

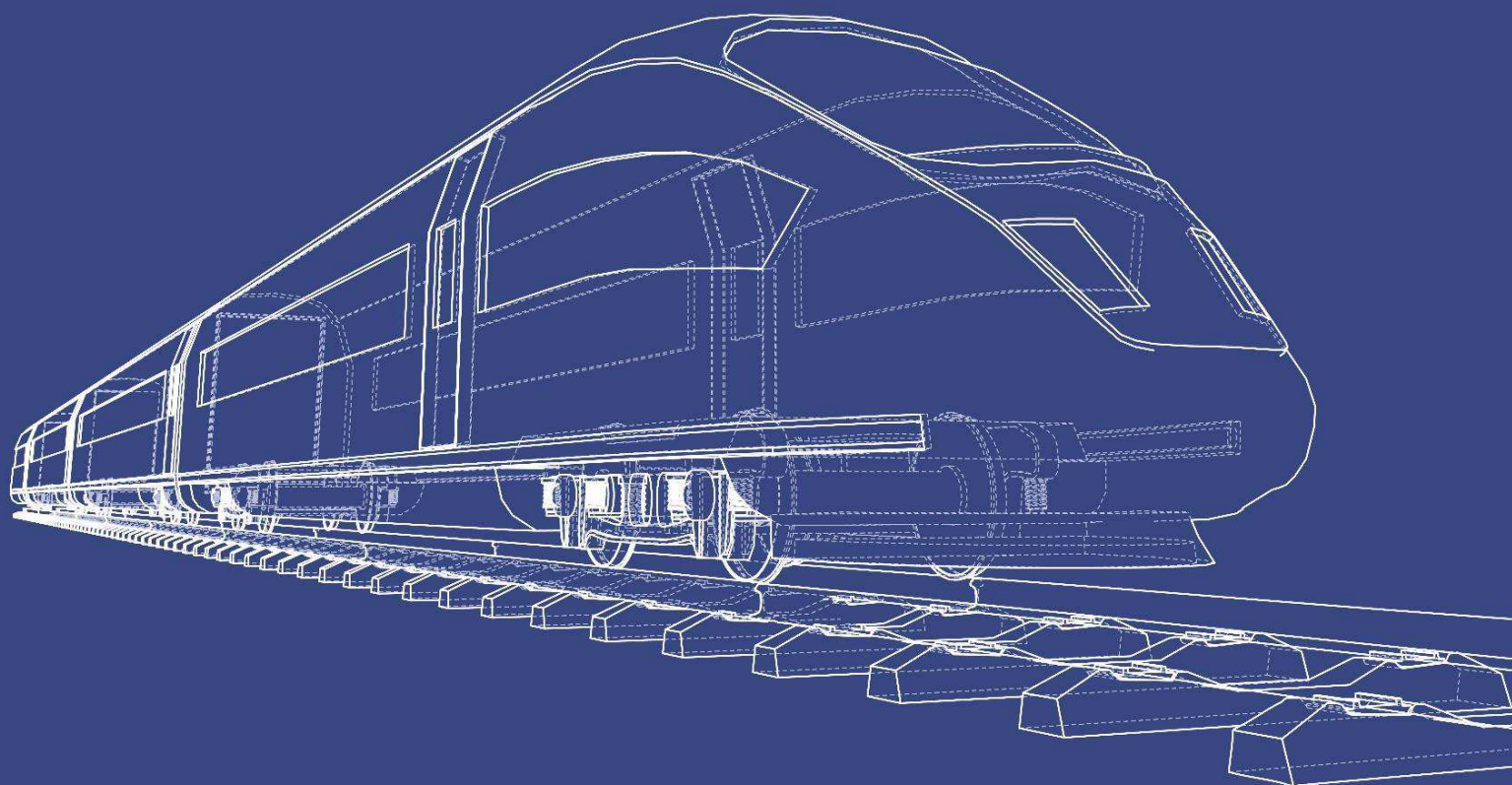
AS 7501:2019



Rolling stock compliance certification



Rolling Stock Standard



This Australian Standard® AS 7501 Rolling stock compliance certification was prepared by a Rail Industry Safety and Standards Board (RISSB) Development Group consisting of representatives from the following organisations:

Metro Trains Melbourne	Rio Tinto	ARTC
Queensland Rail	Monash University	SNC-Lavalin
Bombardier	Select Plant Hire	PTA WA
Central Queensland University	Downer Group	Specialised Force
TfNSW		

The Standard was approved by the Development Group and the Rollingstock Standing Committee in November, 2019. On December 02, 2019 the RISSB Board approved the Standard for release.

This standard was issued for public consultation and was independently validated before being approved.

Development of the Standard was undertaken in accordance with RISSB's accredited process. As part of the approval process, the Standing Committee verified that proper process was followed in developing the Standard

RISSB wishes to acknowledge the positive contribution of subject matter experts in the development of this Standard. Their efforts ranged from membership of the Development Group through to individuals providing comment on a draft of the Standard during the open review.

I commend this Standard to the Australasian rail industry as it represents industry good practice and has been developed through a rigorous process.



Deborah Spring
Exec. Chair / CEO
Rail Industry Safety and Standards Board

Keeping Standards up-to-date

Australian Standards developed by RISSB are living documents that reflect progress in science, technology and systems. To maintain their currency, Australian Standards developed by RISSB are periodically reviewed, and new editions published when required. Between editions, amendments may be issued. Australian Standards developed by RISSB could also be withdrawn.

It is important that readers assure themselves they are using a current Australian Standard developed by RISSB, which should include any amendments that have been issued since the Standard was published. Information about Australian Standards developed by RISSB, including amendments, can be found by visiting www.rissb.com.au.

RISSB welcomes suggestions for improvements and asks readers to notify us immediately of any apparent inaccuracies or ambiguities. Members are encouraged to use the change request feature of the RISSB website at: <http://www.rissb.com.au/products/>. Otherwise, please contact us via email at info@rissb.com.au or write to Rail Industry Safety and Standards Board, PO Box 518 Spring Hill Qld 4004, Australia.

Notice to users

This RISSB product has been developed using input from rail experts from across the rail industry and represents good practice for the industry. The reliance upon or manner of use of this RISSB product is the sole responsibility of the user who is to assess whether it meets their organisation's operational environment and risk profile.

AS 7501:2019

Rolling stock compliance certification

Document details

First published as: AS 7501:2013

ISBN 978-1-76072-645-4

Document history

Publication Version	Effective Date	Reason for and Extent of Change(s)
2019	December 02, 2019	Edition 2019 first published
2013		Superseded

Approval

Name	Date
Rail Industry Safety and Standards Board	2/12/2019

Copyright

© RISSB

All rights are reserved. No part of this work can be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of RISSB, unless otherwise permitted under the Copyright Act 1968.

Published by SAI Global Limited under licence from the Rail Industry Safety and Standards Board, PO Box 518 Spring Hill Qld 4004, Australia

This Standard was prepared by the Rail Industry Safety and Standards Board (RISSB) Development Group AS 7501 Rolling stock compliance certification. Membership of this Development Group consisted of representatives from the organisations listed on the inside cover of this document.

Objective

The objective of this Standard is to provide a standard method for certifying rolling stock compliance to the issued RISSB Rolling Stock series of Australian Standard® brand standards and referenced standards.

The certification documentation is intended for use facilitating network registration of rolling stock.

While this standard was developed for RISSB Rolling Stock Standard compliance, the process is suitable for use in obtaining compliance with any Standard.

This standard has several notable changes from AS 7501:2013. Changes include but are not limited to revised responsibilities and definitions applicable to rolling stock operators, owners and independent competent persons. Changes to the overall certification process have been implemented and additional example parameters added to the data register.

Compliance

There are two types of control contained within Australian Standards developed by RISSB:

1. Requirements.
2. Recommendations.

Requirements – it is mandatory to follow all requirements to claim full compliance with the Standard. Requirements are identified within the text by the term 'shall'.

Recommendations – do not mention or exclude other possibilities but do offer the one that is preferred. Recommendations are identified within the text by the term 'should'.

Recommendations recognise that there could be limitations to the universal application of the control, i.e. the identified control is not able to be applied or other controls are more appropriate.

For compliance purposes, where a recommended control is not applied as written in the standard it could be incumbent on the adopter of the standard to demonstrate their actual method of controlling the risk as part of their WHS or Rail Safety National Law obligations. Similarly, it could also be incumbent on an adopter of the standard to demonstrate their method of controlling the risk to contracting entities, or interfacing organisations where the risk may be shared.

Controls in RISSB standards address known railway hazards that are addressed in an appendix.

Contents

1	Scope and general	6
1.1	Scope	6
1.2	Normative references.....	6
1.3	Terms and definitions.....	6
1.4	Abbreviations	9
2	General	10
3	Certification documentation prerequisites	11
3.1	General.....	11
3.2	Certification documentation mandatory requirements	11
3.3	Certification of modified, same class or existing class rolling stock	12
4	Independent competent person	13
4.1	General.....	13
4.2	ICP mandatory requirements	14
4.3	ICP recommendations	14
5	Design compliance certificate	14
5.1	General.....	14
5.2	Design compliance certificate mandatory requirements	15
6	Data register.....	16
6.1	General.....	16
6.2	Data register mandatory requirements	16
7	Standards compliance register	16
7.1	General.....	16
7.2	Standards compliance register mandatory requirements	17
8	Construction conformance certificate.....	17
8.1	General.....	17
8.2	Manufacturer's representative mandatory requirements	18
8.3	Manufacturer's representative recommendations.....	18
8.4	Verification checklist	18
8.5	Construction conformance certificate mandatory requirements.....	19
8.6	Vehicle construction non-conformance	20
9	Rolling stock class type test compliance certificate.....	21
9.1	General.....	21
9.2	Rolling stock class type test compliance certificate mandatory requirements	21
10	Derogation process	22
10.1	General.....	22
10.2	Derogation risk assessment scope	22
10.3	Derogation risk assessment mandatory requirements.....	22
11	Acceptance for on-track testing certificate	23
11.1	General.....	23

11.2	Issuing an acceptance for on-track testing certificate	23
11.3	Inclusion of conditions, restrictions and imposed requirements	23
11.4	Acceptance for on-track testing certificate mandatory requirements	24
12	Certificate of standards compliance	25
12.1	General	25
12.2	Certificate of standards compliance mandatory requirements	25
13	Hauled movement of vehicles on a rail network	26

Appendix Contents

Appendix A	Certification process flowcharts	27
A.1	Certification process entities	27
A.2	Overall certification process	28
A.3	Example design compliance certificate process	29
A.4	Example construction conformance certification process	31
A.5	Example acceptance for on-track testing certificate process	33
Appendix B	Example Data register	34
Appendix C	Example standards compliance register	47
Appendix D	Guidance on structure testing	48
D.1	Introduction	48
D.2	Typical static tests	48
D.3	Typical Dynamic Tests	48
D.4	Sequencing of tests	49
D.4.1	General	49
D.4.2	Static tests	49
D.4.3	Loco hauled movement of the vehicle network	49
D.4.4	Dynamic tests	50
D.4.5	Monitoring tests	50
Appendix E	Vehicle mass system guidance note	52
Appendix F	Hazard references	54
Appendix G	Bibliography	55

1 Scope and general

1.1 Scope

This document applies to new rolling stock, modified rolling stock and existing rolling stock being proposed for operation on a Network on which the class of rolling stock has not previously operated.

This document applies to existing rolling stock that is to be / has been modified and has previously operated on the network.

The document covers the design, construction and testing of rolling stock. Certification of individual units of rolling stock or those which are coupled to operate is included, but not of trains.

Operation of rolling stock in regard to network safe working rules and route standards is not covered. Rolling stock used on light rail, cane railway and monorail networks are not covered.

The scope of AS 7501 ends with the issuing of certification documentation and does not cover network registration which is managed by the RIMs.

1.2 Normative references

The following referenced documents are indispensable for the application of this Standard:

- AS/NZS ISO 31000 Risk management – Principles and guidelines.
- AS 7509 - Dynamic behaviour.

1.3 Terms and definitions

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

- (a) **AW0**
load condition of a vehicle carrying no passengers in a serviceable condition. Also referred to as tare mass.
- (b) **AW1**
AW0 plus load (or simulated load) of crew and seated passengers only.
- (c) **AW2**
AW0 plus load (or simulated load) of crew and includes a combination of both seated and standing passengers.
- (d) **AW3**
AW0 plus load (or simulated load) of crew and the maximum possible number of passengers both seated and standing. Also referred to as crush load.
- (e) ***acceptance for on-track testing certificate***
the type certificate issued by the independent competent person following an assessment process on the rolling stock, and on which limitations applying to on-track testing are recorded. For more details refer to Section 11.
- (f) ***certificate of standards compliance***
the overarching certificate confirming that a unit of rolling stock has been designed, constructed and tested in accordance with the referenced standards.

- (g) **certification**
the process of certifying the compliance of the design and construction of rolling stock against the referenced standards. Certification culminates with the issuing of the certificate of standards compliance supported by the design compliance certificate, construction conformance certificate and the acceptance for on-track testing certificate.
- (h) **class**
a class of rolling stock is a group of vehicles built to the same design.
- (i) **competent person**
a person who carries out verification and has suitable or sufficient skill, knowledge, experience and qualifications as determined by their organization.
- (j) **construction**
the processes of fabrication, manufacture, and assembly (includes installing components, connecting sub-systems), and the required quality control activities that generate construction records.
- (k) **construction conformance certificate**
the routine document issued for each unit following a verification process on rolling stock, and on which compliance of the vehicle(s) to the certified design is recorded.
- (l) **data register**
the list of key characteristics of a particular (class of) rolling stock as listed in the AS 7500 series of Australian Standards. See Appendix B.
- (m) **design (verb)**
a process to define the architecture, system elements, interfaces and other characteristics of a system or system element (ISO 15288:2015).
- (n) **design (noun)**
result of the process of design (ISO 15288:2015).
- (o) **derogation risk assessment**
a document used to assess and mitigate the risks arising as a result of non-compliance with mandatory requirements.
- (p) **design compliance certificate**
the certificate issued by a competent person following an assessment process on rolling stock, and on which compliance of the design to the referenced standards, and/or conditions relating to certification, are recorded.
- (q) **existing rolling stock**
rolling stock which is approved and/or registered to operate on the network concerned prior to the implementation of this standard.
- (r) **independent competent person (ICP)**
a person accepted by the RSO and the RIM as having practical and theoretical knowledge and experience in specified areas to critically and capably examine, determine and record compliance of new or modified rolling stock against the referenced standards.
- (s) **manufacturer**
the manufacturer of rolling stock or rolling stock equipment. Note the manufacturer may be independent of the designer and/or the rolling stock supplier.

- (t) **manufacturers representative**
the person responsible for verifying the compliance status of the manufactured rolling stock ie the 'as-built' baseline.
- (u) **modified rolling stock**
rolling stock altered in such a way that the declared compliance status for one or more requirement or recommendation clauses in the standards compliance register is as a consequence affected.
- (v) **network registration**
the process, used by the RIM, by which rolling stock is recorded as a vehicle that can operate on their network.
- (w) **network**
a combination of track and other infrastructure controlled by a rail infrastructure manager.
- (x) **overhang**
distance from last detectable axle to end of vehicle.
- (y) **owner**
the person or body with legal title to the rolling stock.
- (z) **rail infrastructure manager (RIM)**
in relation to rail infrastructure of a railway, means the organisation who has effective control and management of the rail infrastructure, whether or not the organisation:
 - i. owns the rail infrastructure; or
 - ii. has a statutory or contractual right to use the rail infrastructure or to control or provide access to it.
- (aa) **Office of the National Rail Safety Regulator (ONRSR)**
Office of the National Rail Safety Regulator (ONRSR) is an independent body corporate established under the Rail Safety National Law (South Australia) ACT 2012.
- (bb) **registration notification**
a confirmation from a RIM that rolling stock has been registered on the network under their responsibility. Registration can be conditional.
- (cc) **referenced standards**
The suite of standards that have been nominated by the RSOs and the relevant RIMs where the ICP has been engaged to performance compliance assessment and in the certification of the fleet of the rolling stock. The standards may include the suite of RISSB Rolling stock series Australian Standard @brand standards or any other applicable standards.
- (dd) **rolling stock**
any vehicle that operates on or is intended for operation on, or uses a railway track, including any loading on such a vehicle, but excluding a vehicle designed for both on- and off-track use when not operating on the track. Rolling stock is a collective term for a large range of rail vehicles of various types, including locomotives, freight wagons, passenger vehicles, track machines and road-rail vehicles.
- (ee) **rolling stock operator (RSO)**
a person who has effective management and control of the operation or movement of rolling stock on rail infrastructure for a railway, but does not

include a person by reason only that the person drives the rolling stock or controls the network or the network signals.

- (ff) **rolling stock supplier**
a person who designs, commissions, manufactures, supplies, maintains, repairs or alters the rolling stock.
- (gg) **standards compliance register**
a list of compliance and controls against the requirements contained in RISSB Rolling Stock Australian Standards. See Appendix C.
- (hh) **tare mass**
the mass of the rolling stock in the lightest condition under which it will be operated. This includes provisioning with sand and all fluids but fuelled to no more than one-third of capacity. Tare mass applied to the stock in its new condition hence no allowances for wear or corrosion is to be made.
- (ii) **test organization**
the service provider who conducts the test activities.
- (jj) **track access agreement**
a formal agreement between an RSO and a RIM allowing the RSO to operate on the RIM's network under agreed commercial, technical and operational conditions.
- (kk) **unit**
the smallest number of vehicles that can be considered a single independent entity for the purpose of certification.
- (ll) **verification checklist**
a checklist produced by the manufacturer listing the features of the design that need to be verified, and how they will be verified.

General rail industry terms and definitions are maintained in the RISSB Glossary:

<https://www.rissb.com.au/products/glossary/>

1.4 Abbreviations

- (a) **AEI**
Automatic equipment identification;
- (b) **ATP**
Automatic train protection;
- (c) **AWS**
Automatic warning system;
- (d) **CBTC**
Communications based train control;
- (e) **ETCS**
European train control system;
- (f) **MAN**
mandatory;
- (g) **TPS**
train performance specification;
- (h) **TPWS**
Train protection & warning system.

2 General

This Standard provides a generic process for assessing rolling stock compliance with the referenced standards, which are the RSOs nominated rolling stock standards and the relevant RIMs nominated interface standards/requirements.

In this Standard it is assumed throughout that the 'RSO' is the stakeholder responsible for determining the referenced standards list. In practice there are situations where the RSO has not yet been determined (for example product development prior to sale) in which case one or more of the other stakeholders may be substituted for the RSO to suit the particular circumstances.

The issuing of a certificate of standards compliance shall be used by the RSOs to confirm the certification of a fleet of rolling stock that they are compliant with the reference standards.

The certification documentation (certificate of standard compliance and/or acceptance of on-track testing compliance) can be required by the RIMs when an RSO seeks to have rolling stock operating on the network managed by the RIM.

The certification documentation may be used to demonstrate how risks related to rolling stock are being managed by the RSO and RIM under the accreditation requirements of ONRSR.

This Standard includes the definition of certification documentation that the RSO of the rolling stock is to prepare and present when the rolling stock is submitted for network registration.

The ICP is responsible for endorsing and issuing the certificate of standards compliance, the design compliance certificate and, where necessary, an acceptance for on-track testing certificate for the RSO.

This Standard can be used if the RSO and/or RIM determines a modification certification to AS 7501 can be required for existing rolling stock to continue to be operated on a network if it has been modified and/or operation is proposed on a network where the same class of rolling stock has not previously operated.

The RSO's own change management process will establish whether a change to the design or operation of a unit of rolling stock has altered the declared compliance status for one or more requirement or recommendation clauses in the standards compliance register. The applied change management process shall:

- (a) involve all relevant stakeholders;
- (b) be accompanied by a SFAIRP argument; and
- (c) include detail of:
 - i. who has initiated the change;
 - ii. reason(s) for the change;
 - iii. whether the change includes aspects of reverse engineering or re-design from first principles.

This Standard describes the following phases relating to the certification process using the certification documentation produced as an output of this AS 7501 Standard:

- (a) Design compliance certificate - see Section 5.
- (b) Construction conformance certificate - see Section 8.
- (c) Acceptance for on-track testing certificate - see Section 11.
- (d) Certificate of Standards compliance - see Section 12.

The RSO is responsible for the appointment of the ICP and to gain the agreement of the RIM.

The RSO shall define the class of rolling stock to be described by the certification documentation which is endorsed by the ICP.

A schedule of standards shall be developed by the RSO at the time of the agreement, which shall form as the referenced standards used in the rolling stock certification. It is important that the standards upon which assessment and certification is required to be based are agreed by the RSO, RIM and manufacturer before the execution of a contract.

The ICP should be consulted on the suitability of the referenced standards prior to commencement of design and/or the execution of a contract where practicable.

The ICP shall review the referenced standards and is responsible for advising the RSO of any omissions and errors. The ICP shall verify that the referenced standards against which the rolling stock is to be assessed is complete and accurate. It is accepted that the ICP need not be appointed at the start of the specification and/or contract stage when the referenced standards is established and agreed.

The RSO should undertake a derogation risk assessment for the impact of any changes to the schedule of standards advised by the ICP. Where changes to the referenced standards are identified by the ICP, the RSO has an opportunity to undertake a derogation risk assessment to highlight the potential impact of such changes.

The flowchart in Figure 1 shows the typical entities involved in the rolling stock certification process.

3 Certification documentation prerequisites

3.1 General

The flowcharts showing the certification processes are shown in Appendix A.

The RSO shall be responsible for obtaining the endorsement of the certification documentation from an ICP, where required by this Standard.

The owner shall be responsible for supplying certification documentation to the RIM of the network(s) where the rolling stock is proposed to operate, and as required under the operational framework of the network.

3.2 Certification documentation mandatory requirements

Certification documentation shall contain:

- (a) a certificate of Standards compliance as per Section 12;
- (b) a design compliance certificate as per Section 5;
- (c) a data register as per Appendix B;
- (d) a standards compliance register as per Section 7;
- (e) a construction conformance certificate as per Section 8;
- (f) s a derogation risk assessment as per Section 10 where applicable; and
- (g) shall contain an acceptance for on-track testing certificate as per Section 11 where applicable.

A data register, standards compliance register and derogation risk assessment pertaining to the rolling stock being certified shall all be approved by the ICP before a design compliance certificate is issued.

The rolling stock's construction shall be complete and a data register, standards compliance register, derogation risk assessment and design compliance certificate pertaining to the rolling stock shall all be approved by the ICP before a construction conformance certificate is issued.

An acceptance for on-track testing certificate shall not be approved by the ICP until up to date versions of the data register, standards compliance register, derogation risk assessment and design compliance certificate are approved by the ICP.

The derogation process shall not be concluded until a construction conformance certificate and acceptance for on-track testing certificate (where applicable) have been issued.

The certificate of standards compliance shall not be endorsed and issued until the derogation process is concluded.

It is the responsibility of the RSO and RIM to determine if recertification is required for modification to be performed on existing certified rolling stock. This may be where the modification has significantly changed the performance parameters of the rolling stock or where the RSO or the RIM have determined the scope of the modification will significantly deviate from the declared compliance status in the Standards Compliance Register. The RSO's internal change management process may be sufficient in lieu of the recertification process for minor modifications performed on the rolling stock.

3.3 Certification of modified, same class or existing class rolling stock

3.3.1 General

In the case of modifications to certified rolling stock, or rolling stock which the RSO presents as being of the same class as either certified rolling stock or existing rolling stock the following applies:

- (a) The ICP shall confirm the class of the rolling stock presented by the RSO and provide an endorsement if there is no discrepancy.
- (b) The ICP shall examine a statement provided by the RSO identifying the extent of the modification work and the relevant referenced standard(s) to be used for the new certification documentation and provide an endorsement if in agreement with the statement.
- (c) The RSO may supply only the data for the parameters and areas of the rolling stock which have been deemed to have been affected by the modification and missing data requested by the ICP.
- (d) Pre-existing certification documentation, where applicable and up to date, can be used if the relevant standards have not been updated since the last certification was issued.

3.3.2 Requirements for certification

The following requirements for certification apply for modifications to certified rolling stock, or rolling stock which the RSO presents as being of the same class as either certified rolling stock or existing rolling stock:

- (a) Certification shall be required for the areas of the rolling stock affected directly or indirectly by differences in design to existing rolling stock or

modifications, to confirm compliance with the requirements of the relevant referenced standards.

- (b) If certification documentation does not exist for the existing rolling stock which the ICP confirms as being of the same class as the rolling stock presented by the RSO for certification, then it need not be necessary to produce certification documentation unless required by clause 3.3.2(a).
- (c) In the case where rolling stock is transferred to a different RSO but continues running on the same network, it need not be necessary to undergo the certification process providing that the new RSO has the same suite of rolling stock safety standards and does not have different controls for non-conformances.
- (d) Providing the network that the rolling stock is operating on remains unchanged and the RSO and RIM's controls for non-conformances remain unchanged it shall not be necessary for the rolling stock to undergo the certification process.

4 Independent competent person

4.1 General

The independent competent person (ICP) endorses the completed certification documentation, if acceptable, irrespective of their source or authorship.

The ICP may be employed internally and need not be an external third party, provided they can demonstrate that they are independent of from the rolling stock acquisition, design and construction process.

The ICP can perform their duties for the certification using documentation and supporting data provided by the RSO and /or the organization(s) that are designing/manufacturing/testing the rolling stock.

If a non-conformance to the Standard utilised is recorded, the RSO and /or the organization(s) that are designing/manufacturing/testing the rolling stock may propose to the ICP control measures to be implemented to verify the use of other standards for certification process, with or without conditions.

The approval of these control measures shall rest with the RSO and/or the RIM.

The ICP shall be issued with a list of the referenced standards that are required for the certification process by the RSO.

The ICP shall request the RSO to provide the relevant certification documentation submission, any associated supporting information, and can request additional information for clarification, if required.

An ICP shall have responsibility for recording the completeness, evaluation, accuracy and content of the data register, standards compliance register, derogation risk assessment, design compliance certificate, certificate of standards compliance and, if required, certificate of acceptance for on-track testing.

The ICP shall endorse that the certification documentation is compliant with the agreed standards by signing where required.

An ICP can undertake any or all of the activities described in sections 5 to 12 on behalf of the RSO.

4.2 ICP mandatory requirements

An ICP:

- (a) shall have experience in assessing rolling stock against standards;
- (b) shall have demonstrated experience and knowledge of the referenced standards;
- (c) shall have demonstrated experience and knowledge of rail safety national law;
- (d) shall have demonstrated experience and knowledge of the requirements of relevant rail safety legislation;
- (e) shall have demonstrated experience and knowledge of the requirements of AS 4292;
- (f) shall declare any conflicts of interest;
- (g) shall have the ability to demonstrate that they are removed from the rolling stock acquisition, design and construction process to verify their independence
- (h) shall have knowledge of risk management;
- (i) shall have knowledge and experience in the testing of rolling stock; and
- (j) shall have knowledge and experience in the rail interfaces which the RSO has deemed relevant at the time of the ICP's appointment.

4.3 ICP recommendations

An ICP:

- (a) should have qualifications and experience which satisfy the criteria for membership of a professional engineering body acceptable to the owner/RSO and/or RIM;
- (b) should have knowledge of ONRSR processes; and
- (c) should have demonstrated experience in the areas in which they are undertaking certification, such as rolling stock commissioning, design, manufacture, testing, operations and maintenance.

5 Design compliance certificate

5.1 General

The design compliance certificate formally records that the rolling stock design has been:

- (a) assessed for compliance against the referenced standards; and
- (b) verified by the competent person who holds suitable qualifications and experience acceptable to the owner/RSO and/or RIM.

The design compliance certificate should document aspects of the design that will not be part of the process.

5.2 Design compliance certificate mandatory requirements

The design compliance certificate shall contain the following information:

- (a) Unique design compliance certificate number consisting of the vehicle code, date and other numbers/characters that the RSO wishes.
- (b) The rolling stock class and model ID being covered by the certificate.
- (c) Designer approval.
- (d) Name of the designer's organisation.
- (e) The reason for the certificate.
- (f) Name of the competent person.
- (g) Signature of the competent person endorsing the certificate.
- (h) Name of the designer.
- (i) Title of the designer.
- (j) Date of endorsement signature.
- (k) Contact details for the designer, address, phone number, email.
- (l) Owner.
- (m) RSO (if different to owner).
- (n) Expiry date for the design compliance certificate of design life.
- (o) Data register identification number.
- (p) Standards compliance register identification number.
- (q) Derogation risk assessment identification number.
- (r) A summary sheet of any non-conformances and mitigating statements, conditions, novel and critical design features, limitations and restrictions for the rolling stock, as identified in the standards compliance register and derogation risk assessment.

For on track testing an interim design compliance certificate should be used.

Design compliance certificates shall be amended prior to the conclusion of the overall certification process and document:

- (a) changes that have been made due to results obtained from on track testing;
- (b) changes that have been made for any other reason and relate to design aspects within the design compliance process.

The overall certification process in Section A.2 of Appendix A shall be followed to attain a design compliance certificate.

Section A.3 of Appendix A provides an example design compliance certification process.

6 Data register

6.1 General

The RSO shall undertake or arrange for the compilation of the data register which contains specific identification and safety-related parameter values of the particular vehicle, or class of rolling stock, being offered up for certification according to the RIM requirements.

The RSO should ensure sufficient technical information is supplied to allow the ICP to endorse the data register.

6.2 Data register mandatory requirements

Data registers shall contain:

- (a) signature of the ICP endorsing the data register;
- (b) name of ICP organisation;
- (c) contact details for ICP organisation;
- (d) name of the ICP;
- (e) a data register identification number, unique to the assessing body;
- (f) the applicable and available data for the parameters;
- (g) data register date;
- (h) data register version number; and
- (i) copies of any documentation referenced in the data for Appendix B, especially the general arrangement drawing corresponding to the drawing number as advised in the data for Appendix A.1.

Appendix B details a list of examples of applicable parameters for the data register for certain rolling stock types.

Where the data is yet to be verified (e.g. requires on-track testing), then it is acceptable to state this to obtain a temporary data register necessary to allow the on-track testing to occur and make a reference to the number of the acceptance for on-track testing certificate that shall be issued to justify the tests necessary to verify the data (see Section 11).

Where the method used for calculating passenger loading factors is other than AW0, AW1, AW2 or AW3 as defined by this Standard, then it is acceptable to state the alternative method used and provide a detailed description in the data register.

Appendix E provides additional guidance for the correlation between the AW system used in AS 7501 and the European system (EN 15663) for defining vertical mass.

7 Standards compliance register

7.1 General

A Standards compliance register is a list of compliance and controls against the requirements contained in the referenced standards as shown in the example in Appendix C.

The RSO shall submit the Standards compliance register against each of the referenced standards for rolling stock being assessed to the ICP for appropriate verification and endorsement.

The Standards compliance register records compliance of the rolling stock with the referenced standards.

7.2 Standards compliance register mandatory requirements

The standards compliance register shall contain the following:

- (a) Signature of the ICP endorsing the Standards compliance register;
- (b) Name of the ICP.
- (c) Standard compliance register number, unique to the assessing body.
- (d) A statement of compliance to the relevant referenced standards.
- (e) A statement of overall compliance, including non-conformances, with supporting documentation which includes:
 - i. for any non-conformances recorded against a recommended requirement, there shall be a corresponding statement detailing either the alternative control measure to be implemented, or the endorsement of the ICP of a statement from the owner and/or RSO that no control measure is required for the non-conformance; and
 - ii. for any non-conformances recorded against a mandatory requirement, detail of the derogation process in Section 10 that shall be followed.

Each of the standards in the referenced standards shall have its own section in the standards compliance register, arranged in numerical order.

Any documentation supporting the standards compliance register should be made available to the RIM on request.

An interim Standards compliance register should be used in the initial stages of the overall certification process until it has been confirmed that all required design, construction, modification or test activities have been successfully concluded.

The Standards compliance register shall be finalised and amended to document any changes relating to aspects of the Standards compliance register after all design, construction, modification and all required test activities have been successfully concluded.

If compliance cannot be promptly determined, then a temporary registration, if required by the RIM, may be granted by the ICP to enable the certification process to be completed.

Table C1 shows an example of standards compliance register layout using the Australian rolling stock standards.

8 Construction conformance certificate

8.1 General

The construction conformance certificate formally records that each unit of rolling stock has been: