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(54) Title (EN): BATTERY HEATING DEVICE

(54) Title (FR): DISPOSITIF DE CHAUFFAGE DE BATTERIE

(54) Title (JA): 電池昇温装置

(57) Abstract:

(EN): Provided is a battery heating device that heats a battery using a ripple current, wherein the battery is heated more quickly. A current generation device (1) is electrically connected to a battery pack (11) having a plurality of battery cells (111) electrically connected to each other, and generates a ripple current. A temperature difference reduction unit (10, 50, 60) reduces the temperature difference between battery cells to be heated by the ripple current, among the plurality of battery cells (111). Thus, the ripple current can be generated in the battery cells (111) while reducing the temperature difference between the battery cells (111), so that the current flowing through the battery cells (111) can be increased, and consequently, the battery cells (111) can be heated more quickly.

(FR): La présente invention concerne un dispositif de chauffage de batterie qui chauffe une batterie en utilisant un courant d'ondulation, la batterie étant chauffée plus rapidement. Un dispositif de génération de courant (1) est connecté électriquement à un bloc-batterie (11) qui a une pluralité de cellules de batterie (111) électriquement connectées les unes aux autres, et génère un courant d'ondulation. Une unité de réduction de différence de température (10, 50, 60) réduit la différence de température entre les cellules de batterie qui doivent être chauffées par le courant d'ondulation, parmi la pluralité de cellules de batterie (111). Ainsi, le courant d'ondulation peut être généré dans les cellules de batterie (111) tout en réduisant la différence de température entre les cellules de batterie (111), de telle sorte que le courant qui passe à travers les cellules de batterie (111) puisse être augmenté, et, par conséquent, les cellules de batterie (111) peuvent être chauffées plus rapidement.

(JA): リップル電流を用いて電池を昇温させる電池昇温装置において、電池をより速く昇温させる。電流発生装置(1)は、互いに電氣的に接続された複数の電池セル(111)を有する組電池(11)に電氣的に接続され、リップル電流を発生する。温度差低減部(10、50、60)は、複数の電池セル(111)のうちリップル電流によって昇温させたい電池セル同士の温度差を低減する。これにより、電池セル(111)同士の温度差を低減しつつ、電池セル(111)にリップル電流を発生させることができるので、電池セル(111)に流せる電流を大きくすることができ、ひいては電池セル(111)をより速く昇温させることができる。

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