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Battery Testing



Background

RISE's test centre, ResLab has been providing high quality testing services to the renewable energy industry for many years. The RISE renewable energy systems design and testing team comprise qualified engineers with significant industry and sustainable energy experience.

RISE has developed the capability to perform temperature controlled long-term battery testing, together with performance testing to verify manufacturers' claims.

As well as specialising in traditional lead acid batteries, RISE is also developing its testing expertise in emerging battery technologies such as zinc bromide and lithium ion.

Battery Performance Testing

RISE's test laboratory contains a fully automated BaSyTec high power battery test system, together with a temperature controlled bath. This allows up to four separate tests on four different batteries to be performed simultaneously. Cell voltages of each battery are automatically recorded and electrolyte density measurements made at regular intervals.

Typical charge/discharge patterns that can be implemented are:

- Constant current charging (up to 200 A)
- Constant current discharging (up to 200 A)
- Constant voltage charging
- Charge/discharge cycling using time, current, voltage or other parameters
- Temperature controlled testing to +/- 2 °C at temperatures of 20 °C, 25 °C and 40 °C.

Future Trends

RISE is keeping a close watch on emerging battery technologies and will develop new testing methodologies to meet the requirements of the renewable energy industry.



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