

Title (en)

Systems and methods for power generation from multiple heat sources using customized working fluids

Title (de)

Systeme und Verfahren zur Stromerzeugung aus mehreren Wärmequellen mittels angepassten Arbeitsflüssigkeiten

Title (fr)

Systèmes et procédés pour la génération d'électricité à partir de plusieurs sources de chaleur au moyen de fluides de travail adaptés

Publication

EP 2431580 A1 20120321 (EN)

Application

EP 11250808 A 20110919

Priority

US 88449110 A 20100917

Abstract (en)

A power generating system employs a Rankine cycle system that is coupled to multiple heat sources (106, 108). The Rankine cycle system includes a customized working fluid that comprises a mixture of a plurality of constituent fluids, the selection of which gives the mixture a working fluid profile. In one embodiment, the working fluid profile includes a temperature glide portion selected and optimized based on operating conditions of the heat sources, wherein the temperature glide portion includes a constituent phase point at which one of the constituent fluids undergoes a phase change before the other constituent fluids of the mixture.

IPC 8 full level

F01K 25/06 (2006.01); **F01K 25/10** (2006.01)

CPC (source: EP US)

F01K 25/06 (2013.01 - EP US); **F01K 25/10** (2013.01 - EP US)

Citation (search report)

- [XYI] FR 2575787 A1 19860711 - MENDOZA ROSADO SERAFIN [ES], et al
- [Y] US 4982568 A 19910108 - KALINA ALEXANDER I [US]
- [A] EP 1283393 A2 20030212 - BWX TECHNOLOGIES INC [US]
- [A] DE 4442859 A1 19960605 - KLEMM MANFRED [DE]

Cited by

CN110746936A; US2013160450A1; US9689281B2; WO2022011995A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2431580 A1 20120321; US 2012067049 A1 20120322

DOCDB simple family (application)

EP 11250808 A 20110919; US 88449110 A 20100917