US 20240235213A9

(19) **United States**

(12) **Patent Application Publication**

ZENG et al.

(10) **Pub. No.: US 2024/0235213 A9**

(48) **Pub. Date: Jul. 11, 2024**

CORRECTED PUBLICATION

(54) **BATTERY SYSTEM AND EQUALIZATION MANAGEMENT METHOD THEREFOR**

(71) Applicant: **Envision Energy CO., LTD**, Jiangsu (CN)

(72) Inventors: **Wei ZENG**, Jiangsu (CN); **Jin WEN**, Jiangsu (CN)

(73) Assignee: **Envision Energy CO., LTD**, Jiangsu (CN)

(21) Appl. No.: **18/279,390**

(22) PCT Filed: **Jun. 28, 2021**

(86) PCT No.: **PCT/CN2021/102633**

§ 371 (c)(1),
(2) Date: **Aug. 30, 2023**

Prior Publication Data

(15) Correction of US 2024/0136825 A1 Apr. 25, 2024
See (22) PCT Filed.
See (86) PCT No.

(65) US 2024/0136825 A1 Apr. 25, 2024

Publication Classification

(51) **Int. Cl.**
H02J 7/00 (2006.01)

(52) **U.S. Cl.**
CPC ***H02J 7/0016*** (2013.01); ***H02J 7/0048*** (2020.01); *H02J 2207/20* (2020.01)

(57) **ABSTRACT**

Disclosed is a battery system, including several parallel-connected battery clusters, each battery cluster being connected to a power conversion system via a battery bus, and any one of battery clusters includes several series-connected battery packs; pack equalizers, corresponding to the battery packs on a one-to-one basis, a first end of the pack equalizer being connected to two ends of a corresponding battery pack, and a second end thereof being connected to a power source; and a cluster equalizer, a first end of the cluster equalizer being connected in series to the battery packs, and a second end thereof being connected to the power source. According to the battery system, the pack equalizer is used between the battery packs to regulate the equalization of the battery packs in each cluster; in addition, each battery cluster is connected to the cluster equalizer to realize equalization regulation of the battery cluster. Thus, the battery system has the advantages of low cost, small size, light weight and low loss. The present invention further relates to an equalization management method for the battery system.