

Title (en)
DEHUMIDIFYING COOLING DEVICE FOR DISTRICT HEATING

Title (de)
ENTFEUCHTUNGSKÜHLGERÄT FÜR EINE FERNHEIZUNG

Title (fr)
DISPOSITIF DE DÉSHUMIDIFICATION PAR REFROIDISSEMENT POUR CHAUFFAGE URBAIN

Publication
EP 2078175 A4 20130717 (EN)

Application
EP 07715548 A 20070308

Priority
• KR 2007001148 W 20070308
• KR 20070010673 A 20070201

Abstract (en)
[origin: WO2008041788A1] Disclosed is a dehumidifying cooling device for district heating which comprises; a case having a first partition to divide the interior of the case into a wet channel and a dry channel and a second partition to divided the wet channel into a first wet channel and a second wet channel, a sensible heat exchanger to heat exchange the outside air in the first wet channel with the outside air in the second wet channel, a heating coil for raising the temperature of the outside air in the second wet channel, a rotatable de humidifying wheel for adsorbing and removing moisture contained in the circulated air within the dry channel, and a regenerative-evaporative cooler for cooling the circulated air in the dry channel. With this configuration, the device can carry out an air cooling operation by use of hot water supplied by district heating systems and gas or oil boilers installed in individual households, thereby achieving a reduced device size via the implementation of the cooling operation under the atmospheric pressure state and reducing manufacturing costs by virtue of a simplified system configuration.

IPC 8 full level
F24F 3/14 (2006.01)

CPC (source: EP KR US)
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Citation (search report)
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• [A] US 5170633 A 19921215 - KAPLAN VLADIMIR [US]
• [A] US 6338258 B1 20020115 - LEE DAE YOUNG [KR], et al
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• [A] JP 2000337659 A 20001208 - EARTH CLEAN TOHOKU KK
• [A] DAOU K ET AL: "Desiccant cooling air conditioning: a review", RENEWABLE AND SUSTAINABLE ENERGY REVIEWS, ELSEVIERS SCIENCE, NEW YORK, NY, US, vol. 10, no. 2, 1 April 2006 (2006-04-01), pages 55 - 77, XP028033328, ISSN: 1364-0321, [retrieved on 20060401], DOI: 10.1016/J.RSER.2004.09.010
• See references of WO 2008041788A1

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