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INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods

Joint Meeting of the Working Party on the Transport
of Dangerous Goods on the RID Safety Committee
(WP.15/AC.1)

Bern, 25-28 March 2008
Agenda item 6

REPORTS OF INFORMAL WORKING GROUPS

**Informal Meeting on periodicity of testing of cylinders
Krefeld (Germany) 09./10.01.2008**

Minutes and Conclusions of the meeting

Submitted by the Government of Germany on behalf of the Working Group

Background:

1. For the Joint Meeting RID/ADR/ADN in September 2007, Germany presented document OTIF/RID/RC/2007/59 (ECE/TRANS/WP.15/AC.1/2007/59). This document highlighted a problem concerning the possible extension of the interval for the periodic inspection of steel gas cylinders from 10 to 15 years and offered a proposal for solution.
2. Due to time constraints, the document could not be discussed. Nevertheless, as the subject needed further consideration, several experts of delegations of contracting parties as well as of international industry organisations indicated interest to further discuss the issue prior to the next Joint Meeting in March 2008.
3. Therefore, the Federal Ministry for Transport, Building and Urban Affairs (BMVBS) of Germany invited contracting parties and international organisations interested for an informal meeting to Krefeld (Germany), which took place on 9./10. January 2008 at the premises of Air Liquide Germany.

Participation

4. Representatives of the following countries took part: France, Germany, Switzerland and United Kingdom. Representatives from Finland, Luxemburg, Norway and Sweden had shown interest, but were unable to participate. Representatives of the following organisations took part: AEGPL (including DVFG as German Member of AEGPL), ECMA, EIGA (including IGV as German Member of EIGA). The meeting was hosted by Air Liquide Germany and chaired by BMVBS (Gregor Oberreuter).

Introduction

5. The Chair had prepared a draft agenda (see annex 1), which was adopted. He had further prepared a document highlighting five theses on the issue and offering options for discussion in view of further proceeding (see annex 2).

Problem to tackle

6. Document OTIF/RID/RC/2007/59 (ECE/TRANS/WP.15/AC.1/2007/59) had presented the problem and the five theses further explained the matter. While this was partly seen as a conflict with legal aspects, most of the delegations had not such a firm position. It was mentioned that even if one country had granted the extension of the testing period to 15 years and others not, the cylinder could at least be used for ten years for transport to all RID/ADR countries, but for periodic inspection could only be granted a 10 year period or had to be send to the country of origin to obtain another 15 year period.

7. On the other hand it was highlighted that an inconsistency exists between RID/ADR, P 200 (10) v, and TPED for the EU Member States. It was mentioned that a harmonised way could be found for the countries using this extension clause, e.g. with a multilateral agreement. But such an agreement still does not exist and it would be applicable only for a 5 year period leading to repeated action all 5 years. Moreover, it would still lead to a difference between the application of such an agreement and the complete EU and EEA area, at least as long as not countersigned by all Member States of EU and EEA.

8. AEGPL explained that the original period of 10 years in RID/ADR can currently only be extended by (a) national competent authority(ies) for their respective territory, but not for the complete area covered by RID/ADR and not even for all EU Member States (see EN 1440). Background of this limited clause in P 200 (10) v is the problem of refilling, which has to be carried out under specific conditions in authorised and controlled filling centres (see EN 1439) to permit a closed system/network of circulation of the cylinders.

9. Germany mentioned that although cross border transport of LPG in cylinders is unlikely to happen to and from island countries, it does happen in continental Europe – likely to grow following regionalisation of markets e.g. between BENELUX and central European countries.

10. A clarification was deemed necessary and an harmonised application of the P200 (10) v would be an improvement and avoid any inconsistency. It was pointed out that a future solution should not depend on national competent authority approval(s), but should be based on harmonised technical requirements to permit harmonised transport covering all RID/ADR contracting parties.

Conclusion 1

11. After an extensive exchange of views, the meeting agreed, that the existing inconsistency leads to different practical applications by different countries, therefore an harmonised application of the P200 (10) v would be an improvement.

Application of the current clause in P 200 (10) v

12. After a presentation from AEGPL highlighting especially the huge size of the market concerned, the meeting came back to the former AEGPL document TRANS/WP.15/AC.1/2005/23 and comments in writing received from Finland, France, Germany, Luxemburg, Norway, Sweden, Switzerland and United Kingdom to obtain an overview in how far competent authorities of RID/ADR countries currently make use of the clause in P 200 (10) v and about the requirements applied. France, Germany, Switzerland and United Kingdom presented their current system and gave details of the technical and partly organisational requirements imposed. Written information obtained from other countries was taken into account as available.

After this discussion, the chair addressed the three basic approaches showing up:

- laying more emphasis on filling centres and QS/QM measures,
- laying more emphasis on technical requirements,
- being a combination of both, thus being the most stringent approach.

13. The information send in by several countries did not clearly point out, whether the extension is applied to all types of cylinders with or without the pi-marking or limited to one only (e.g. welded steel cylinders for LPG). From many countries, no information was available whether they use the clause of P 200 (10) v or not, how they use it and if they don't use it, why this is the case (e.g. "nobody applied for" or a safety concern).

14. So a basic review document would support further work; also more information about the numbers of cylinders concerned, split into "new" cylinders placed on the market since 2001/2003 according to TPED and "old" cylinders having been placed before – split up into those re-assessed following TPED (and thus pi-marked) and those not re-assessed – was deemed to be desirable.

Conclusion 2

15. The Working Group agreed to update the tables attached to document 2005/23; the tables should be split in one table containing updated information confirmed during the meeting in Krefeld and one table containing available information, which could not be confirmed during the meeting. The revised tables should be added to the minutes of the meeting. The Joint Meeting RID/ADR should be invited to address all countries to give information about the use of this clause in their respective country to further update the tables (see annex 3).

Further Questions

16. During technical debates, the following questions were raised:

1. If a cylinder has a pi-mark (from scratch = manufacture or import into EU, or from a periodic inspection following a re-assessment according to TPED), can the pi-marking be kept or not from the next periodic inspection on and, if yes, for a 10 year or also for a 15 year period, if granted by a EU Member State?
2. TPED states, that pressure equipment has to be taken out of the market, if it has a pi-mark, but fails the periodic inspection and therefore can no longer be pi-marked. Is this applicable to "new" cylinders only (since 2001/2003)? Could

such equipment then be re-assessed to obtain a pi-mark again? How to deal with this issue for “old” cylinders (prior to 2001/2003), if they had been re-assessed and pi-marked?

3. If the marking e.g. of a cylinder is changed e.g. for reasons coming from amended provisions or standards, is this to be considered as a replacing on the market?
17. In this context it was stated, that an access to the European market following “old rules” is not permitted (D, F) and that article 10 of TPED does not permit to remove a pi-mark as long as conformity to TPED and ADR/RID is confirmed.

Options to move ahead

18. Based on the chairs document (see annex 2) , the five options given were discussed, no additional option came up. It was highlighted, that

- any new system should first be limited to welded steel cylinders for LPG, other types may be discussed at a later stage (like seamless steel cylinders), aluminium cylinders in this context may pose specific corrosion problems (AEGPL),
- Industry is gathering data for other types of cylinders and gases to support a proposal to grant an extension of the interval to 15 years under defined conditions in future (EIGA-IGV),
- corrosion is not a specific problem of aluminium cylinders; it can affect all types of metal cylinders but it can be avoided by proper handling and inspection procedures also in between the interval of periodic inspections (ECMA).

Conclusion 3

19. Based on a summary of the chair, the Working Group agreed
- to limit its work at present on welded steel cylinders for LPG,
 - to reverse the order of the options as follows (for details of the options see annex 2):
 1. no change to P 200 (10) v = no harmonised solution and keeping of the existing inconsistency;
 2. delete letter v from P 200 (19) = 15 year intervals no longer possible;
 3. create a system to grant a 15 year extension applicable only to “new” cylinders (placed on the market after 1.7.2011 – to be discussed whether this could include also cylinders manufactured since 01.07.2001/2003 according to RID/ADR and TPED, bearing a pi-mark) being either mandatory or optional;
 4. include as well “old” cylinders (having been on the market prior to 1.7.2011 – to be discussed whether this should include or not also cylinders manufactured since 01.07.2001/2003 according to RID/ADR and TPED, bearing a pi-mark), which have been re-assessed according to TPED and bear a pi-mark, again either mandatory or optional;
 5. include “new” and “old” cylinders irrespective of a pi-mark, again either mandatory or optional.

20. It was agreed to submit these options to the Joint Meeting RID/ADR for advice which options should realistically be pursued.

21. It was further agreed, that a discussion on an extended interval for the periodic testing of other types of metal cylinders could take place at a later stage based on request of industry and on data presented on experience supporting such a proposal.

Components of a possible new system to grant 15 year intervals

22. The Working Group then discussed possible basic elements to be of importance for any new approach for a more generally applicable system to grant a 15 year interval (whether this interval could be applicable directly after the initial or a periodic inspection or only after a regular 10 year period according to ADR/RID P 200 had been successfully passed, was not discussed in detail):

- any new system should lead to a high safety level, should be practicable and achievable at reasonable cost, an inclusion of a stringent QS/QM system to tightly monitor the whole system/network by the owner of the cylinder – including customers of the cylinders – is a deciding element, the “Pros and Cons” of the options should be better evaluated (AEGPL);
- there is a standard available on pre-filling inspection of cylinders, there has been a big improvement over the years in materials used, manufacturing including QS/QM systems and testing methods for cylinders, transparency of the new system and the conditions applied is important for the functioning of any new approach (EIGA);
- for existing cylinders experience gathered over time should be taken into account as well (D - BAM);
- for new cylinders RID/ADR require a type approval, so sufficiently detailed technical information is available, for existing cylinders this might not be the case – there may be type approvals available, but for many existing cylinders even that is not the case; this should be taken into account in drafting suitable requirements (D – BMVBS);
- For the transport, approvals must be the same (the one according to RID/ADR and the one according to the inland TDG Directive because ADR/RID are European transport agreements : then they both apply to EU). The placing on the market and the putting into service can just be dealt between the EU Member States following TPED. One of the reason is that the goal of ADR/RID is mainly to assure the free transport by road or rail, but these European agreements do not deal with the placing on the market, the putting into service and the use. In EU, the double system (ADR/RID and TPED) on the conformity assessment and periodic inspection bodies should be avoided. That means that, in EU, the conformity assessment and periodic inspection bodies must be the same for TPED and ADR/RID, based on the ADR/RID requirements and on the complementary requirements from TPED (because TPED deals with others aspects than transport).(F);
- a new system should be applicable to transport in accordance with RID/ADR to all contracting parties of RID/ADR, double approvals (one according to RID/ADR and the new EU directive for the inland TDG for the purpose of transport and one according to TPED for placing on the EU market) should be avoided (D – BMVBS).

- there are three areas to cover by provisions to obtain a safe, practical and applicable system:
 1. Design and Construction of the cylinder,
 2. Filling operations including “customer-control”,
 3. Re-qualification and technical requirements;“private customers” of cylinders (e.g. those falling under the exemption clauses in 1.1.3.1) should not be included in a new system, because no “customer-control” will be achievable (AEGPL),
- technical and transitional provisions are likely to be included (D – BMVBS).

Conclusion 4

23. The Working Group agreed, that a new system should be developed to replace letter v in P 200 (10) and that the three areas proposed by AEGPL (see above) should be included in a proposal to be developed for acceptance by the Joint Meeting RID/ADR.

24. The aim of the new system should be, that, if after it’s inclusion in RID/ADR (and the new EU directive on inland TDG) the new system is applied by one country to one type of cylinders, no further approval should be required and the cylinders according to that type should be accepted by all RID/ADR countries for transport, by all EU Member States also for their inland transport and, if granted by a Member State, also for placing on the market according to TPED in the EU internal market with the interval for the periodic inspection raised to 15 years. Therefore the new system needs to be transparent for all countries and users involved.

Conclusion 5

25. It was further agreed by the Working Group to authorise the Chair and the German Delegation to submit the report (including the annexes) as an Inf. Paper to the Joint Meeting RID/ADR in March 2008 for acceptance of the conclusions presented, for advice on the options to pursue and to obtain a mandate to further develop the options, their “Pros and Cons” and a proposal for inclusion in RID/ADR from 1. January 2011 (see annex 4).

26. If the Joint Meeting agrees, a further meeting of the Working Group is planned for the 11./12. June 2008 in Münster/Westfalia (Germany). If countries and organisations interested in the work, who could not take part in the meeting in Krefeld, are willing to contribute to the work, they are welcome; they should indicate so to the Joint Meeting RID/ADR.

Conduct of the meeting

27. The meeting included a presentation of the testing facility of Air Liquide in Krefeld, which was widely appreciated. Furthermore the Chair and the Working Group thanked Mr. Markhoff of Air Liquide Germany for all the efforts taken to carry out the meeting smoothly and successfully and was especially grateful for the hospitality granted by Air Liquide.

28. In the name of the Working Group, AEGPL also thanked the Chair for organising, preparing and conducting the meeting.

Done at Bonn, 27. February 2008
Gregor Oberreuter
BMVBS, Germany

Annex 1

Agenda

Informal international meeting on the extension of the periodicity of periodic testing
of steel gas cylinders

Krefeld, Germany, 09./10.01.2008

Item 1: Welcome

Welcoming and presentation of delegates

Information about the meeting (e.g. locations, program, transport facilities)

Document(s): Invitation, Program of Meeting

Item 2: Agenda

Adoption of the Agenda

Document: Draft Agenda

Item 3: What's the problem?

The legal situation of RID/ADR versus TPED

- Documents:
- ECE/TRANS/WP.15/AC.1/2007/59 (Germany)
 - ECE/TRANS/WP.15/AC.1/2005/23 (AEGPL)
 - Inf. 12 of March 2005, Comments from Sweden to document TRANS/WP.15/AC.1/2005/23
 - Directive 1999/36/EC (TPED)
 - Info from the European Commission
 - Info from Sweden
 - RID/ADR as amended for 2009, especially sections 1.8.6 and 1.8.7, chapter 6.2, and current Packing Instruction P 200 (10) v
 - Technical Standards concerned [see EN 1440:2006, ISO 6406:199, EN 1968:2002 (except annex B), EN 1968:1996 + A1:2005 (except annex B)] EN 1803 ((not attached))
 - Chairs Thesis document about the legal situation

Item 4: How do they do it?

Information about the situation concerning the extension of periodicity

- which countries use this clause (P 200 (10) v)?
- for what types of cylinders and equipment an extension to 15 years has been granted?
- which testing scheme/system is applied?
- what are the conditions imposed?

- Additional documents:
- Information from Finland
 - Information from France
 - Information from Germany
 - Information from Luxemburg
 - Info from Norway: Norway has not extended the interval for the periodic inspection
 - Information from United Kingdom

Item 5: Where are we now?

- what is common, what is different?

Item 6: Where is the way out?

- how to tackle the issue within RID/ADR
 - for new cylinders?
 - for existing cylinders?
 - transitional periods?
- is there any consequential outcome for a revised TPED?

Item 7: What to do now?

- do we have the basis for a common proposal to RID/ADR?
- do we need another meeting?

Item 8: Other Business

Annex 2

Informal international meeting on periodicity
of periodic testing of steel cylinders

Krefeld, Germany, 09./10.01.2008

Agenda item 3

Information about the legal situation for steel cylinders
provided by the chair

- Theses 1: Before TPED, there wasn't a practical problem
Prior to the application of TPED, steel gas cylinders, especially for LPG, were manufactured and used mainly for national markets and under control of the national competent authority.
- Theses 2: Before TPED, reality of EU internal market was ignored
The internal market was concluded in 1985 to be realised by 1991. For transport of Dangerous Goods, a first step came later with the directives 94/55/EC and 96/49/EC. These directives provided for the harmonisation of technical provisions for the transport of dangerous goods, but didn't address internal market issues. Because of specific problems in the internal market concerning gas receptacles (especially cylinders) becoming apparent, directive 1999/36/EC (TPED) was created. The problem does not exist for other cylinders, receptacles and tanks for gases, as their intervals for periodic inspection are laid down in RID/ADR and no extension is possible. A different and more complex problem exists for composite cylinders and receptacles, but that is to be regarded as a separate task not to be tackled by this meeting.
- Theses 3: TPED implies the problem, but doesn't solve it
TPED requires that pi-marked cylinders, receptacles and tanks for gases can be placed on the market, used and periodically tested in all EU Member States regardless of the country of origin, the country/ countries of use and the notified body for conformity assessment and periodic inspection. Therefore a restriction as currently in RID/ADR Packing Instruction P 200 (10) v to limit use only to that country or those countries, having specifically granted the extension, legally is in contradiction to TPED.
- Theses 4: The problem is growing
TPED has to be applied since 1. June 2001/2003 for
- all receptacles for gases manufactured and placed on the market for the first time after that date; their conformity to RID/ADR has to be assessed according to TPED procedures by TPED Notified Bodies;
 - all receptacles for which the owner would like to use the optional procedure of re-assessment of conformity according to TPED to obtain a pi-mark for existing cylinders; de facto RID/ADR, Packing Instruction P 200 (10) v, prevents from using either the re-assessment

for existing cylinders or the extension of the period for testing to 15 years.

Furthermore the current situation is not transparent, can therefore not be understood and applied in another country and has prohibited a mutual recognition of a 15 year period by all RID/ADR countries.

So the problem is growing at least for new cylinders, including “UN cylinders” which form the basis of the new chapter 6.2 RID/ADR from 2009 and therefore may be regarded as the types of cylinders with the widest applicability and the best market perspectives for the future.

Theses 5: Technical Progress and Experience show that a 15 year period may become state of the art.

The standards used and referred to in RID/ADR have been developed further. Several countries have granted an extension of the period to 15 years, apparently without a significant increase in safety problems. But the conditions imposed still vary widely. To grant an extension of the testing interval to 15 years requires to lay down harmonised conditions and requirements in RID/ADR Packing Instruction P 200 (10) v.

Options (in reversed order as agreed by the Working Group):

1. Leave things as they currently are in RID/ADR P 200 (10) v. The conflict/inconsistency to TPED would then be remaining and could require monitoring and market surveillance authorities of countries to carry out appropriate action to either eliminate the pi-mark on steel cylinders with 15 year testing periods or limit the period to 10 years for pi-marked steel cylinders. As re-assessment of conformity for existing cylinders is not part of RID/ADR 2009, chapter 6.2, it should then consequently also be taken out from a revised TPED.
2. Delete letter v in packing instruction P 200 (10). This would automatically lead to a unified period of 10 years for the periodic inspection for steel cylinders and would also automatically strike out all legal problems related to TPED and the internal market for steel cylinders.
3. Add provisions to P 200 (10) v for a mandatory or optional, but general system for new welded steel cylinders only (i. e. those manufactured and first placed on the market since 1. June 2001/2003). This would require provisions to ensure that a harmonised level of safety is achieved regardless of the country granting the extension and regardless of the competent authority, it's delegate or the inspection body carrying out the procedure following RID/ADR 2009, sections 1.8.6 and 1.8.7. But this would exclude cylinders existing on the market prior to the 1. June 2001 from a 15 year period, but would keep TPED applicable to such cylinders.
4. Add provisions to P 200 (10) v for a system for new and existing welded steel cylinders for an optional or mandatory, but generally applicable system to extend the interval to 15 years. This would also require provisions to ensure that a harmonised level of safety is achieved regardless of the country and regardless of the competent authority, it's delegate or an inspection body carrying out the procedure according to RID/ADR 2009, sections 1.8.6 and 1.8.7. This option may lead to more complex provisions and may require transitional measures.

5. Add provisions to P 200 (10) v for a general interval of 15 years for the periodic inspection of welded steel cylinders. This is the option the most far reaching. It would also require to add provisions to ensure a harmonised level of safety regardless of the country and regardless of the competent authority, it's delegate or an inspection body carrying out the procedure according to RID/ADR 2009, sections 1.8.6 and 1.8.7. This option may lead to more complex provisions and may require transitional measures.

Annex 3

Information Tables about application of P 200 (10) v RID/ADR

Table 1: Table with information, which could be updated at the Krefeld meeting (09./10.01.2008)

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
SWITZERLAND	Yes since 1997		Yes	Yes	Yes		External and internal inspection required for periodic inspection, EN 1803 is applied, EN 1440 is applied only for the extension of the interval, Agreement of Swiss CA to the type approval required, Manufacturer and retesting body to be accepted by Swiss CA, Additional guideline to be applied, Filler to be accepted according to EN 1439, will be audited.
LUXEMBURG	Yes		Yes	No	No		In Luxembourg the interval for the periodic testing of steel gas cylinders is 10 years, which can be extended, to 15 years, pending the visual approval of the bottle by the certified verification body. There is yet another 'however' - if this certified verification body operates on a 10-year basis only, the bottle will anyhow be re-tested after these 10 years, and then no extension to 15 years is possible.
GERMANY	Yes	Cylinders manufactured from 1969. Basically for cylinders having an "old" type approval (see right column)	Yes	Yes	Yes		<p style="text-align: center;">Periodic inspection interval extended to 15 years – German conditions since 2002</p> <p style="text-align: center;">Summary of the announcement in the Verkehrsblatt 17/2002 (page 566) This announcement is currently being adapted to RID/ADR 2009.</p> <p>This national agreement was based on former regulations for national the design type approval in line with the "Druckbehälterverordnung" (former German</p>

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
		Possible for oldest cylinders under expert judgement with given expertise and experience.					<p>regulation on pressure equipment applicable until 1997, when RID/ADR introduced new provisions) for cylinders manufactured before the TPED has become mandatory. It is not applied to pi-marked cylinders.</p> <p>1. Requirements on the steel- cylinders</p> <ul style="list-style-type: none"> a) The requirements of EN 1442 for retesting shall be fulfilled (in addition to other requirements mandatory for welded steel cylinders; e. g. EN 1803) b) The date of manufacturing shall not be before 1968. c) The cylinders shall be design type approved by a German competent authority. d) The cylinders shall have a galvanising or a plastic coating in line with requirements GT1 of DIN 53151 and with the salt spray test in accordance with DIN 500021-SS. e) The valves shall be in accordance with EN 849 taking into account a number of closing cycles of 3000 instead of 2000. f) If already used valves are not confirmed by the competent authority as being appropriate for 15 years of use or retesting period, for the enlargement of retesting period new valves shall be fitted. <p>2. Requirements to service centres (fillers or repair shops)</p> <ul style="list-style-type: none"> a) It shall be assured that cylinders and valves have the same testing periodicity. b) They shall demonstrate a QM-System which is at least adequate to ISO 9002 and is appropriate to guarantee the specific requirements relevant for the service centre. c) The staff shall be specially trained such that they are aware of change of requirements for 15 years periodicity and relevant check criteria.

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES

COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
							<p>Decision guidance for the testing and rejection of cylinders has to be elaborated and provided.</p> <p>d) The LPG shall be of a quality that excludes inner corrosion of the cylinder (at least in line with DIN 51622 or EN 589).</p> <p>e) Between the LPG-supplier and the filler shall be a contractual obligation.</p> <p>f) The relevant cylinders shall be belongings of the filler or of a company that ensures the filling of the cylinders only in fuelling shops bounded by contract.</p> <p>The requirements of point 1 and 2 have to be verified by a national recognised testing and certification body. In the first years a re-audit has to be performed every year.</p> <p>Approved bodies shall announce their activity to the local authority in charge for the pressure equipment and the transport of dangerous goods. Deficits at the service centres detected by the certification body have to be announced to these authorities, too.</p>
FRANCE	Yes since 1984	Cylinders manufactured after about 1960-1965. 5 years interval for older cylinders	Yes	No	Yes	Periodical burst tests on samples. Pneumatic test on camping cylinders	<p>Possibility of self assessment granted</p> <p>Quality management system + periodical audit required</p> <p>The owner must ask the competent authority for the agreement for the 15 years periodic inspection interval on the basis of tests results described below. For maintaining, he must repeat his ask every time these periodic tests have to be performed.</p> <p>In France, this agreement has been delivered only for LPG cylinders which comply with conditions. Use of these cylinders is restricted to the national territory. The conditions of the approval are detailed below.</p>

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
							<p style="text-align: center;"><u>Conditions on the manufacture :</u></p> <ul style="list-style-type: none"> - The cylinders must be conforming to the ADR/RID/ADN. - The cylinders must be conforming to the EN 1442: 1998 with some modifications described below. - The point "6.8 Heat treatment" of the EN 1442: 1998 is modified so that the normalised heat treatment of the cylinders is mandatory (point 6.8.4 of the standard is aimless). It is a major point for France because it assures a sufficient volumetric expansion in case of overfilling which is one of the major risks of the filling of the LPG cylinders. For France, the normalised heat treatment is the guarantee of a good manufactured quality cylinder. - The minimum test pressure is 30 bar for all the cylinders (butane too) by application of the 7.3.2 of the standard (the point 5.3.1.a of the EN 1442: 1998 is modified). - In addition of the point "8.2 Approval procedure : tests on manufacture lots" of the EN 1442 : 1998, the burst tests must be made random, on a minimal sample rate of 1/200, without depending on the type or on number of cylinders of the manufacture lot. As the results of these tests are concerned, the point "7.2 Burst test" of the EN 1442: 1998 is modified. <ol style="list-style-type: none"> 1) The results of the burst tests must be analysed as metallurgic is concerned (the burst must not be in several pieces, the principal burst must neither present some fragility sign, neither visual defect of the material). 2) The results of the burst tests must be also statistically analysed. It assures that receptacles are issued from a mastered manufacture, meaning a manufacture which has got regular characteristics. We consider : p_0 : mean (average) of the plastic instability pressure

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES

COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension									
			External Inspection	Internal Inspection	Pressure test	Others										
							<p>Sp : standard deviation of the plastic instability pressure v0 : mean (average) of the volumetric expansion at the burst Sv : standard deviation of the volumetric expansion at the burst For each of the two below objects, the limit of the one sided “on right” statistic tolerance interval for a confidence level of 95% and for a fraction of the population of 99% must be calculated. The calculation is based on the standard NF X 06-032 (1973) by considering the normality of the population and the unknown variance. The results must be conform with :</p> <table border="1" data-bbox="1425 734 1932 911"> <thead> <tr> <th></th> <th>Butane cylinders</th> <th>Propane cylinders</th> </tr> </thead> <tbody> <tr> <td>p0 – k Sp (1)</td> <td>≥ 50 bar</td> <td>≥ 70 bar</td> </tr> <tr> <td>v0 – k Sv (1)</td> <td colspan="2">≥ 15 % (2)</td> </tr> </tbody> </table> <p>(1) The value of the coefficient k is given by the table III of the standard NF X 06-032 for: $1 - \alpha = 0,95$; $p = 0,99$; unknown variance. But for the new cylinders, a known variance equal to the higher of the estimated values for the 50 last cylinders lots (with the same description) submitted to the test can be considered too. In this case, the calculation must take into account :</p> <ul style="list-style-type: none"> ▪ the value of the coefficient k given by the table I of the standard NF X 06-032 for $1 - \alpha = 0,95$; $p = 0,99$; known variance. ▪ Sp and Sv are not calculated based on the test sample but on the 50 last lots. <p>(2) No value must be lower than 20% if the length of the cylinder is greater than the diameter D. No value must be lower than 17% if the length of the cylinder is lower than or equal to the diameter D.</p>		Butane cylinders	Propane cylinders	p0 – k Sp (1)	≥ 50 bar	≥ 70 bar	v0 – k Sv (1)	≥ 15 % (2)	
	Butane cylinders	Propane cylinders														
p0 – k Sp (1)	≥ 50 bar	≥ 70 bar														
v0 – k Sv (1)	≥ 15 % (2)															

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
							<p>3) For each lot, the manufacturer performs a test report which mentions :</p> <ul style="list-style-type: none"> - the date of the test, - the numbers of the cylinders of the lot, - the numbers of the cylinders of the sample and their volume, - the plastic instability pressures and the measured volumetric expansion, - the calculated relative volumetric expansion , - the limit of the statistic tolerance interval, calculated in conformity with the mentioned above standard. <p>The test report is attached to the manufacture file and is the object of a certificate checked, dated and signed by an inspection body (type A) in two exemplars which one is kept by the manufacture.</p> <p><u>Conditions to maintain the 15 periodic inspection interval :</u></p> <p>In order that the 15 years interval can be kept for a cylinders lot, it must have always satisfied to the periodic burst tests since their manufacture or since their first acceptance to the 15 years interval.</p> <p>Periodic burst tests must be made :</p> <ul style="list-style-type: none"> - during the 7th and 14th year after the year of the first hydraulic pressure test - during the years that are numerous of 15 of the 7th and 14th years described below. <p>More clearly, that means that, with N the year of the first test pressure, the periodic burst tests must be made during the :</p> <ul style="list-style-type: none"> - N + 7, - N + 14, - N + 22 = N + 7 + 15, - N + 29 = N + 14 + 15, - N + 37 = N + 7 + (2*15),

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES

COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
							<ul style="list-style-type: none"> - $N + 44 = N + 14 + (2 \cdot 15)$, - $N + 52 = N + 7 + (3 \cdot 15)$... <p>Sample: the numbers of the cylinders of the lot is Q. For each lot, the sample must be at least equal to the smallest value between $Q/200$ or $3 \times \sqrt[3]{Q}$. This number cannot be less than 20. Some lots can be mixed if the cylinders are identical and if the original test results are conform to the criteria fixed for a single lot. If the results of these mixed lots are not sufficient, the user is authorised to split it into 2 or many parts (a part must contain a whole number of lots) that must be conform to the following criteria.</p> <p>The result of the burst tests must be analysed as metallurgic is concerned and also statistically analysed. The parameters of the statistic evaluation are the same as for the manufacture except for the (2) which is replaced by the following: (2) The limit of the of the statistic tolerance interval of the volumetric expansion must not be lower than 15% reduced by 2% by 8 past years counted since the manufacture of the lot, without be lower than 12%.</p> <p>For each lot, the burst tests centre performs a test report which mentions :</p> <ul style="list-style-type: none"> - the date of the test, - the numbers of the cylinders of the lot, - the numbers of the cylinders of the sample and their volume, - the plastic instability pressures and the measured volumetric expansion, - the calculated relative volumetric expansion , - the limit of the statistic tolerance interval, calculated in conformity with the mentioned above standard. <p>The test report is the object of a certificate checked, dated and signed by an inspection body (type A) in two exemplars which one is kept by the burst tests centre.</p>

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
							<p>If the results of a lot are not conforming, all the cylinders of the lot must be submitted to a pressure test. This pressure test must be done before the first filling happening after the following test year. The owner must be able to take over the concerned cylinders from the commercial circuit when they arrive at the filling station in order to perform the pressure test. The cylinders of the lot cannot anymore pretend to have the 15 periodic inspection interval. If these pressure tests are not performed, the competent authority can prescribe the withdrawal of the market of the lot.</p> <p><u>Purpose of these criteria :</u></p> <p>These criteria assure on one hand that receptacles come from a mastered quality manufacture. This means the manufacture takes into account more than the minimum prescriptions of the regulation (so that it is acceptable to extend it from 10 to 15 years) and the manufacture has got regular characteristics. On the other hand these criteria make sure that there is no deterioration of this quality in time.</p>
UNITED KINGDOM	Yes		Yes	Yes	Yes/No	Pressure test according to company	<p>Current situation in the UK</p> <p>5. The UK has permitted 15 year intervals between the required testing for some time, provided that certain conditions are met. Principally, these are that the owner has to ensure that the cylinders are:</p> <ul style="list-style-type: none"> a) examined for excessive corrosion or damage before filling; b) filled at EN 1439 compliant filling sites; and a) inspected by a body recognised by the UK CA. <p>Copies of all related documentation must be provided to the CA on request.</p> <p>6. There has been no suggestion that this practice has had any negative consequences for safety. We would find it difficult to believe that more frequent testing could ever be justified in cost benefit terms.</p> <p>((For further details see file attached at the end of this table))</p>

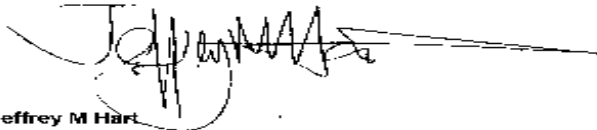
Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/ date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
FINLAND	Yes, since 1998	For UN 1965 for national delivery only, for cylinders manufactured before TPED only	Yes	Yes	Yes	Not more than 5% loss in weight	Accordance to EN 1440. New valve to be fitted.
SWEDEN	No	The competent authority in Sweden not has agreed to accept special packing provision (10) v in P200 and to extend the interval to 15 year; the periodical inspection is performed in accordance with the requirements in 6.2.1.6 of the RID/ADR.					<i>Additional remark of the Chair: Sweden had submitted detailed mainly technical comments and questions prior to the Krefeld meeting, but was not able to attend. These were not discussed at the meeting because the Working Group first concentrated on the general issues and discussion of detailed technical provisions is likely to be subject of a further meeting.</i>

Attached file with further information about the current practice in the United Kingdom:

**The Carriage of Dangerous Goods and Use of Transportable
Pressure Equipment Regulations 2004 (as amended)**

Notice Number 4

1. In accordance with Regulations 27(a)(i) of the Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (The Carriage Regulations) and paragraph (10)(v) of Packing Instruction P200 of Chapter 4.1 of RID and ADR¹, the GB Competent Authority agrees to the extension of the interval between periodic inspections for steel cylinders to 15 years, subject to all of the conditions set out in paragraphs 2 and 3.
2. The owner of the steel cylinder shall ensure:
 - (a) its periodic inspection is carried out by a notified body, an approved body or an inspection body that is recognised by the UK competent authority for that purpose. The inspection shall be in accordance with the requirements of EN 1440:1996.
for old transportable pressure receptacles (as defined in the Carriage Regulations) until 30th June 2006, periodic inspection may be carried out by a Competent Person, in accordance with Standard EN 1440:1996.
 - (b) it is only filled at filling sites in accordance with EN 1439;
 - (c) before it is filled, it is examined externally to verify it is free from excessive corrosion or excessive damage;
 - (d) he has sufficient control over the filling, repair, maintenance, period inspection and distribution of his cylinder population to ensure compliance with the above
3. The written procedure(s) for the inspection of cylinders prior to the filling and any other relevant documents shall be produced on request to the GB Competent Authority, or the enforcing authority. Copies of documents shall also be provided if requested.
4. This agreement shall only apply to cylinders filled and carried wholly within Great Britain.
5. This notice shall come into force immediately and shall remain in force until withdrawn.



Jeffrey M Hart

Head of Dangerous Goods Branch, Department for Transport, who has been duly authorised to sign in that behalf

20 October 2005

¹ Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) and Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), as revised or replaced from time to time. Current editions (2003)

Table 2: Table with information, which could NOT be updated at the Krefeld meeting (09./10.01.2008)

Welded LPG CYLINDERS REQUALIFICATION for an extended interval to 15 years periodicity WITHIN RID/ADR COUNTRIES							
COUNTRY	15 years acceptance/date according to P 200 (10) v	Comments	Type of tests				Requirements of the national competent authority for 15 years extension
			External Inspection	Internal Inspection	Pressure test	Others	
AUSTRIA	Yes		Yes		Yes		Quality management system + accordance to EN 1439 and 1440
BELGIUM	Yes		Yes	No	Yes	Pneumatic pressure test allowed, but currently not used for LPG	Accordance to EN 1439 and EN 1440. EN 1803 is not followed. Periodical audit by qualified body. Date of the next re-qualification on the cylinder
PORTUGAL	Yes	From date of manufacture for "ε" cylinders. From last re-qualification date for others.	Yes	No	Yes		
IRELAND	Yes		Yes	Yes	No		None. Professional code of practice in accordance with EN 1440. New or refurbished valve.
ITALY	Possible, but not applied	10 years interval applied	Yes	No	Yes		Accordance to EN 1440?
DENMARK	Possible, but not applied	10 years interval applied. 5 years interval for cylinders manufactured before 1956	Yes	Yes	Yes		Accordance to EU directive 1999/36: Approved quality management system in accordance to 1999/36/EEC or EN 45004. Accordance to EN 1440.

Annex 4

Draft

Terms of Reference

Working Group on periodicity of testing of gas cylinders

Based on the minutes of the meeting of the Working Group in Krefeld (Germany) on 09/10.01.2008 (see. Inf. XX), the Joint Meeting

- acknowledges the benefits of a harmonised approach to the current provisions in P 200 (10) v RID/ADR,
- agrees to require the Working Group to continue it's work and
 - further work out options 3 to 5 as presented, including evaluation of their "Pros and Cons", and develop a preferred option,
 - develop the basic technical and organisational requirements for a proposal for inclusion in RID/ADR based on the preferred option,
 - concentrate first on welded steel cylinders for LPG,
 - report back to the Joint Meeting in September 2008,
 - draft legal text for inclusion in RID/ADR from 1.1.2011 based on results of discussion by the Joint Meeting in September 2008 and
 - ensure, that a high level of safety is achieved being at least equivalent to the level of the current provisions of RID/ADR for the 10-year-interval,
- asks delegations of contracting parties and international organisations being interested in that work and willing to actively contribute to it, to indicate this to the Joint Meeting,
- endorses the meeting of the Working Group envisaged for the 11/12.06.2008 in Münster/Westfalia (Germany) and
- welcomes the offer from Germany to organise, host and chair the meeting.

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