Amendment Proposal to GCU Appendix 10

Amendment history

Amendment made by	Date	Paragraph	Amendment
Maintenance WG Appendix 10	19/4/2018		Final version drafted in the WG meeting

Title	Updating Appendix 10, Annex 4
Proposed amendment made by (RU / keeper / other body):	Maintenance WG Appendix 10
Proposed amendment concerns:	Appendix 10
Proposer:	Maintenance WG Appendix 10
Location, date:	19/4/2018
Concise description:	Editorial aspects of Annex 4 have been revised and additional sample images added

1. Starting point (current situation):

1.1. Introduction

The criteria for replacement of composite brake blocks are stipulated in Appendix 10, Annex 4. These examples have been revised and further examples have been added.

1.2. Mode of operation

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1.3. Anomaly / description of problem:

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1.4. Does this concern a recognised code of practice* (e.g. DIN, EN)?

☐No ☒ Yes (state which): catalogue of damage

* “Code of practice: a written set of rules that, when correctly applied, can be used to control one or more specific hazards." (Source: Regulation EC 352/2009, Article 3)

"Technical provisions laid down in writing or conveyed verbally and pertaining to procedures, equipment and modes of operation which are generally agreed by the populations concerned (specialists, users, consumer and public authorities) to be suitable for achieving the objective prescribed by law, and which have either proven their worth in practice or, it is generally agreed, are likely to within a reasonable period of time" (Source: BMJ Handbuch der Rechtsförmlichkeit – German Ministry of Justice)

2. Target situation

2.1. Elimination of anomaly/problem (goal)

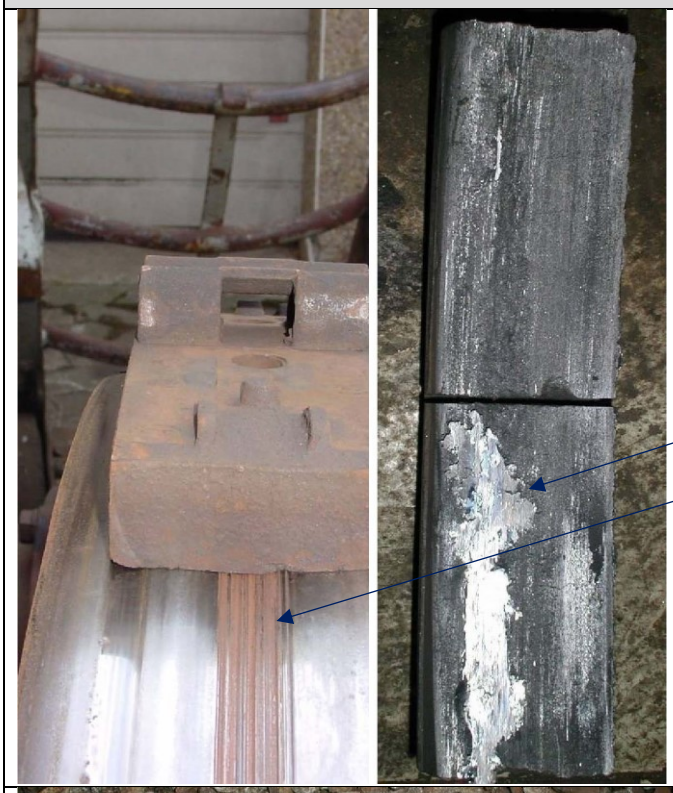
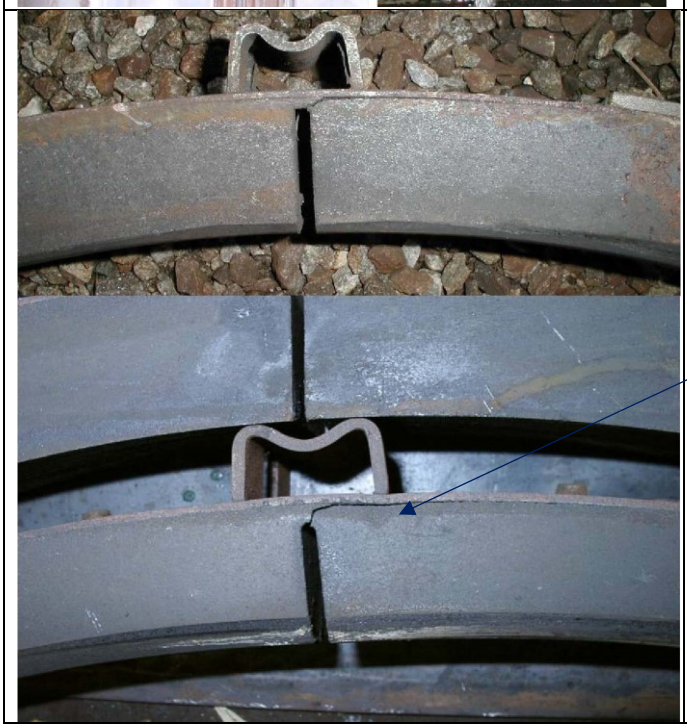
Updating of the annex

3. Additional text and/or modifications relates to proposed amendments to GCU Appendix 10:

Amendment colour code:
Black: Current text, for info and remains unchanged
Blue: new text

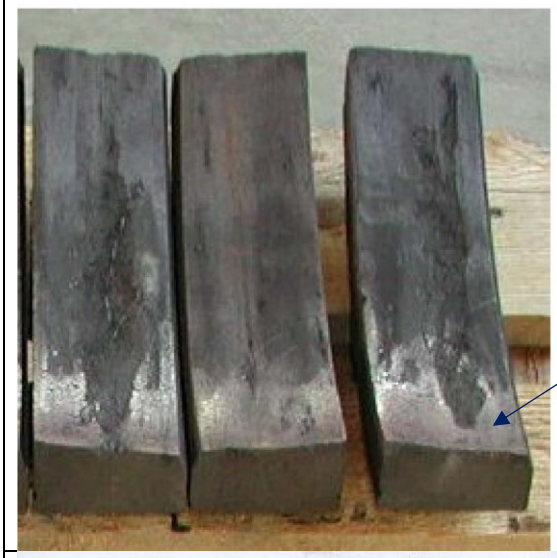
Appendix 10 - Annex 4

COMPOSITE BRAKE BLOCKS: WHEN TO REPLACE AND NOT TO REPLACE

Picture	Description, limit value	Action to be taken
	Picture 1: Most of tread displays hollowing (e.g. grooves) and/or shiny metallic marks	Replace Note: Check wheel tread in accordance with Chapter A 1.6.1
	Picture 2: Friction material has become detached from plate over a length of > 25 mm	Replace

Picture	Description, limit value	Action to be taken
	Picture 3: Crack on the expansion joint (designated breaking-point) Incipient cracking or crack on brake block	Do not replace
	Picture 4: Incipient cracking of > 25 mm parallel to the wheel circumference	Replace
	Picture 5: Significant difference in the block's thickness at the top and bottom ends (one-sided wear). Smallest thickness is below 10 mm	Replace

Picture	Description, limit value	Action to be taken
	Picture 6: Incipient radial cracking in friction material	Do not replace
	Picture 7: Radial crack in the brake block from the friction surface to the plate: the brake block displays a radial crack from the friction surface to the plate/edge of the plate, not located on the expansion joint (designated breaking-point).	Replace

Picture	Description, limit value	Action to be taken
 	Picture 8: "White film" on surface of contact area and to a depth of 10 mm **or** significant shelling on the contact surface and heavy carbonisation	Do not replace <u>Note:</u> Check wheelset in accordance with Chapter A 1.18
	Picture 9: Branched thermal crack pattern, mainly axial (not thermal cracks, cf. vitrification) and carbonisation	Do not replace
No figure	Crumbling (without carbonisation)	Replace

Picture	Description, limit value	Action to be taken
	Picture 10: Damage to brake block due to metal build-up on the wheelset or wheel flat	Replace Note: Check wheel tread in accordance with Chapter A 1.6.1

4. Reasoning:

Annex 4 has been updated and supplemented as part of the feedback process as an aid for workshops.

5. Assess potential positive/negative impacts

Impact on costs, administration, interoperability, safety, competitiveness:
Costs: 1 (no impact)
Administration: 1 (no impact)
Interoperability: 1 (no impact)
Safety: 2 (clearer instructions)
Competitiveness: 1 (no impact)

6. Safety appraisal of proposed amendment

Description of actual/target system, and scope of change to be made (see points 1 and 2).

Performance of risk analysis is unnecessary where only recognised standards are implemented.

Risk analysis conducted by

6.1. Does the change have impact on safety?	☒No ☐ Yes
Reasoning: No change to the target status; improved operating safety in workshops	
6.2. Is the change significant?	☒No ☐ Yes
Reasoning: Clarification of procedure. No change to existing instructions.	
6.3. Determining and classifying risk:	☒ N/A
6.3.1. Effect of change in normal operation: 6.3.2. Effect of change in the event of disruption / deviation from normal operation: 6.3.3. Potential misuse of system: ☐ No ☐ Yes (describe possible misuse):	
6.4. Have safety measures been applied?	☒No ☐ Yes
For each type of risk, one of the following risk acceptance criteria is to be selected: • *Code of practice* • *Use of reference system* • *Explicit risk estimate*	
6.5. Has a risk analysis been submitted to the assessment body?	☒No ☐ Yes
Assessment body: Attach the verdict reached by the assessment body:	[Appendix]