



(51) International Patent Classification:

H01M 8/20 (2006.01) H01M 8/18 (2006.01)

(21) International Application Number:

PCT/IB2010/002004

(22) International Filing Date:

13 August 2010 (13.08.2010)

(25) Filing Language:

English

(26) Publication Language:

English

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: REDOX FLOW BATTERY SYSTEM EMPLOYING DIFFERENT CHARGE AND DISCHARGE CELLS

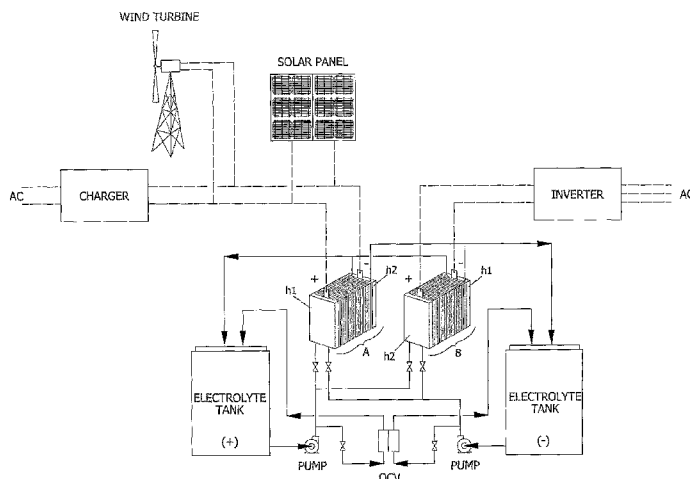


FIG. 1

(57) Abstract: Enhanced storage efficiency, reliability and durability of a redox flow battery system are achieved by employing distinct pluralities or groups of cells wherein all the cells of a first plurality have porous metallic electrodes in both compartments through which respective electrolyte solutions flow during a charging process of the battery system, and all cells of a second plurality may have porous carbon felt electrodes in both flow compartments through which the respective electrolyte solutions flow during a discharging process of the battery systems or solely in the compartment through which the negatively charged electrolyte solution flows and a porous metallic electrode in the other compartment where the positively charged electrolyte solution flows. All the cells of both groups of cells may be defined by repetitive sequences of stackable elements, according to a common bipolar or monopolar cell stack architecture.

