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(71) Applicant: NUSCALE POWER, LLC [US/US]; 6650 SW Redwood Lane, Suite 210, Portland, Oregon 97224 (US).

(72) Inventors; and

(71) Applicants: BOTHA, Derick [US/US]; c/o NuScale Power, LLC, 6650 SW Redwood Lane, Suite 210, Portland, Oregon 97224 (US). MIRSKY, Steven [US/US]; c/o NuScale Power, LLP, 6650 SW Redwood Lane, Suite 210, Port-

land, Oregon 97224 (US). STEVENS, Kaeley [US/US]; c/o NuScale Power, LLP, 6650 SW Redwood Lane, Suite 210, Portland, Oregon 97224 (US).

(74) Agent: WILLIAMS, Matthew S.; PERKINS COIE LLP, P.O. Box 1247, Seattle, Washington 98111-1247 (US).

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(54) Title: THERMAL POWER CONVERSION SYSTEMS INCLUDING HEAT PIPES AND PHOTOVOLTAIC CELLS

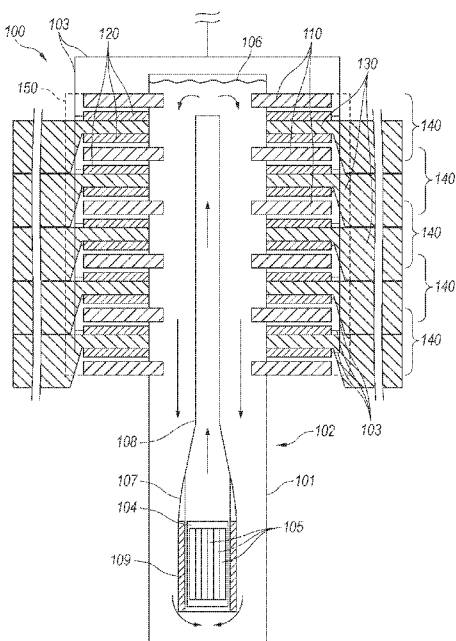


Fig. 1

(57) Abstract: Power generation systems, such as nuclear power generation systems, are described herein. A representative power generation system includes a heat source, a heat pipe, and a thermophotovoltaic cell. The heat pipe includes a first region and a second region. The first region is positioned to absorb heat from the heat source, and the second region is positioned to radiate at least a portion of the absorbed heat away from the heat pipe as thermal radiation. The thermophotovoltaic cell is positioned to receive the thermal radiation from the second region of the heat pipe and to convert at least a portion of the thermal radiation to electrical energy. The power generation system can further include another heat pipe positioned to remove waste heat from the thermophotovoltaic cell.



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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

See Search History document

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X — A	RU 2650885 C1 (AKTSIONERNOE OBSHCHESTVO GOSUDARSTVENNYJ NAUCHNYJ TSENTR ROSSIJSKOJ FEDERATSII FIZIKO ENERGETICHESKI) 18 April 2018; figures 1-3; see machine translation; entire document	1-2, 4-8, 11, 16-20 — 3, 9-10, 12-15
A	CN 111128413 A (NUCLEAR POWER INSTITUTE OF CHINA) 08 May 2020; see machine translation; entire document	1-20
A	US 2018/0224215 A1 (SYLVAN SOURCE, INC.) 09 August 2018; entire document	1-20
A	US 5,932,885 A (DEBELLIS, C ET AL.) 03 August 1999; entire document	1-20
A	US 4,755,350 A (KENNEL, E) 05 July 1988; entire document	1-20

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
P.O. Box 1450, Alexandria, Virginia 22313-1450
Facsimile No. 571-273-8300

Authorized officer

Shane Thomas

Telephone No. PCT Helpdesk: 571-272-4300