

Safety Alert

Number: 23-10

Published: 28/07/2023

Subject: Air Cylinder – High Pressure Discharge

What Happened / Narrative

During preparations to land a leaking Breathing Apparatus bottle ashore, a crewmember was draining the remaining pressure from the bottle when the pillar valve broke off from the top. On inspection of the damaged valve, it was found that there was a fracture of the threaded end which had resulted in failure along a crack likely caused by metal fatigue.

Although this couldn't've been foreseen, the potential for serious injury was very high if the bottle had been fully pressurised. In this case there were no injured persons.

Why Did it Happen / Cause

The cylinder and associated fittings were sent to the Fire Safety Engineers for further investigation with the following response;

"Upon inspection of the valve, I feel it is evident that this valve has seen a heavy impact, the nut retaining the handwheel has been pushed through the handwheel itself and you can see that what is left of the spindle has also seen a heavy impact along with the valve itself. In my opinion this cylinder has been dropped on the valve causing it to break. This is a very serious incident that ultimately could have caused a fatality".

Corrective Actions Taken / Recommendations

There was an extremely high potential for this incident to have caused harm. When reporting any incidents, it is for the benefit of all and allows us to learn. This learning and sharing of information will in turn minimise the chance of reoccurrence.

Actions recommended by vessel owner:

- When moving pressurised cylinders around the vessel extreme care is to be exercised.
- When decanting cylinders for transportation, the cylinder is to be held securely with the valve being slightly cracked open with the contents being released in a slow and controlled manner.
- Always make sure that the valve end of the cylinder is pointing away from yourself and any colleagues.
- When conducting this operation full PPE is to be worn.
- Vessel owner is investigating the fitting of Excess Flow Valves when individual cylinders pass through the maintenance workshop.
- The importance of accurate reporting is to be stressed to crews.

Photographs / Supporting Information



The information contained within this Safety Alert and the associated MSF web site is provided in good faith for the benefit of our members and does not constitute and is not intended to constitute professional advice or any form of formal representation on behalf of any MSF member or officer. The text as provided by submitting organisations may be amended to ensure that it is brief, informative and readable but will as far as reasonably practicable remain as per the intent of the original submission. For the avoidance of doubt, no liability whatsoever shall be attached to any guidance, recommendation or statement contained therein. Contents should be reviewed individually by recipients who will determine relevance to their own operations.