
Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods**

19 September 2013

**Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods**

Geneva, 17-27 September 2013

Item 6 (b) of the provisional agenda

**Proposals of amendments to RID/ADR/ADN:
new proposals****Amendments regarding the document
ECE/TRANS/WP.15/AC.1/2013/43: Periodic inspection and
test of some transportable refillable LPG steel cylinders in
RID/ADR. It superceeds and replaces INF 27****Transmitted by the European Liquefied Petroleum Gas Association
(AEGPL)**

In order to answer received comments during the consultation phase and also provide/include improvements following INF 45 submitted during the Joint Meeting session, the proposal points 13 to 17 of the document ECE/TRANS/WP.15/AC.1/2013/43 are revised as below. The previously submitted INF 27 document of AEGPL has been now superseded and should not be considered. Some points still need to be discussed further to find relevant criteria and be defined by a Working Group or experts. This Working Group (*) needs to finalise its work before the next Joint Meeting. The items that need to be finalized are marked with an asterisk (*). The philosophy of the periodic inspection and test method is presented below.

1. Add a new definition in 1.2:

Over-moulded cylinder, means a cylinder intended for the carriage of LPG of a water capacity not exceeding 13 litres made of a coated steel inner pressure receptacle with an over-moulded protective case made from cellular plastic which is non-removable and permanently bonded to the inner receptacle wall.

2. Add in the existing definition of "Pressure receptacle" under 1.2, also the overmoulded cylinders.

3. Add elementary design information in 6.2:

Add a paragraph 6.2.1.1.10 *additional requirement for over-moulded cylinders*

Over-moulded cylinders shall be produced serially based on steel cylinders in accordance with EN1442, EN14140 or annexe I Directive 84/527/CEE as far as replicable. Each cylinder shall be fitted with an individual resilient identification electronic tag or an equivalent device linked to an electronic database. The design of the over-moulding case shall prevent water ingress.

4. Add periodic inspection procedure with criteria in 6.2.3.5.3:

The over-moulded cylinders have to be tested as required by 6.2.1.6.1 (a) - (c) and (e). Instead of 6.2.1.6.1 (b), each batch of over-moulded cylinders, shall be tested by burst tests,

peeling tests and adhesion tests by sampling, such that it can be demonstrated that no degradation of these properties of the batch have been taken place. A batch is defined as a yearly production of the over-moulded cylinders by the same manufacturer of the over-moulding case and by the same manufacturer of the steel inner pressure receptacle. A detailed methodology is specified in annex G of EN 1440 :2008 + A1 :2012. The hydraulic pressure test shall not be used as substitution of the test concept of annex G of EN 1440:2008 + A1 :2012.

The results of the burst tests shall respect the unilateral statistical tolerance interval as per ISO 16269-6:2005 for a confidence level of 95% and a fraction of population equal to 99%. The burst pressure result shall be at least x1% (*) of the original design value and the volumetric expansion result shall be at least x2% (*) of the original design value.

For the peeling test, the assessment of the degree of rusting shall have a maximum corrosion grade of Ri2.

The adhesion value shall be x3% (*) of the original design value.]

The batch sampling levels are xxx (*) [To give an example for the burst test, for the first periodic inspection test the batch sampling level is the minimum between $3 \sqrt[3]{Q}$ or $Q/200$ with a minimum of 20 per batch, then the sampling is double for the next periodic inspection test. For the adhesion test, the amount of cylinders to be tested is set by ISO 2859-1 (Sampling procedures for inspection by attributes - Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection) for a single sampling plan for normal inspection, inspection level I, applied to one thousandth of the annual production.].

The frequency of the controls is after 3 years in service and every 5 years after.

The test results have to be monitored and kept available by the owner for 10 years to the competent authority upon request.

If the burst test or peeling test fails the tests are re-done considering sub-batches to define the sub-batch with a manufacturing defect or if it is an isolated defect. The production batch or sub-batch with defect has to be withdrawn immediately after detection using the electronic tag.

If the result of the adhesion test does not comply with the criteria for at least one cylinder, a second sampling is made. If at least one cylinder of the second sampling does not comply with the minimum value of the adhesion criteria, the periodic inspection of the batch depends on the results of the peeling and burst tests described previously.

An external visual inspection of the steel inner pressure receptacle is not necessary if the over-moulded cylinder is free from material gouge, cut or crack that may harm the protection against corrosion of the inner steel pressure receptacle as defined in EN1439 annex G. If an external visual inspection of the inner pressure receptacle is necessary to remove the over-moulding of the cylinders. A re-over-moulding may be taken into consideration.

5. Add a new point in (7) in packing instruction P200 in 4.1.4.1:

“(c) The owner shall demonstrate to the satisfaction of the competent authority shall verify that the over-moulded cylinders are only filled in filling centres applying a documented quality system and that the requirements of EN1439:2008 are fulfilled and correctly applied. The owner shall provide documentary evidence to the competent authority that the filling centre complies with these requirements.

If a filling centre is situated in a different Contracting Party to ADR, the owner shall provide additional documentary evidence that the filling centre is monitored accordingly by the competent authority of that Contracting Party to ADR.”

6. Remove the exclusion of clause 3.5. and of annex G for EN 1439:2008 in the table in point 11 in P200.

7. Remove the exclusion of annex G for EN 1440:2008 + A1:2012 in the periodic inspection and test standards table in 6.2.4.2.

The AEGPL asks for the support of the delegates to the proposal, under the condition that the items marked with an asterisk obtain satisfactory answers to the JM participants to be presented at the March session of the Joint Meeting.
