Technical Information

batterie füllungs systeme gmbh
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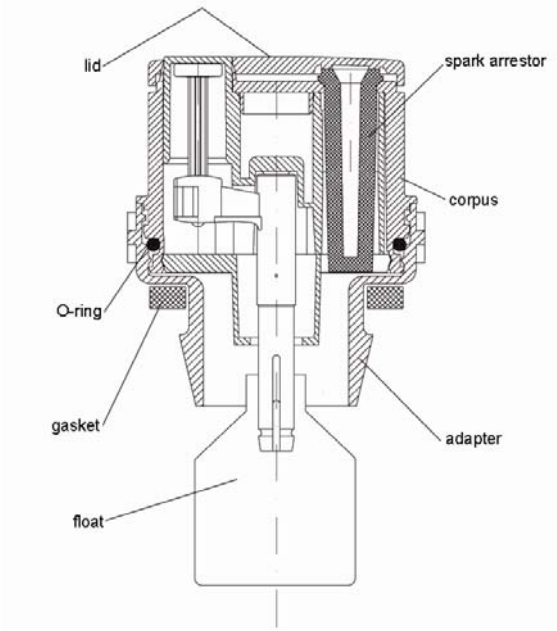
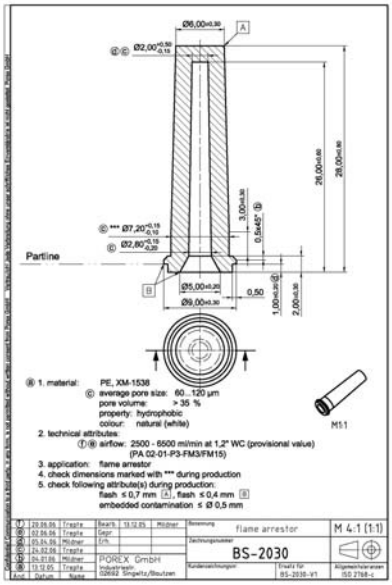
Tests to prove the effectiveness of an "external spark arrestor" built into the bfs plug III

Test:

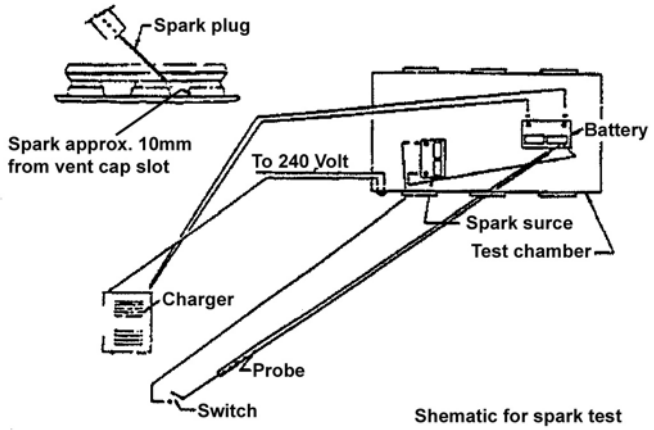
This is to prove that with the use of a spark arrestor built into the bfs plug III an arc-through into the battery cell from the outside can be avoided.
Question: It is possible to avoid an intrusion of flames, caused by an external ignition of concentrated hydrogen gas, into the inner part of the battery cells via this special bfs-plug with spark arrestor?

bfs plug with spark arrestor:





Method of Testing:



Shematic for spark test

Test Result (desired):

In case of an external ignition, there should be no reaction in the battery cell. The hydrogen gas ignited externally should not continue to burn on the surface of the plug or on top of the battery and has to be extinguished within a few seconds.

Test Result:

The respective tests have shown the following results:

1. Due to the spark arrestor built into the plug underneath the lid there was no arc-through and no reaction within the battery cell.

2. The hydrogen gas flame on the surface of the plug shuts off its self immediately.

3. After the ignition, the bfs-plug does not show any damages and is fully functioning. However, it is in any case recommended to exchange the spark arrestor for a new one.

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QM