Solar Storage Container Solutions

Operation and maintenance of energy storage devices

Overview

Can predictive maintenance help manage energy storage systems?

This article advocates the use of predictive maintenance of operational BESS as the next step in safely managing energy storage systems. Predictive maintenance involves monitoring the components of a system for changes in operating parameters that may be indicative of a pending fault.

Should the energy storage industry shift to a predictive monitoring and maintenance process?

This article recommends that the energy storage industry shift to a predictive monitoring and maintenance process as the next step in improving BESS safety and operations. Predictive maintenance is already employed in other utility applications such as power plants, wind turbines, and PV systems.

What are the guidelines for battery management systems in energy storage applications?

Guidelines under development include IEEE P2686 “Recommended Practice for Battery Management Systems in Energy Storage Applications” (set for balloting in 2022). This recommended practice includes information on the design, installation, and configuration of battery management systems (BMSs) in stationary applications.

How to control and maintain electrochemical storage facilities?

Another essential factor for the optimum control and maintenance of electrochemical storage facilities is to provide the plant with a system for processing and interpreting data, issuing reports and managing alarms, both for the technical teams in charge and for customers.

Are energy storage systems outpacing existing standards?

Between 2011 and 2013, several major grid energy storage installations experienced fires (figure 1). As a result, leading energy storage industry

experts recognized that technologies and installations were beginning to outpace existing standards.

How often should energy storage systems be inspected?

For example, an Energy Storage Safety 101 presentation during a May 2020 meeting of the California Energy Storage Alliance recommended semi-annual steps such as visual inspections of the overall system, examining the HVAC (cooling), and checks on the ESS software control and communications.

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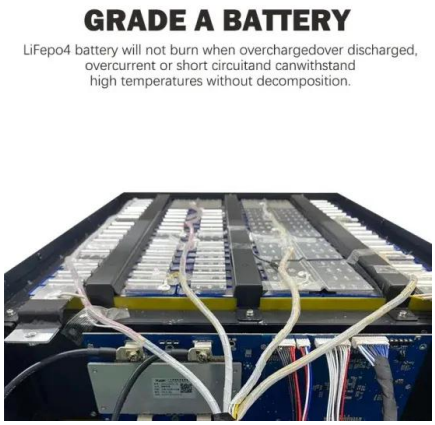

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