Alternative methods for periodic inspection of refillable pressure receptacles

Report of the working group on its lunch time session during the Geneva JM of Autumn 2016

Transmitted by the European Liquefied Petroleum Gas Association (AEGPL) on behalf of the Working Group

The working group met after presentation and discussions of the working document n°2016/22, the INF paper 4 and the presentation of INF 32 in the plenary.

The working group took note of an increased support of delegations of the work done so far. In addition, an increased support of the OMC specific case was noted.

Nevertheless, the main following concerns have been expressed by the participants, and have to be addressed.

1- Main concerns:

• Clarify uncertainties on the scope of the statistical tests:
  - Make clear for which types of cylinders it can be applied?
  - Make clear which ADR 6.2.1.6.1 checks (a to e) are concerned
• Be more precise and consistent in using statistical terms applied to pressure receptacles
• Be clearer on the responsibilities for manufacturers (eg availability of cylinder’s data), owners, filling centers, retest facilities & inspection bodies
• Provide more detailed requirements with regards to activities of sampling, destructive tests and statistical analysis
• Improve the determination of population groups for statistical purposes (sampling)
• Define minimum sampling size. (linked to the confidence level)
• Statistical methods shall enable to monitor degradation (ageing) of mechanical properties. (note : no requirements in the ADR concerning in service ageing tests / residual life time)
• Explain how to demonstrate the equivalent safety level (Note: for safety level comparison, the group needs current failure rate in service - Safety level means reliability level)

• Come back to the OMCs specific proposal, as a detailed illustration «of an alternative methods»

• For OMCs, analyze whether there are appropriate NDT methods

• Consider Interactions with standardization (CEN – ISO) - Regulation shall give the framework, then adequate standards to be referenced

2- Agenda for the next meeting:

**Dates and place:** Paris: 10 & 11th of January 2017 (at CFBP)

**Proposed Agenda:**

• Consider all above mentioned concerns

• Review available data on existing failure rates

• Review the revised general provision (to be circulated before the next meeting)

• Improve the specific provision for OMC, and the justifications (revised version to be circulated before the next meeting)

• Consolidate, in parallel with OMC, the general provision

for presentation **with an INF paper** to the next JM in Bern March 2017 meeting