



EN 45545 in transition... a GB perspective



Richard Nowell

2016

TSI issues – brief summary of requirements

The LOC&PAS TSI which came into force 1/1/2015 gives mandatory train fireworthiness requirements for:

- Materials – EN 45545-2 or national standards until 1/1/2018
- Fire containment - Passive barriers – but not using EN 45545-3!
 - Active FCCS systems – open point, new standard being prepared
- Fire detection and extinguishers – see TSI application guide, EN 45545-6 gives presumption of conformity
- Flammable liquids – see TSI application guide, EN 45545-7
- Continued operation – EN 50553 is specified
- Emergency exits – see TSI application guide, EN 45545-4

EN 45545-3 and EN 45545-5 do not seem to be mentioned!

Transition issues – GB national standards

The current situation is complicated:

- The LOC&PAS TSI allows application of EN 45545-2:2013 already;
- In GB the TSI also permits application of national standards GM/RT2130 and BS 6853 until 1/1/2018;
- GB Railway Group Standards like GM/RT2130 are no longer mandatory except where specific parts are Notified National Technical Rules;
- The other parts of GM/RT2130 become ‘voluntary’ as accepted methods to control hazards;
- BS 6853, due to a mismatch between TSI and EN timetables, now has a ‘**withdrawn**’ status.

Railway Group Standard
GM/RT2130
Issue Four
Date December 2013

Vehicle Fire, Safety and
Evacuation

BRITISH STANDARD

BS 6853:1999
Incorporating
Amendment No. 1

Code of practice for fire
precautions in the
design and
construction of
passenger carrying
trains

ICS 43.040.20

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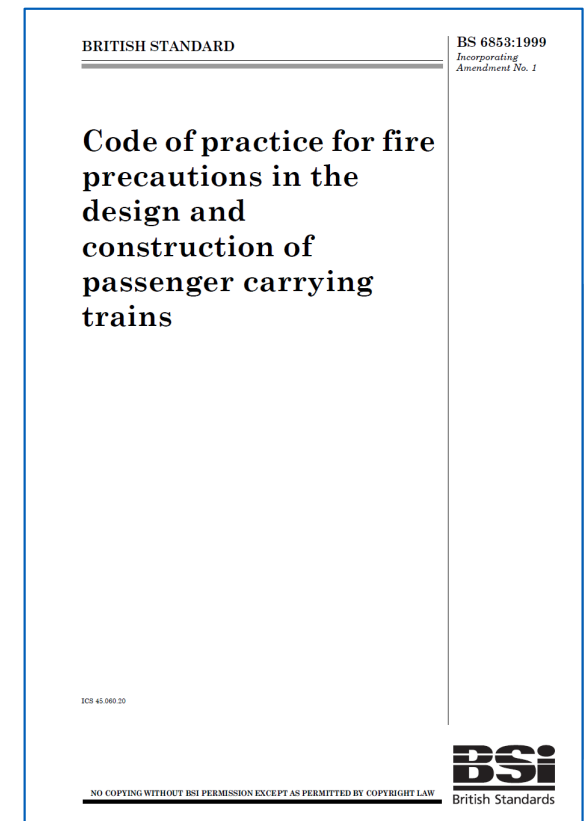
BSi
British Standards

TSI problems – GB perspective

- THE TSI DOES NOT COVER EVERYTHING! - you have to do more
- The TSIs are not ‘complete’ so the absence of requirements does not mean that known, foreseeable hazards do not have to be managed and controlled.
- The TSI, in mandating EN 45545-2:2013, does not acknowledge the known issues with EN 45545-2, in particular Annex B.
- It would however be difficult legally to apply EN 45545-2 for seats without due consideration of what we know:
 - the results of the RSSB T1018 research which demonstrate that the Annex B test as published in 2013 fails to discriminate between the fire performance of different types of seats and
 - the work undertaken to prepare prEN 16989 to replace EN 45545-2 Annexes A and B with a comprehensively revised fire test.

Transition – common issues in GB

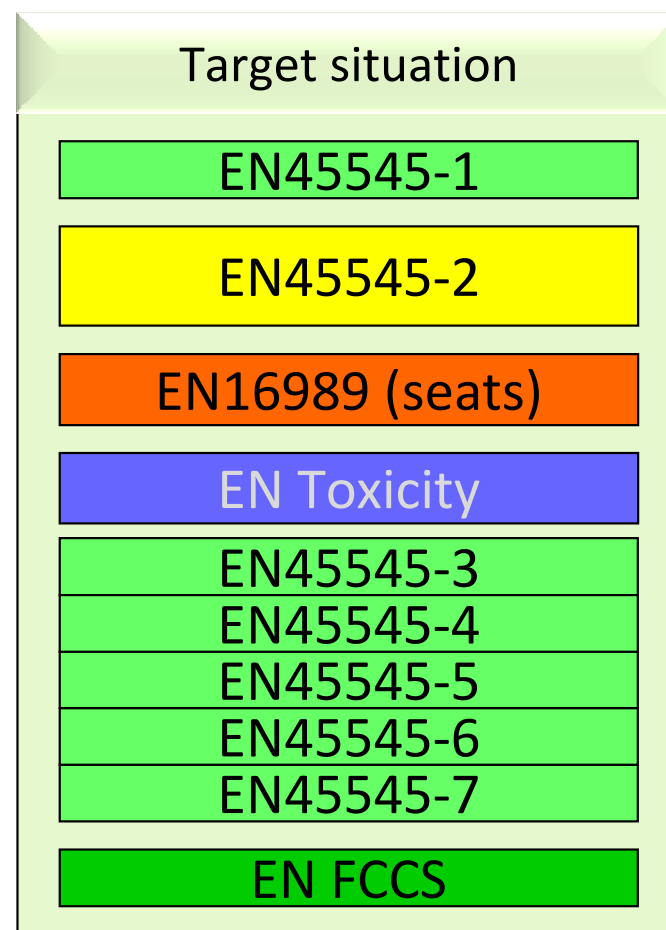
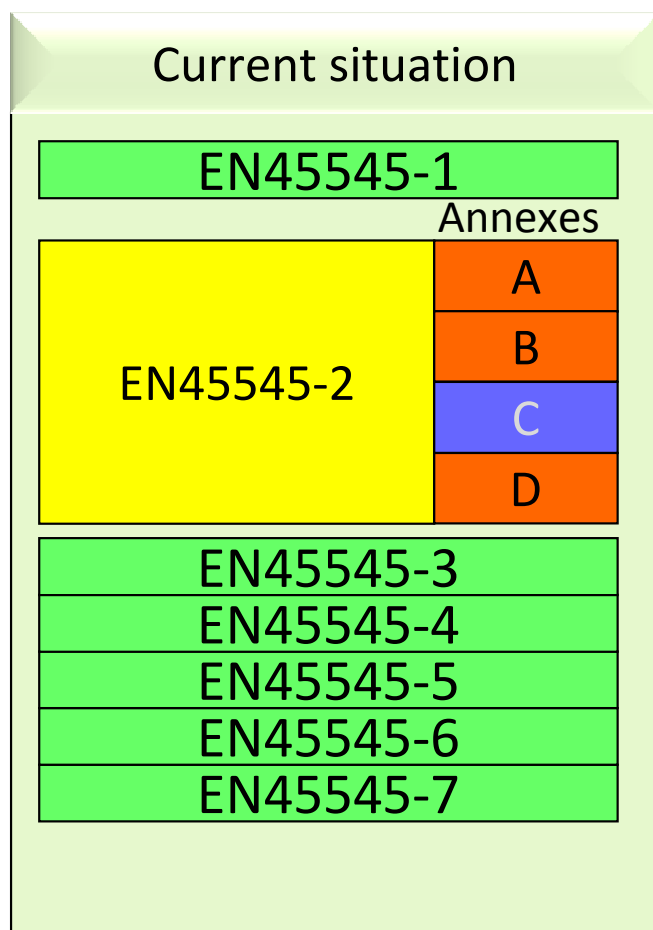
- It is not always realised that BS 6853 **can continue to be used until 2018** even though its status is **'withdrawn'** (from 31/3/2106), because it is a freely available document in the public domain.
- A recurring problem is that many people do not understand that the whole EN 45545 series had to be published or disappear and therefore when EN 45545 was published there were unresolved technical comments.
- It should be noted that all parts of EN 45545 (except for EN45545-2 because of the seat test) were voted positively by GB, effectively by the same committee as were responsible for BS 6853 – so there are no grounds to not apply almost all of EN 45545!



Work in progress – development of EN45545

Available now

Coming soon!



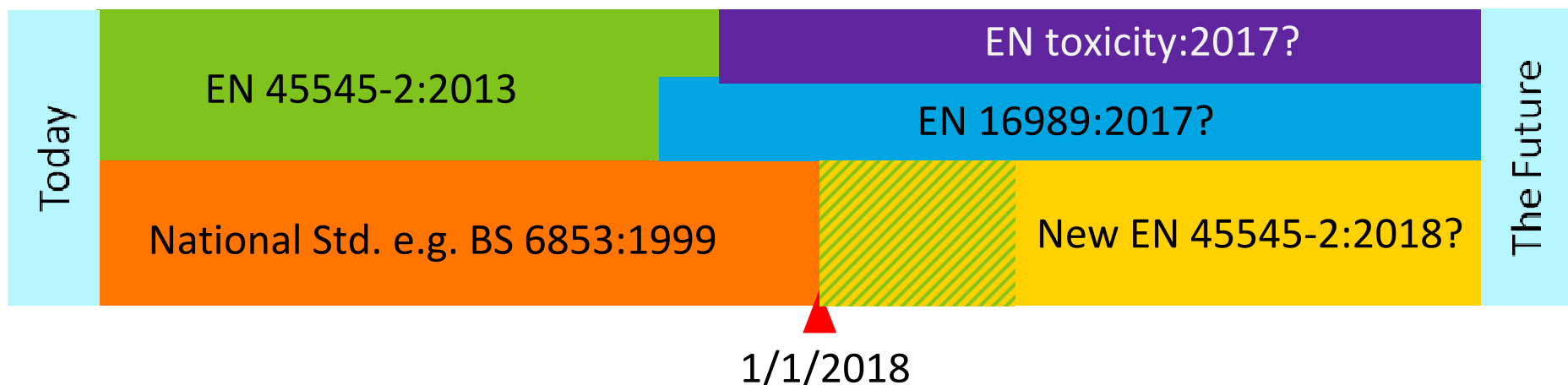
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Started

Looking forward

- When the new complete seat fire test EN 16989 is published then acceptance criteria for the different hazard levels will need to be agreed in an amended EN 45545-2
- As of 1/1/2018 the only permitted standard for materials will be EN 45545-2 unless the TSI is changed or somehow ‘adjusted’ (e.g. via the TSI application guide)
- The timings for these changes will be an interesting headache!



Approach currently suggested for design in GB

- In consideration of the present transitional situation, with EN 45545 undergoing revision and completion, for GB, the recommended way forward until 1/1/2018 is to:
 - For materials continue with BS 6853 or apply EN 45545 for the relevant Operational Category throughout with the exception of the seats;
 - Seats should continue to be tested to the appropriate BS 6583 category e.g. Cat 1b for HL2 and Cat 1a. for HL3 vehicles.
 - Elsewhere, where there are equivalent measures in the EN 45545 series compared to those in GM/RT 2130 and BS 6853, these may be applied in place of requirements in GM/RT2130.
- **AFTER** 1/1/2018 we want to say **only** EN 45545 (with EN 16989 and EN “toxicity” etc.) to address **all** fire related hazards.



Thank you

