

AALS Safety Committee 2019 Consultation process on braking.
Draft code amendments for discussion 6/12/2019

Background

In April 2019 the AALS membership voted to accept certain revisions to the Operations Code of Practice, which included a replacement of section 4 relating to minimum braking requirements. Since it was a major revision it was anticipated that some fine tuning might be found necessary as members implemented the revision, so the Terms of Reference for the 2019 consultation process invited further submissions. The scope was limited to incremental improvements. The Braking subcommittee has considered and discussed the submissions, resulting in a number of draft amendments to code clauses. These are presented here for wider discussion before being presented as proposals to the next AGM for members to vote on.

The subcommittee has also identified several topics which will be added to a revised Braking Guideline document which is non-binding information supporting the Code interpretation.

The Codes of Practice referred to below can be obtained at:

<http://www.aals.asn.au/2019-files/190605aals-cop-for-interopability-safety.pdf>

<http://www.aals.asn.au/Resources/CoP%20Ops.pdf>

Please address any responses to secretaryALSSC@aals.asn.au

Draft proposals

No	Proposed amendment	Brief justification
1	Interoperability Code Clause 6.3.1.12. [1] Add the sentence... "The twist test packer thickness may be the lesser of (BogieSpacing)/150 or 12 mm." [2] Change the cant ramp from the existing 1:200 to 1:150	The existing rule for calculating the twist test packer thickness results in unreasonable values for very long carriages. This clips the thickness to an appropriate value for such carriages. The revised cant ramp is more appropriate for the range of existing tracks.
2	Interoperability Code Clause 4.5, row labelled "Loco Mechanical Parking Brake". [1] Relabel the row "Loco Parking Brake [1]" [2] Replace note 1 "It is acceptable to rely on effective load-holding functionality of a hydraulically or electrically driven locomotive for short term park braking"	[1] For the purposes of short term parking the function provided by a mechanical brake may be met by a locomotive drive system which has adequate load-holding characteristics. [2] logically, heavy trains should be permitted to use the above concession. [3] Existing note 1 text can be deleted since it is an operational comment rather than equipment-related. Intent is already covered elsewhere."
3	Interoperability Code Clause 4.5, cell stating "Mandatory" for Guard-applied braking in the Heavy category. Add a new note 7 stating "This requirement can be deemed to be satisfied where the guard has a communication system capable of reliably attracting the driver's attention. A guard's whistle alone is not sufficient."	All significant hazards controlled by the provision of guard-activated braking can be controlled by guard-instigated driver braking, provided that the communication is highly reliable.
4	Interoperability Code Clause 6.4.1.5 and 6.5.1.5. Add the words "crush height" after "seat"	To disambiguate the intent of the clauses.

5	Interoperability Code Clause 4.5, note 3. Replace the second sentence with "Train brakes are optional if the locomotive is braked and (a) its mass exceeds the gross mass of the trailing load, or (b) the total length of the passenger-carrying seating is less than 5 m."	Many operators still rely on the earlier rule that train brakes are not necessarily required for up to two carriages. This proposal restores legitimacy to a well established practice with an acceptable safety record. Replacing the carriage count with seating length removes an ambiguity regarding passengers sometimes riding on the driver's vehicle.
6	[1] Operations code clause 5.7.8.1. Replace with "be required if the distance between the driver and the last passenger seat exceeds 7 metres" [2] Insert Operations code clause 5.7.8.2 "in a position to observe all passengers." and renumber subsequent existing clauses.	The existing rule counts carriages, which ignores the physics and has led to ambiguity with some train consists (e.g. articulated). Train length is a more fundamental surrogate for train mass and number of passengers.
7	Interoperability code clause 4.5. Prefix the existing sentence with "In addition to complying with clauses 4.1 to 4.4 above, ..." and add "There is no implication that the minimum requirements given in this table will be sufficient for all operations. A Society's Policy may apply additional requirements."	To minimise a common misunderstanding resulting from readers focussing on the table and missing the significance of the preceding clauses.
8	Operations code 5.1.1.2. Change to... Establish a suitable braking policy for trains operating on their system. Such a policy shall be based on grades, weight and speed of trains operating on their system. Societies will satisfy themselves that the solution arrived at shall fulfil operating procedures. Because of the many differences from one system to another the arrangements adopted at one location may not fulfil the requirements at another location. The requirements must not be less than as described in AALS Code of Practice: - Standards for Interoperability and Safety of Miniature Railways, Road Vehicles and Plant, section 4.	Reinforces that this Operations Code requires reference to the Interoperability Code for the minimum equipment requirements.
9	Interoperability code table 4.5 note 6. Extend note 6 to apply to both Small and Small/Medium categories.	Reflects more examples of current practice which have an acceptable safety record
10	Interoperability code table 4.5 note 2. Fill the blank cells with "optional"	Clarifies the meaning of the blank cell
11	Interoperability code clause 4.1. Modify to..."The braking policy required by all Societies under Clause 5.1.1.2 of the "AALS Code of Practice "OPERATION OF MINIATURE RAILWAYS, ROAD VEHICLES AND PLANT shall meet these minimum requirements"	Explains explicitly how the Interoperability Code is complementary to the Operations Code.

12	Interoperability code clause 4.5 table. Remove the row re Train Brake control auto applies loco brake, and the corresponding note 7.	Ongoing consultations have exposed redundancy. Safe operations in this regard are covered elsewhere.
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