



(51) International Patent Classification:

<i>F25B 43/00</i> (2006.01)	<i>F28D 15/04</i> (2006.01)
<i>F25B 45/00</i> (2006.01)	<i>F28F 13/00</i> (2006.01)
<i>F28F 27/00</i> (2006.01)	<i>B01D 11/04</i> (2006.01)

(21) International Application Number:

PCT/US2023/010106

(22) International Filing Date:

04 January 2023 (04.01.2023)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) Priority Data:

63/296,336	04 January 2022 (04.01.2022)	US
------------	------------------------------	----

(71) Applicant: SOLVCOR TECHNOLOGIES LLC
[US/US]; 4200 San Jacinto Street, Houston, TX 77004
(US).

(72) **Inventor: NOVEK, Ethan**; 4200 San Jacinto Street, Houston, TX 77004 (US).

(74) **Agent: PORTER, Gregory;** Hunton Andrews Kurth LLP,
600 Travis Street, Suite 4200, Houston, TX 77002 (US).

(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, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE,
KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU,
LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG,
NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS,
RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GO, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: SYSTEMS AND METHODS FOR ENHANCED HEAT TRANSFER LOOPS

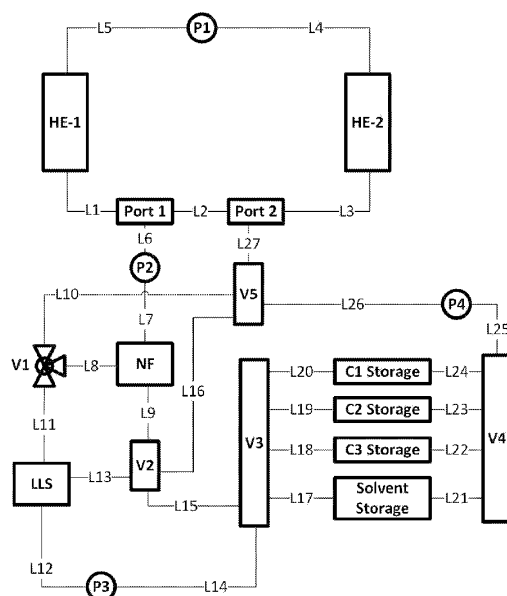


Figure 1

(57) **Abstract:** The present application pertains to processes and systems for enhanced heat transfer. In some embodiments a process is described for removing a portion of a chemical from a heat transfer loop comprising a heat transfer fluid. The process may comprise adding a solvent to the heat transfer fluid in the heat transfer loop; removing at least a portion of the heat transfer fluid from the heat transfer loop; separating said removed heat transfer fluid into a permeate and a retentate using a membrane; and adding at least a portion of the permeate to the heat transfer fluid in the heat transfer loop.

(88) Date of publication of the international search report:
10 August 2023 (10.08.2023)