Proposed amendment to GCU
Appendix 9

Record of amendments

Amended by	Date	Paragraph	Amendment
Lukas Halbig	02/09/2019		Draft
TTI WG decision	24/03/2020		See minutes of TTI WG meeting of March 2020
Approved by SG WU	26/05/2020		See minutes of WU SG meeting of May 2020
Approved by JC GCU	15/06/2020		After editorial corrections

Title	New element: Code 3.2.4.5_ 3.2.4.6 radial fins/circular cooling bars
Proposed amendment made by: **RU / keeper / other body:**	DB Cargo
Proposed amendment concerns:	☒ Appendix 9 ☐ Appendix 11
Proposer:	Sven Seligmann
Location, date:	Mainz, 02/09/2019
Concise description:	New element: Code 3.2.4.5_ 3.2.4.6 broken radial fins/circular cooling bars on brake discs mounted on the axle

1. Starting point (current situation):

1.1. Introduction

Increasing numbers of wagons (preferably combined transport carrier wagons) are being equipped with brake discs mounted on the axle.

1.2. Mode of operation

-

1.3. Anomaly/description of problem

As part of the technical transfer inspection, personnel inspecting the wagons are finding damage and irregularities on brake discs mounted on the axle, particularly prior to loading of the wagons. In particular broken blades / circular bars are being found. These findings cannot be described accurately without a code.

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

☐ No ☒ Yes UIC 27205-3 /2017

* 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". (translation/source: BMJ Handbuch der Rechtsförmlichkeit – guide published by German Ministry of Justice)

2. Target situation

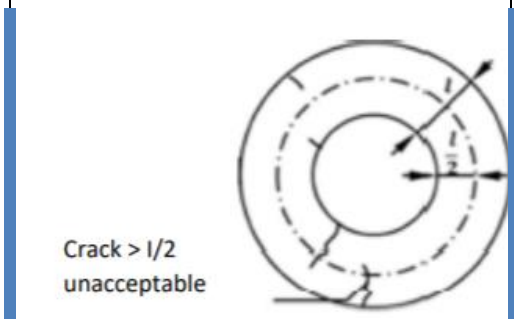
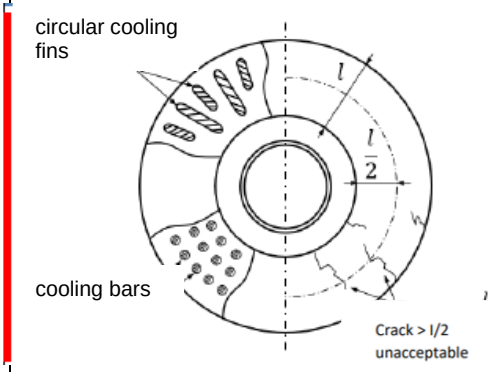
2.1. Elimination of anomaly/problem (goal)

Introduction of two new codes and a drawing in GCU Appendix 9, Annex 1. Code 3.2.4.5 Cooling *bars* and code 3.2.4.6 cooling fins.

3. Additional text (relates only to proposed amendments to GCU Appendix 9:

Amendment colour code:

Black: Current text, for info and remains unchanged
Red: new text
Blue: (if crossed out): text to be deleted

Component	Code no.	Irregularities/Criteria/Notes	Action to be taken	Irregularity class
Disc brakes*	3.2.4			
* Observed during a special inspection separate to the technical transfer inspection	3.2.4.1	The inspection groove on the brake discs is no longer completely visible (maximum wear)	K + R1 (isolate brake)	3
	3.2.4.2	Defective brake disc fixing on the axle pin	Detach wagon	5
	3.2.4.3	Brake disc: unacceptable cracks > l/2 as per diagram  	K + R1 (isolate brake)	3
	3.2.4.4	Crack in cross-section	Detach wagon	5
	3.2.4.5	Missing or cracked circular cooling bars - more than 2 side by side - more than 6 in total	K + R1	3
	3.2.4.6	Cracked cooling fins - more than 4, with less than 3 cooling lines intact between the cracked fins	K + R1	3

4. Reason:

Additional damage codes are required due to wagons being fitted with brake discs mounted on the axle and the damage/irregularities being detected.

5. Assess potential positive/negative impacts

e.g. on operations, costs, administration, interoperability, safety, competitiveness, etc., using a scale of 1 (very low) to 5 (very high).
Justify observations

Impacts:
Operations: 4, Interoperability: 1,
Competitiveness: 1,
Costs: 5 (exorbitant maintenance costs in the event of an overly severe assessment of damages),
Administration: 4,
Safety: 1

6. Safety appraisal of proposed amendment

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

The risk study becomes obsolete insofar as only the known repositories are implemented

Safety study conducted by:

6.1. Does the change make impact on safety?	☐No ☒ Yes
Reason: There is currently no way to explicitly indicate defects concerning shaft brake discs using a code. Brake component defects - shaft brake discs in this case - are significant in terms of safety.	
6.2. Is the change significant?	☒No ☐ Yes
Reason: see template. Attach the significant change test template	
6.3. Determining and classifying risk:	☒ deleted
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" (acknowledged technical rules)* • *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]