

Proposal for amendments to Regulation No. 55 (Mechanical couplings)

I. Proposal

2.6.12. amend to read:

Devices and components which do not conform to any of the Classes A to L or T above and which are used, for example, for special heavy transport or are devices unique to some countries and covered by existing national standards. **Innovative devices in phase of standardization shall also be classified in class S.**

Justification:

In case of Innovative devices (for example fully automatic coupling device) in phase of standardization actually it is not possible to get any approval, also when most requirements of similar devices are fulfilled.

These devices in the same moment, when requested standardization, are validated for practical use in field tests. This field tests are under monitoring of the manufacturer.

Actually the approval of these innovative devices is under national interpretation with help of exceptional procedures or completely impossible. The approval shall not be different over national requirements.

4.7. amend to read:

For devices and components of Class A, or Class S, if applicable, for use with trailers of maximum permissible mass not exceeding 3.5 tonnes, and which are produced by manufacturers not having any association with the vehicle manufacturer and where the devices and components are intended for fitting in the after-market, the height and other installation features of the coupling shall, in all cases, be verified by the type approval authority or technical service in accordance with annex 7, paragraph 1. **Manufacturers of towing brackets shall incorporate attachment points to which either secondary couplings or devices necessary to enable the trailer to be stopped automatically in the event of separation of the main coupling, may be attached.**

Annex 5

Insert new item:

1.4. Movable ball coupling devices

1.4.1. The moving of movable couplings when a trailer is connected to the towing vehicle shall be excluded by positive locking.

Justification:

For detachable couplings are requirements fixed regarding safety features. In paragraph 1.3.1. of annex 5 is requested a double safety device in positive Locking due to a serie of accidents happened. The minimum requirement on the upcoming movable coupling devices –especially ball couplings shall be stated.

1.5. (old) ~~Manufacturers of towing brackets shall incorporate attachment points to which either secondary couplings or devices necessary to enable the trailer to be stopped automatically in the event of separation of the main coupling, may be attached. This requirement is necessary to enable the vehicle to comply with the requirements of paragraph 5.2.2.9. of UNECE Regulation No. 13 Uniform Provisions concerning the approval of vehicles of categories M, N and O with regard to braking.~~

Justification:

Inertia braked trailers up to 3, 5 t are not only equipped with coupling heads class. These trailers often carrying construction machines in professional use are equipped with drawbar eyes class S (38 mm, 40 mm, and others). Here often is missing the possibility to fix the brake away cable. On the other hand it is easily possible to add a lashing ring or else to the fixing bolts of the flange of these kinds of couplings. Item 4.7. deals with both draw beams for class A50 and for class s drawbar couplings. For information: the sentence of former 1.5.:

“This requirement is necessary to enable the vehicle to comply with the requirements of paragraph 5.2.2.9. of UN/ECE Regulation No. 13 – Uniform Provisions concerning the approval of vehicles of categories M, N and O with regard to braking.” is completely cancelled.

1.5. (new) Coupling balls and towing devices shall be able to satisfy the tests given in annex 6, paragraph 3.1.

(Renumber item 1.4. to 1.5)

12.1. amend to read:

Devices for remote indication and remote control are permitted only on automatic coupling devices of Classes ~~C50-X and G50-X~~. **pin couplings (drawbar coupling type) and automatic 5th wheel couplings.**

Justification:

Remote indications may help the driver to assure safe coupling procedures.

In the today`s version the safety feature of remote control and remote indication is only permitted to C50-X and G50-X, so that C50-1until C50-7, but also class S automatic pin couplings with a 40 mm bolt and the very common automatic 5th wheel coupling for 90 mm King pin is excluded. There is no reason to exclude these coupling types

Annex 6

3.4.2. amend to read:

Toroidal eyes of Class L shall ~~be tested in the same manner as standard drawbar eyes~~ **be subjected to the same dynamic testing as hook couplings. For Toroidal eyes intended for use with hinged drawbar trailers, where the imposed vertical load on the coupling, S, is zero, the test force shall be applied in a horizontal direction simulating a tensile force on the hook and varying between 0.05 D and 1.00 D;**

For Toroidal eyes intended for use with centre axle trailers the test force shall represent the resultant of the horizontal and vertical forces on the coupling and shall be applied along an angle, - α , that is, from top front to bottom rear (see Figure 21), and equivalent to the calculated angle of the resultant between the horizontal and vertical forces on the coupling. The force, F_{hres} shall be calculated as:

$$F_{hres} = (F_h^2 + F_s^2)^{1/2}$$

The applied force shall vary between 0.05 F_{hres} and 0.10 F_{hres} [??]

Justification:

Actually the drawbar-eye is to be tested according to a two component test. The stressed zone and relating damage load sum between the actual tests is different from the reality of hook couplings.

3.5.3. amend to read:

With hook type couplings it is also necessary to test the closure and any locking devices by means of a static force of **0.6 D** acting in the direction of opening.

Justification:

The actual static value “0,25 D” is based of experiences with standard drawbar couplings, where the forces in opening direction are caused by friction between pin and drawbar eye, according to former research. With hook coupling is presented a different situation.

With hook couplings all experiences are showing a higher practical force in opening direction caused directly by the drawbar eye (class L) in on-road condition.

Headline Table 3, table 5, table 7, table 9 and table 13

amend to read:

Minimum characteristic values,

Justification:

The reason for standardized characteristic values is to avoid, that one partner has not sufficient performance for the required application. If every partner of a coupling combination fulfills minimum requirement a safe combination is given. Any device being tested against higher characteristic values does still comply with every requirement – especially dimensional - of the standard device.
