EBA
B				
C				

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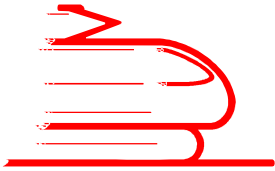
Requirements

Subject: Connecting structures between bogies and the vehicle body		
Identnumber: 4.2	EBA	BMVIT
National Id	04/4.2.3	A/1.12, A/1.16, A/1.3, A/1.36, A/1.4, A/3.1
Law, guidelines, standards	EN 12663, UIC 615-1	EN 12663, EN 15227, UIC 515, UIC 615-1
Detailed requirement	Connecting structure between the bogies and the carriage bodies. FEM calculation incl. component testing to prove that the material's physical limits are not exceeded.	<div style="border: 1px solid black; padding: 2px;"> Wheel (drive side and non-drive side) </div> <div style="border: 1px solid black; padding: 2px;"> Bogie/locomotive body (e.g. tie rod/plunger) </div> <div style="border: 1px solid black; padding: 2px;"> Calculation of the locomotive body suspension </div> <div style="border: 1px solid black; padding: 2px;"> Drive torque resistance </div> <div style="border: 1px solid black; padding: 2px;"> Torque resistance of the power transmission </div>
Accredited laboratory		
Investigating Authority		
Prooftype		
Application		
Technical description	X	X
Certificate of conformity		
Drawing / parts list		X
Test report	X	X
Calculation	X	X
Maintenance instruction		
Notification of homologation		
Expert opinion		X
Data sheet		
Safety case		
User guide		
Proof		
Validation		
Cross Acceptance		
	EBA	BMVIT
A	IVW, RFI, BAV, BMVIT	IVW, RFI, BAV, EBA
B		
C		

Detailed requirement
Implementation of requirements
Legislation, guidelines, standards

Documents with information that must be submitted to the organisation

Cross Acceptance concerning the mutual acceptance for the homologation process



Choose of the different organizations

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

Vehicle category: Diesel locomotive

Catalogstructure: CAL

Structure: Expand Collapse

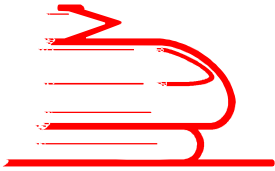
Number of forms/page: 10 Subitems: (1 - 6 of 6) 0.1 Complete vehicle

Homologation / network access authority: EBA BAV ÖBB IVW DB-Netz DB Netz RFI SBB BMVIT

More information

Subject: Complete vehicle general		
Identnumber: 0.1.1	ÖBB	RFI
National Id	2, 29	30-07, 62-06, RFI TCCS PR OR 01 001 A
Law, guidelines, standards	EisbG 1957, prEN 15528, UIC 700	Disposizione 30/2007, Disposizione 62/2006
Detailed requirement	no translation available	no translation available
Accredited laboratory		
Investigating Authority		
Prooftype Display additional information about the prooftype in line <input type="checkbox"/>		
Application		X
Technical description		
Certificate of conformity	X	A
Drawing / parts list	X	A

The output of the requirement catalogue can also be filtered



Export from requirements into a file

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI **Export Settings**

Vehicle category: Diesel locomotive

Catalogstructure: CAL

Structure: Expand Collapse

Number of forms/page: 10 Subitems: (1 - 6 of 6) 0.1 Complete vehicle

Homologation / network access authority: EBA BAV ÖBB IVW DB-Netz DB Netz RFI SBB BMVIT Filter

More information

Subject: Complete vehicle general

Identnumber: 0.1.1	ÖBB	
National Id	2, 29	30-07, 62-
Law, guidelines, standards	EisbG 1957, prEN 15528, UIC 700	Dispositor
Detailed requirement	no translation available	no translat
Accredited laboratory		
Investigating Authority		
Prooftype	Display additional information about the prooftype in line <input type="checkbox"/>	
Application		X
Technical description		
Certificate of conformity	X	A
Drawing / parts list	X	A

Documenttype: Adobe PDF

Exportvolume: **Exportvolume** (indicated by a red arrow)

Current view incl. certification / network access authority filter

Selection in directory tree with certification / network access authority filter

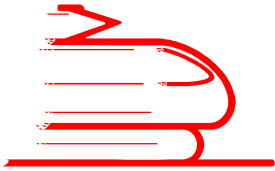
Selection in the structure

Complete catalog

Start Export

[Hide]

The requirement catalogue can be exported as a PDF file



Search function

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

Searchfunktion

Search by keyword

This function will search in the requirements description and title.

Bogies and materials

Suchen

Search by properties

Application Calculation Maintenance instruction
 Technical description Proof Expert opinion
 Certificate of conformity User guide Notification of homologation
 Drawing / parts list Safety case Validation
 Test report Data sheet

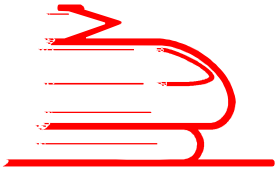
alle Abwählen alle Auswählen

Search

Search based on
keyword

Search based on
characteristics

(like show me all
requirements from
RFI we need a report
from an accessor)



List of Standards

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

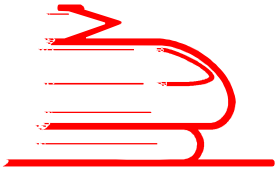
List of Standards

This list contains all of the standards, guidelines, regulations and laws contained in the IRL. This list also states the current revision level valid for the whole IRL. If any of the requirements in the list requires a different revision level/version, this is stated explicitly.

Standards	Titel, Document	Status	Date	Version	Note	Category
UIC 438-1	Identification marking for passenger rolling stock	3	2004-04			UIC Guideline
UIC 505	UIC Guideline					UIC Guideline
UIC 505-1	Railway transport stock - Rolling stock construction gauge	10	2006-05			UIC Guideline
UIC 505-4	Effects of the application of the kinematic gauges defined in the 505 series of leaflets on the positioning of structures in relation to the tracks and of the tracks in relation to each other	3	1977-01			UIC Guideline
UIC 505-5	Basic conditions common to Leaflets 505-1 and 505-4 - Notes on the preparation and provisions of these leaflets	2	1977-01			UIC Guideline
UIC 506	Rules governing application of the enlarged GA, GB and GC gauges	1	1987-01			UIC Guideline
UIC 507	Wagons - Conditions governing wagons conveyed on ferries	1	1997-07			UIC Guideline
UIC 510-2	Trailing stock: wheels and wheelsets. Conditions concerning the use of wheels of various diameters	4	2002-10			UIC Guideline
UIC 510-3	Wagons - Strength testing of 2 and 3-axle bogies on test rig		1989-01			UIC Guideline

contains standards, guidelines, regulations and laws contained in the IRL

This list also states the current revision level valid for the whole IRL



Addresses from the Organizations

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

EBA Eisenbahn-Bundesamt
Vorgebirgsstraße 49
D - 53119 Bonn

Telefon: +49 (0) 2 28 - 98 26 - 0
Telefax: +49 (0) 2 28 - 98 26 - 1 19

<http://www.eba.bund.de/zentrale/abt3.htm>

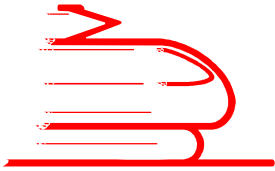
Email: Ref31@eba.bund.de

BMVIT Bundesministerium für Verkehr, Innovation und
Technologie
Sektion IV/SCH 4
Radetzkystraße 2
1030 Wien

Tel: +43 (0) 1 711 62 65 25 00

<http://www.bmvit.gv.at/mvit.gv.at/verkehr/i>

Email: karl.hartig@bmvit.gv.at
Email: karl.endlicher@bmvit.gv.at
Email: michael.koestinger@bmvit.gv.at
Email: reinhard.kuntner@bmvit.gv.at



Control Center

International Requirement List
Webportal draft version

CONTACT IMPRESSUM HELP MEINE DATEN LOGOUT

Welcome

Requirement Catalog Search List of standards History Members of TFI

Einstellungen & Optionen

Einstellungen

[Accountdaten anzeigen](#)

[Kennwort ändern](#)

Nachrichten

[Gesendet](#)

[Nachricht erstellen](#)

Contact to IRL Support

Für weiterführende Informationen oder Anfragen allgemeiner Art können Sie dieses Kontaktformular nutzen. Wenn Sie Fragen rund um den Internetauftritt haben sollten oder falls technische Probleme aufgetreten sind, finden Sie unsere Webmaster ebenfalls über dieses Formular.

Nach dem Versenden des Formulars erhalten Sie eine Bearbeitungsnummer. Für weitere Nachfragen bitten wir Sie diese anzugeben.

Selbstverständlich können Sie uns auch auf dem postalischen Wege erreichen.

Author:

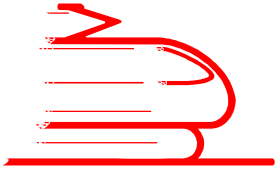
Email:

Subject:

Message:

Contact the
IRL Support
Team or the
TFI Group

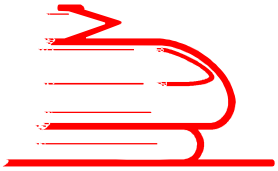
Change user
details &
password



International Requirement List

IRL Database:

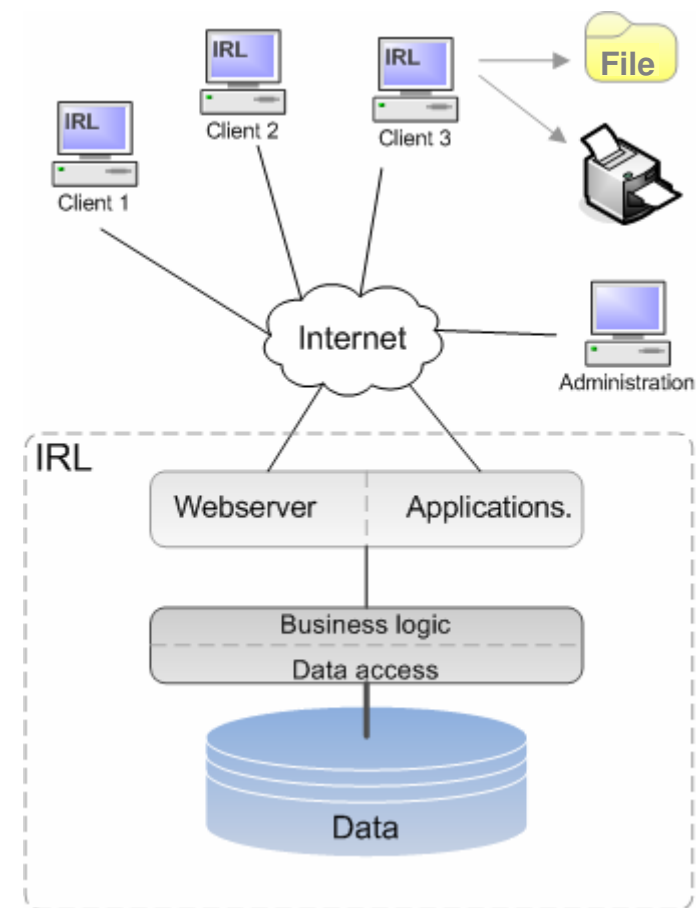
Practical demonstration

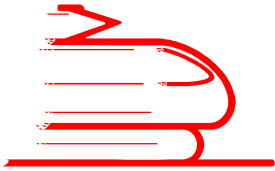


Design of the IRL

How was the IRL created?

- The IRL is based on a database
- The administration and maintenance will be done using a content management system (CMS)
- Access to the IRL is provided via a web portal





IRL Administration

IRL Administration 2.0.2768.25641 - [TabPagePluginViewer]

File Manage Window Help

Homologationorganisation Manager Language Manager Newsmanager Proofotype Manager StructuresManager RequirementCatalogManager User Manager Vehicletype Manager

Order by TreeView Order by ListView

VehicleTypes
Elektrolokomotive

Structures
CAL E-LOK

Structure

- [-] CAL
 - [-] 00 Allgemein
 - [-] 0.1 Komplettes Fahrzeug
 - 0.1.2 Nachweis Qualitätsmanag...
 - 0.1.3 Konformitätserklärungen
 - 0.1.4 Ausgewählte Unterlagen
 - 0.1.5 Technische Unterlagen
 - [-] 0.2 Prüfungen und Messungen
 - 0.2.1 Funktionsmaße (Drehgeste...
 - 0.2.2 Radaufstandskraft
 - 0.2.3 Messungen
 - 0.2.4 Probefahrten (Funktionspri...
 - [-] 01 Fahrtechnik
 - [-] 1.1 Einhaltung der Anforderung bezi...
 - 1.6 Verhalten bei Seitenwind
 - [-] 02 Fahrzeugaufbau
 - 2.1 Fahrzeugaufbau allgemein
 - 2.2 Hinreichende Beanspruchbarkei...
 - 2.3 Hinreichende Beanspruchbarkei...
 - 2.4 Verbindungen zwischen Fahrzeu...
 - [-] 03 Zug- und Stoßeinrichtungen
 - 3.1 Stoßeinrichtung
 - 3.9 Zugeinrichtung
 - 3.12 Zughaken
 - 3.13 Schraubenkupplung
 - [-] 04 Drehgestell und Fahrwerk
 - 4.1 Verbindung Wagenkasten, Rad...

Requirements

RefId	RequId	Organisation	NationalId	Description	Standards	VehicleTy
36	14	EBA	01/1.1.1	Einhaltung der A...	EN 14363 UIC 5...	E-LOK, D-
36	15	EBA	01/1.2.1	Sicheres Befahre...	EN 14363 ORE ...	E-LOK, D-
36	17	EBA	01/1.5.1	Wagenkastenste...	EN 14363 UIC 5...	E-LOK, D-
36	229	BMVIT	A/3.3	Lauftechnische ...	EN 14363 UIC 5...	E-LOK
36	230	BMVIT	A/1.30	Rechnerischer N...	ORE B 55 Rp 8	E-LOK
36	231	BMVIT	A/1.31	Lauftechnische ...		E-LOK
36	232	BMVIT	A/3.2	Ausdrehversuche...		E-LOK
36	328	DB Netz	810.0203	Technischer Net...		E-LOK, D-
36	329	DB Netz	810.0212	Technischer Net...		E-LOK, D-
36	366	ÖBB	12	Lauftechnische E...	UIC 518	E-LOK, D-
36	371	ÖBB	11	Fahrtechnische A...	UIC 518 UIC 700	E-LOK, D-
36	411	BAV	EBV Art.48 Abs.2	EBV Art.48 Abs.2...		E-LOK, D-
36	486	RFI	1.3	Kurvenlance und	ORF R55/RPR	E-LOK, D-

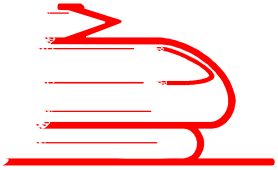
to existing requirement

Translations

RequirementId	NationalOrganisatic	Comment	RequirementShort	Language	HomologationOrgar
14	01/1.1.1		Einhaltung der A...	Deutsch	EBA
14	01/1.1.1		Compliance with r...	Englisch	EBA
14	01/1.1.1		Rispetto del requ...	Italienisch	EBA

Rispetto del requisito relativo a:
- Sicurezza di marcia
- Sollecitazione della linea
- Qualità di marcia

→ Start Administration Tool presentation



More Features of the IRL Web Portal

List of Standards

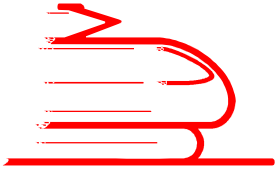
- Parallel to the requirement catalogue there is a list of all standards, guidelines and laws referenced in the IRL

Export

- Export of the requirement list in PDF or Word format
- Export of the current view (with all selected filters) or of the complete catalogue

Filters

- By organisation
- By vehicle type



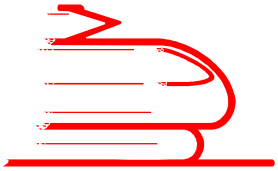
More Features of the IRL Web Portal

Search

- Full-text search for terms contained in the requirements
- By standards and guidelines
- By property

Localisation

- All of the data in the IRL can be used in any of the available languages
- Only the relevant parts of the requirements need to be translated,
i.e. the field standards do not need to be translated
- If a translation is not complete, the contents can still be displayed.
These parts of the form are then marked as 'not translated'



Looking to the Future

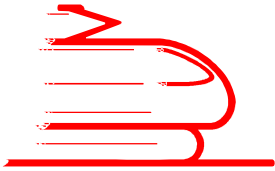
Addition of new organisations, e.g. additional countries
additional requirements

The diagram illustrates the addition of a new organization, 'Org X', to an existing system. An arrow points from 'Org X' towards 'Org 1', indicating that 'Org X' is being integrated into the system. 'Org 1' is a detailed form with the following sections:

- Subject: Other parts
- Identnumber 9.0
- National Id
- Law, guidelines, standards
- Detailed requirement
- Accredited laboratory
- Investigating Authority
- Proof type
- Application
- Technical description
- Certificate of conformity
- Drawing / bill of materials
- Test report
- Calculation
- Maintenance instruction
- Notification of homologation
- Expert opinion
- Data sheet
- Safety case
- User guide
- Proof
- Validation

'Org X' is a simpler form with the following fields:

- Identnumber 9.0
- National Id
- Law, guidelines, standards
- Detailed requirement
- Accredited laboratory
- Investigating Authority
- Proof type
- Application
- Technical description
- Certificate of conformity
- Drawing / bill of materials
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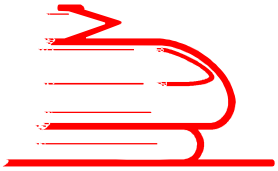


Looking to the Future

Addition of new properties or new types of certifications for a requirement

The image shows a 3D-rendered technical specification form, tilted at an angle. The form is divided into several sections. The top section contains fields for 'Subject: Other planes', 'Edennummer: 9.3', 'National Id', 'Law, guidelines, standards', and 'Detailed requirement'. Below this is a section for 'Accredited laboratory' and 'Investigating Authority'. The bottom section is a table with columns for 'Property type' and 'Certification type'. A callout box labeled 'new property' with an arrow points to a new row in the table.

Property type	Certification type
Application	X
Technical description	X
Certificate of conformity	X
Drawing / bill of materials	X
Test report	
Calculation	
Maintenance instruction	
new property	
Data sheet	
Safety case	
User guide	
Proof	
Validation	

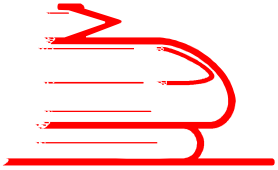


Looking to the Future

Addition of new vehicle types or categories

	Org 1	Org 2
Subject: Other panes		
Identifiers 9.3	09/2.6.1, 09/2.6.2, 09/2.6.3, 09/2.6.4 DIN 5544, UIC 560, UIC 544-1, UIC 491	A/2.34 UIC 560, UIC 491, UIC 460
Law, guidelines, standards		
Detailed requirement	<input checked="" type="checkbox"/> Elec. L. <input checked="" type="checkbox"/> Diesel L. <input type="checkbox"/> Trainset <input type="checkbox"/> ...	<input type="checkbox"/> Elec. L. <input checked="" type="checkbox"/> Diesel L. <input checked="" type="checkbox"/> Trainset <input type="checkbox"/> ...
Accredited laboratory		
Investigating Authority		
Prooftype		
Application	X	X
Technical description	X	X
Certificate of conformity		
Drawing / bill of materials		
Test report		
Calculation		
Maintenance instruction		
Notification of homologation		
Expert opinion		
Data sheet		
Safety case		
User guide		
Proof		
Validation		

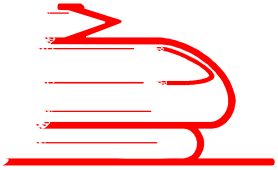
- When adding new vehicle types the existing requirements can be transferred to the new category



The IRL as a Web Portal

Features of the IRL

- All national requirements are **instantly accessible**
- **New requirements** can be added easily
- **New vehicle types or categories** can be added quickly and easily
- **New structures**, e.g. new TSI structures, can be added easily
- The **verification** process is quick and secure
- The **language** is selectable
- The **search function** allows you to find technical details
- The information is accessible from **anywhere**
- Requirements of the national authorities for **vehicle design changes** are accessible systematically
- Add on **TSI requirements**.



AEbt Angewandte Eisenbahntechnik
(Applied Railway Technology)

Thank you for your attention

AEbt Angewandte Eisenbahntechnik GmbH
Nuremberg, Kassel, Fischamend, Olten

Norbert Schäfer independent safety assessor for rail vehicles
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- Functional Test

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