

## Economic Commission for Europe

### Inland Transport Committee

#### Working Party on the Transport of Dangerous Goods

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

11 March 2014

Bern, 17–21 March 2014

Item 5 (b) of the provisional agenda

**New proposals**

### Pressure receptacles for paintball guns

#### Transmitted by Government of Belgium

#### Introduction

Recently, a discussion has taken place on different levels concerning the applicable requirements for pressure receptacles used for paintball guns, including the applicability of provisions on the transport of dangerous goods.

In the EU context the applicability of Directive 2010/35/EU on transportable pressure equipment (TPED) and Directive 97/23/EC on the approximation of the laws of the Member States concerning pressure equipment (PED) have been called into question. An inquiry was made at the European Commission to seek their opinion on the application of TPED. Subsequently, both the PED and TPED Market Surveillance groups (ADCO – Administrative Cooperation) were contacted to express their views and clarify the situation. The response of the European Commission to the inquiry can be found in the annex.

In this discussion, several points deserve to be highlighted:

1. There is general agreement that these receptacles, when transported empty, fall outside the scope of TPED and fall within the scope of PED.
2. However, when transported under pressure, they would have to meet the requirements of ADR/RID and be Pi-marked.
3. They do not fall under the exemption for gases stated in RID/ADR 1.1.3.2.
4. Probably only a minority of these receptacles will be transported under pressure. They are intended for sports purposes and not the transport of gases as such.
5. Particular attention should go to the intended use of these receptacles: high rates of filling cycles, handling by non-professionals, located near the head, arm or hand of the users during very active handling,...
6. The standards in ADR/RID 6.2 do not cover all the pressure components of a paintball gun.
7. Currently, both CE and Pi marked receptacles seem to circulate on the market. For the larger part however, these cylinders seem to be Pi-marked.
8. Distinction is made between paintball guns with refillable receptacles and those operated by pre-filled gas cartridges, which are included in the scope of TPED.

9. TPED and transport of dangerous goods regulations do not provide for specific user instructions to be provided for end users or consumers. PED requires such documentation,

10. Receptacles up to 1 liter capacity are not covered in the scope of PED as far as the essential requirements and the CE marking is concerned, only construction according to best available practice and user documentation remains.

From these discussion it became apparent that a clarification of the situation and the applicable regulations is desirable, possibly within ADR/RID<sup>7</sup>. This has for instance been previously done for cylinders for breathing apparatus in Special Provision 655:

655 Cylinders and their closures designed, constructed, approved and marked in accordance with Directive 97/23/EC<sup>4</sup> and used for breathing apparatus may be carried without conforming to Chapter 6.2, provided that they are subject to inspections and tests specified in 6.2.1.6.1 and the interval between tests specified in packing instruction P200 in 4.1.4.1 is not exceeded. The pressure used for the hydraulic pressure test is the pressure marked on the cylinder in accordance with Directive 97/23/EC<sup>4</sup>.

## Proposal

The Joint Meeting is invited to have a discussion on a possible way forward. One possible route is an amendment to SP 655 to deal with these receptacles for paintball guns with a capacity above 1 liter in the same way as done for breathing apparatus

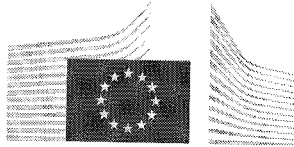
Depending on the results of the discussion, the European Commission is invited to evaluate a revision of article 2 (1) of the TPED Directive to exclude these receptacles explicitly from the scope of this Directive, as has been done for fire extinguishers (UN1044) and gas cylinders for breathing apparatus. In such a case also a discussion at PED level is advisable to evaluate in which category these cylinders would fall and if amendments are desired on how to deal with cylinders below 1 liter capacity. Alternatively, when the preference of the Joint Meeting is to place these items fully under ADR and TPED, the necessary amendments should be further examined.

With the preliminary feedback from the Joint Meeting, Belgium is prepared to submit a working paper for the next Joint Meeting in September 2014.

## Annex

(see separate pdf. file – CHAP(2013)01513 – correspondence with the European Commission)

<sup>4</sup> Directive 97/23/EC of the European Parliament and of the Council of 29 May 1997 on the approximation of the laws of the Member States concerning pressure equipment (PED) (Official Journal of the European Communities No. L 181 of 9 July 1997, p. 1 - 55).



**EUROPEAN COMMISSION**  
DIRECTORATE-GENERAL FOR MOBILITY AND TRANSPORT

Directorate C - Innovative & sustainable mobility  
**C.4 - Road safety**  
Head of Unit

Brussels, **24 SEP. 2013**  
MOVE/C4/SzS/TA/scm

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Dear Mr Andersen,

You have inquired on the application of Directive 2010/35/EU on transportable pressure equipment (hereinafter "Directive 2010/35/EU") to pressurised paintball gun equipment. Your inquiry has been registered in the European Commission's system for complaints and other requests under the reference CHAP(2013)01513. Please use this reference in your eventual further correspondence.

You will find in the annex an analysis of the inquiry concerning only the risks related to pressure contained in the product in the context of Directive 2010/35/EU. There may be other regulatory requirements, notably due to the character and nature of the product.

The view of the Commission services is that in the circumstances you have described the mentioned equipment does not fall within the scope of Directive 2010/35/EU. Therefore the Commission services consider that compliance with Directive 2010/35/EU cannot be required for the placing on the market of these products and their components. Please note, however, that only the Court of Justice of the European Union can make legally binding rulings on the interpretation of EU law.

Since specific measures taken by Member States' authorities are not under inquiry, this letter will not lead to any further action by the Commission at this stage. I therefore wish to inform you that we intend to close this case. However, should you have any new information of relevance that might justify further examination of the inquiry, I would be most grateful to receive it at your earliest convenience, and at any rate within four weeks of this letter, after which date the Commission might close the case.

Yours sincerely,



Szabolcs Schmidt

**Annex:** Applicability of Directive 2010/35/EU to paintball gun equipment

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## 1. PROBLEM DEFINITION AND DESCRIPTION OF THE PRODUCT

The inquiry concerns the application of Directive 2010/35/EU for the placing on the market of paintball gun equipment. The analysis here addresses only pressure-related hazards, and there may be other regulatory requirements relating to the control of articles resembling guns or other hazards and risks presented by the product.

According to the information provided the product is described as follows:

Cylinders for paintball gun equipment are available in different sizes ranging from 0.2 L to 2 L. The most common sizes are 0.8 L and 1.1 L. These are filled with air to a pressure from 200 to 310 bar. The two most common operating pressures of the cylinders are 230 and 310 bar.

The cylinders have a mounted regulator. The regulator is fitted with a burst disc designed to burst at 344 bar or 517 bar, depending on the operating pressure of the cylinder. Each regulator also has a burst disc designed to burst at 124 bar to protect the user and the gun in the event of a regulator failure. The regulators have an output pressure from 18 bar to 60 bar feeding the gun.

The cylinder and regulator must be fitted together to be used on a paintball gun.

The complete systems are sold to the retailers empty, and they are also sold to the end user empty when being shipped. If bought in a store the cylinder is pressurised to allow the user to operate the equipment directly after purchase. No transport is carried out of these devices in a pressurised state other than that by the private user after purchase.

The intended usage of these cylinders and regulators is as sports equipment.

## 2. DIRECTIVE 2010/35/EU ON TRANSPORTABLE PRESSURE EQUIPMENT<sup>1</sup>

Directive 2010/35/EU sets out detailed rules concerning transportable pressure equipment to enhance safety and ensure free movement of such equipment within the Union.

For the purposes of Directive 2010/35/EU "transportable pressure equipment" means all pressure receptacles, their valves and other accessories when appropriate, as covered in Chapter 6.2 of the Annexes to Directive 2008/68/EC on inland transport of dangerous goods<sup>2</sup> (hereinafter "Directive 2008/68/EC") when the equipment is used in accordance with those Annexes for the transport of gases.

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<sup>1</sup> Official Journal L 165 of 30.6.2010, page 1.

<sup>2</sup> Official Journal L 260 of 30.9.2008, page 13.

Directive 2010/35/EU defines furthermore that the following equipment are excluded:

- those transporting gases or articles with figures 6 and 7 in the classification code;
- aerosols;
- open cryogenic receptacles;
- gas cylinders for breathing apparatus;
- fire extinguishers (UN 1044);
- transportable pressure equipment exempted according to 1.1.3.2 of the Annexes to Directive 2008/68/EC. This list covers eight cases where transport of gases is not covered by the rules on the transport of dangerous goods;
- transportable pressure equipment exempted from the construction and testing of packages in the special provisions contained in 3.3 of the Annexes to Directive 2008/68/EC. These cover, *inter alia*, certain refrigerating machines and their components, lighters, lighter refills, shock absorbers, pressurized pneumatic or hydraulic articles (UN 3164) and certain gases in metal capsules containing not more than 25 g of the gas.

By contrast, gas cartridges (UN 2037) are explicitly mentioned belonging to the scope of Directive 2010/35/EU. Furthermore, its Annex I lists six other substances than gas which fall within the scope of Directive 2010/35/EU.

Directive 2010/35/EU covers also larger equipment, such as tanks, which are not relevant for this analysis.

### **3. ANALYSIS ON THE APPLICABILITY OF DIRECTIVE 2010/35/EU TO THE CASE AT ISSUE**

Provided that paintball gun equipment is pressurised only when used for sports purposes, the equipment is not used for the transport of gases according to the rules on the transport of dangerous goods. Eventual transport in a pressurised state by private individuals is exempted from the rules according to sub-section 1.1.3.1 (c) of Annex I, Section I.1 to Directive 2008/68/EC. In these conditions the equipment falls out of scope specified in Article 2(1) of Directive 2010/35/EU.

The conclusion is coherent with the large range of exemptions provided in 1.1.3.2 and 3.3 of the Annexes to Directive 2008/68/EC. These cases cover articles or substances which are not designed for the purpose of transporting gases under pressure but yet they are offered for transport under pressure. For empty cylinders offered for transport there is no need for such an explicit exemption, as no gas is being transported.

In case the cylinders were filled already at the manufacturers' or distributors' site before their dispatch to the retailer, it could be argued that they are used for the transport of gases and thus Directive 2010/35/EU would apply. However, there is a

minimum pressure for this to be the case. Any kind of receptacle filled with a gas having only hazards of oxidation or asphyxiation – such as air – and its pressure not exceeding 2 bar at 20 °C is exempted from Directive 2010/35/EU according to 1.1.3.2 (c) of Annex I, Section I.1 to Directive 2008/68/EC.

In addition to the formal analysis above it is recalled that the standards applied for the design and construction of equipment used for the transport of gases do not cover in their technical contents all the pressure components of a paintball gun. The application of Directive 2010/35/EU cannot therefore ensure the safety of the full assembly covering the cylinder, its regulator, safety devices and the gun itself.

Furthermore, Directive 2010/35/EU, or the Annexes to Directive 2008/68/EC, do not require providing any instructions to the end user on how to operate safely paintball guns and their components. Directive 2010/35/EU seeks to facilitate professional transport of gases and the operational requirements and instructions, such as filling instructions for cylinders, are in the Annexes to Directive 2008/68/EC. Thus the instructions are available for ordinary paintball gun users in a cumbersome format and they are not complete as they do not explain how to operate the gun.

Finally, it is recalled that certain types of paintball guns are operated by prefilled gas cartridges (UN 2037) which belong to the scope of Directive 2010/35/EU. Therefore the conclusions made here apply directly only to paintball guns as described in paragraph 1.

#### **4. CONCLUSIONS**

This analysis examines the application of Directive 2010/35/EU paintball guns operating on refillable gas cylinders.

The analysis concludes that paintball gun equipment do not fall in their ordinary conditions of use within the scope of Directive 2010/35/EU. Furthermore, Directive 2010/35/EU cannot ensure the overall safety of these products, neither does it provide for appropriate documentation and instructions to the intended users.

The paintball guns or their components should not be transported pressurised over 2 bar by other than private individuals. Otherwise additional requirements during their carriage will apply under Directive 2010/35/EU and Directive 2008/68/EC.

In conclusion, the Commission services consider that compliance with Directive 2010/35/EU should not be required for paintball guns and their components for their placing on the market unless it is demonstrated that the conditions of use are systematically different from those described in this analysis.