

Quality Control Testing of Thermal and Liquid Reserve Batteries

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ABSTRACT:

The world of reserve batteries is split into two categories: thermal and liquid reserve. The technology of these batteries is beyond the research and development stage. Functional batteries have already been developed and put into military use for both categories of reserve batteries. There are, however, been problems arising with these batteries.

When dealing with the thermal battery used in Excalibur Rockets, mathematical modeling has given reason to believe that the battery will not perform to the standards that it should. By performing hot and cold temperature tests on this battery, the battery is able to be put under the extremes it will face in natural fighting environments. It is with these tests that we can determine if the battery is actually performing the way it should.

For liquid reserve batteries, the MOFA battery is currently the accepted solution to many reserve battery problems. There are, however, been some shortcomings with recent lots of the MOFA battery. It is believed that a change in material used is causing a shortened runtime for this battery. By testing the battery with equipment used to simulate an artillery fire, the battery can be tested to see if it meets the requirements it should be.

KEYWORDS: Reserve Battery, Liquid Reserve, Thermal Reserve, MOFA, Excalibur Battery

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