

Disguised transportable gas cylinders

Gas companies around the world and their customers operate in excess of 200 million high pressure gas cylinders. The high level of safety during use and transportation of these gas cylinders is shown by the very low level of incidents caused by failures of gas cylinders or associated safety devices which sometimes is followed with the release of gas. To support this high level of safety are a number of European and International standards for the design, retest, filling checks and handling of gas cylinders. One of the most important operating standards is that any modification to a gas cylinder e.g. repair, change of service or stamp markings is only permitted by authorized experts who ensure that the relevant standards are followed to ensure the continued safe service of gas cylinders.

An unauthorised change of a stamp markings of a cylinder e.g. re-test data, gas type or filling pressure, the changing of the required colour coding and labelling or the intentional damaging of a gas cylinder is a criminal act. This is because the health, safety and potentially the life of employees in filling stations and third party persons are endangered.

From time to time cylinders with modified markings or similar are reported to EIGA. As a reminder, EIGA urgently recommends that its members ensure that all persons involved with the inspection of cylinders before filling operations or with gas cylinder retest shall be sufficiently trained to detect Cylinders with unauthorised markings or those that may have been damaged.

The following details can be indicators of unauthorised modifications

- Are there any contradictions between the cylinder valve type, the colour coding, precautionary label and the identification of the gas (stamp-markings, label)?
- Are there any signs of modification of the cylinder marks, e.g. missing marks, unusual or wrong letters?
- Are there any signs of modification of the cylinder, e.g. strange colour coding or mechanical treatment (grinding or welding work)?
- Are there any signs of modification of the cylinder valve or its cap, e.g. loosened screws, missing components (gland nut, locking pin, burst disk, new or different cap)?
- Is the indication of the gas (stamp marks, colour, gas name etc) unusual?

- Is the weight of the cylinder unusual for the type of gas?
- Is the size (volume, diameter, length) or design of the cylinder unusual?
- Are privately (customer) owned cylinders presented with a brand-new or partly new coating, which was not applied at the filling plant where it is to be filled?

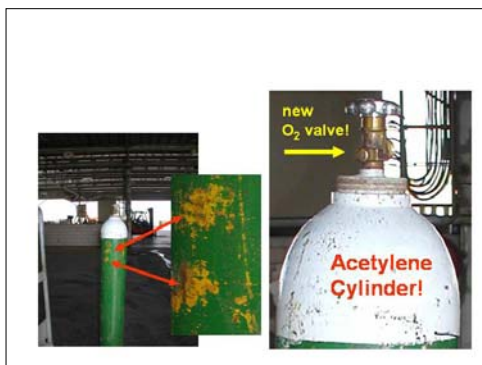
If one or more of the above mentioned should be answered with yes, a hammer test can give support. If the cylinder emits a dull sound, it could be an indication of that the cylinder has been modified. This is not applicable to acetylene cylinders and to aluminium cylinders.

Cylinders having one or more of the above defects or are suspected to have been modified shall be set aside for additional control measures.

« If in doubt, ask your supervisor »

The following examples show the importance of a sufficiently cylinder control before filling. All samples have been identified by the pre-filling checks:

- Conversion of an acetylene cylinder to a 150 bar oxygen cylinder (picture 1).
- Conversion of an acetylene cylinder to Argon mixture gas cylinder (picture 2).



Picture 2



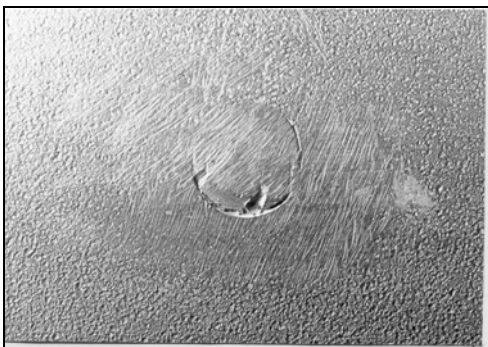
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Picture

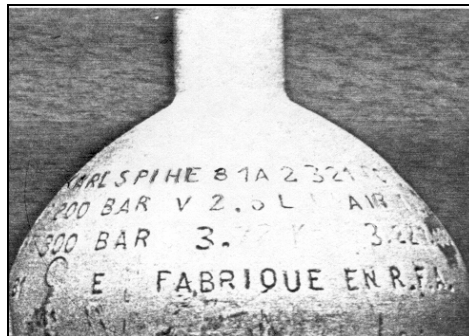
- A cylinder used by a smuggler (picture 3).
- A high pressure cylinder with a welded plug in the shell (picture 4).
- A cylinder with a falsified shoulder marking (picture 5).



Picture 3



Picture 4



Picture 5

Disclaimer

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