TOP 4 mechanical coupling devices ECE R55.01

The working document ECE/TRANS/WP.29/GRRF/2014/14 included a proposal to change references to ISO7641:1983 to ISO7641:2012. This changed was challenged by the GRRF. The informal working group responded ECE/TRANS/WP.29/GRRF/2014/28 in to that challenge by a withdrawal of that proposal for change.

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Now in the agenda of 78th session of GRRF raised a question about the two editions of the standard. In order to respond to that question the table blow has been prepared.

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| Comparison | ISO7641:1983 | ISO7641:2012 |
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| 1. Title | Road vehicles-Caravans and light trailers-Calculation of the mechanical strength of the drawbar- part 1 : steel drawbars | Road vehicles- Trailers up to 3,5t-Calculation of the mechanical strength of steel drawbars |
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| 2. Scope | This part gives a simplified procedure for the calculation of the mechanical strength of drawbars for caravans and light trailers (footnote : Categories O1 and O2 as in ECE /UNO classification) where the vertical static load on the coupling head does not exceed the limits specified in ISO/TR4114 | It is specified, that the standard is applicable for « simple constructions » welded or not, that enable a calculation in bending  The max static load for the application of this standard is now given in a diagram (figure 3) |
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| 3. Field of application | Limited to 0,22% Carbon in case of welding | No field of application, the Carbon limit is given under requirement 4.2, the limit is now 0,25% Carbon |
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| 4. references | Item 3: ISO 1176, ISO/TR4114, ISO 7237 | Item 2 only UNECE (R.E.3) |
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| 5. 1 definitions | 4. Symbols and definitions | All symbols of old 7641:1983 are named in 3.2, it was added the S-value as the vertical **force**, theD value became Dlt, basis for D calculation is increased from 22 000 to 32000 |
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| 5.2 more definitions |  | 3.1 terms and definitions.  Definitions on “mechanical coupling device », « mechanical coupling component » « drawbar », « chassis part »  have been added to the updated standard |
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| 6. requirements | 5. resistance calculation  Old chapter 5. Became new chapter 4.3 strength calculation without any modification | 4. requirements  4.1 limits the S-value for the application of this standard (former ISO TR4114) by showing figure 3  4.2 gives the Carbon limit for the weldability (increased !) |
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| 7. permissible stress | 5.3. permissible stress | 4.3.4. calculation of permissible stress  Identical as before, but added distinguished formulae for σ for drawbars welded or not manufactured by welding |
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| 8 annex | No annex | Figures show examples of chassis and drawbars to underline item 3.1 |