

Title (en)
HIGH-EFFICIENCY POWER GENERATION SYSTEM

Title (de)
HOCHEFFIZIENTES STROMERZEUGUNGSSYSTEM

Title (fr)
SYSTÈME DE PRODUCTION D'ÉNERGIE DE HAUTE EFFICACITÉ

Publication
EP 3104004 A4 20180328 (EN)

Application
EP 14848673 A 20141118

Priority
• CN 201310487826 A 20131017
• CN 2014091381 W 20141118

Abstract (en)
[origin: EP3104004A1] A high-efficiency power generation system, comprising: at least one first heat exchanger (1) containing therein a liquid-state working medium having a low boiling point, said first heat exchanger enabling heat exchange between a first fluid inputted from the outside and said working medium, so as to vaporize said working medium, wherein the boiling point of the liquid-state working medium having a low boiling point is lower than the temperature of the first fluid by at least 1 degree Celsius; a hydraulic generator (2); at least one gas-liquid recovery apparatus; at least one liquefaction apparatus; and, a control apparatus (8). In the system, vaporization and liquefaction recovery of a working medium having a low boiling point are used to allow for recirculation in respect of the entire power generation process. Furthermore, temperature is reduced by means of water evaporation cooling. The system also overcomes the technical difficulty in the prior art of using compressors and booster pumps to handle the enormous amount of energy consumption required for recovery of a working medium.

IPC 8 full level
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CPC (source: EP US)
F01K 25/08 (2013.01 - EP); **F01K 25/10** (2013.01 - EP US); **F01K 27/005** (2013.01 - EP); **F03G 7/06** (2013.01 - EP)

Citation (search report)
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• [A] WO 2012100275 A2 20120802 - LOIDL WALTER [AT]
• [A] GB 2422877 A 20060809 - PARFITT DUNCAN JAMES [GB]
• See references of WO 2015043551A1

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Designated contracting state (EPC)
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