

**Joint Meeting of the RID Safety Committee
and the Working Party on the Transport of
Dangerous Goods
(Bern, 24-28 March 2003)**

- 1. Vacuum resistance of tanks for solid (powdery and granular) substances**
- 2. Addition to Special provision TE15**

Transmitted by Germany

Introduction

In accordance with sub-section 6.8.2.1.7 of RID/ADR 2003, shells designed to be equipped with vacuum valves shall be able to withstand, without permanent deformation, an external pressure of not less than 21 kPa (0.21 bar) [shells ... without vacuum valves 40 kPa (0.4 bar) above the internal pressure.

Sub-section 6.7.2.2.10 of the model regulations/IMDG-Code contain an identical requirement for portable tanks for the transport of **liquid substances**.

Since the 12th revision of the model regulation/30. Amdt. of the IMDG-Code, subject to competent authority approval, a reduction of the above mentioned pressures is allowed if the tanks are used for **solid substances** of packing group II or III only.

This part of Sub-section 6.7.2.2.10 is neither **included** in the current RID/ADR Chapter 6.7 nor in sub-section 6.8.2.1.7.

1. Proposal

Germany propose the implementation of this requirement in Sub-section 6.7.2.2.10 RID/ADR and a similar requirement in Sub-section 6.8.2.1.7 as follows:

In 6.8.2.1.7, add a new third sentence: "Shells used for the transport of solid substances of packing groups II or III only, which do not liquefy during transport, may be designed for a lower external pressure but not lower than 5 kPa (0.05 bar). In this case, the vacuum valve shall be set to relieve at this lower pressure".

2. Proposal

According to Special provision TE15, Tanks fitted with vacuum valves which open at a negative pressure of not less than 21 kPa (0.21 bar) shall be considered as being hermetically closed. This is relate to substances assigned to the tank codes L4BH and SGAH.

If the proposal No 1. is adopted, an adaptation is necessary. We propose therefore the following extension of TE15:

"For shells for the transport of solid substances of packing groups II or III only, which do not liquefy during transport, the negative pressure may be reduced up to 5 kPa (0.05 bar)."

Justification

The reasons for the different requirements in case of solid substances are the same as for the implementation in the model regulations and are as follows:

The requirements regarding vacuum strength of shells are based on physical data and on experience gained with liquid substances. Because of the lower danger potential and the smaller quantities of powdered or granular substances that may be released during accidents or incidents it should be possible to have different requirements with respect to vacuum strength that are appropriate to these substances.

In the model regulation no value is given for the vacuum design pressure. It is therefore up to the competent authority to decide about the right level.

For RID/ADR tanks this way is not user-friendly. To avoid any delay in building tanks and having the same design pressure for all tanks we propose the above pressure.