Title (en)

Air conditioning system capable of converting waste heat into electricity

Title (de)

Klimaanlagensystem, das zur Umwandlung von Abwärme in Elektrizität in der Lage ist

Title (fr)

Système de climatisation capable de convertir de la chaleur de déchets en électricité

Publication

EP 2677253 A1 20131225 (EN)

Application

EP 12004694 A 20120621

Priority

EP 12004694 A 20120621

Abstract (en)

An air conditioning system includes an air conditioning unit (1) and an electricity generating unit (2). The air conditioning unit (1) includes an expansion valve (11), an evaporator (12), a compressor (13) and a condenser (14) that cooperate to form a first coolant circulating loop for circulation of a first coolant. The electricity generating unit (2) includes a heat radiator (22) disposed adjacent to the evaporator (12), a heat absorber (24) coupled to the heat radiator (22) and disposed adjacent to the condenser (14), a turbine (25) coupled between the heat radiator (22) and the heat absorber (24), and an electricity generator (26) coupled to the turbine (25). The heat radiator (22), the heat absorber (24) and the turbine (25) cooperate to form a second coolant circulating loop for circulation of a second coolant. The electricity generator (26) converts mechanical energy from the turbine (25) into electricity.

IPC 8 full level

F25B 11/00 (2006.01)

CPC (source: EP)

F01K 25/106 (2013.01); **F24F 5/0042** (2013.01); **F25B 11/00** (2013.01); F02G 1/043 (2013.01); F02G 2280/20 (2013.01); F25B 2400/14 (2013.01)

Citation (search report)

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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)

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