Title (en)

Cooling system with a unit for determining the amount of frost and method of controlling such a system

Title (de)

Kühlsystem mit einer Einheit zur Bestimmung der Eisbildung und Steuerungsverfahren dafür

Title (fr)

Système de refroidissement comprenant une unité de détermination d'une quantité de givre et procédé de contrôle d'un tel système

Publication

EP 2189740 A3 20110427 (EN)

Application

EP 09167220 A 20090805

Priority

KR 20080117363 A 20081125

Abstract (en)

[origin: EP2189740A2] An oscillatory wave generating unit and an oscillatory wave sensing unit are installed at both ends of a refrigerant pipe of an evaporator of the cooling system, an amount of frost formed on the refrigerant pipe is determined by comparing a wave form of an oscillatory wave generated from one end of the refrigerant through the oscillatory wave generating unit and a wave form of the oscillatory wave sensed by the other one end of the refrigerant through the oscillatory wave sensing unit, and whether or not a defrosting operation is performed is determined by a result of the determination. The cooling system increases the accuracy in sensing the amount of the frost formed on the evaporator of a refrigerator, a Kimchi refrigerator, or an air conditioner, and respectively starts and ends the defrosting operation at proper points of time, thus enhancing a heat-exchanging performance and increasing energy efficiency.

IPC 8 full level

F25D 21/02 (2006.01)

CPC (source: EP KR US)

F25D 21/02 (2013.01 - EP KR US); **F25D 29/005** (2013.01 - KR); F25B 2700/111 (2013.01 - EP KR US)

Citation (search report)

- [XI] US 4860551 A 19890829 - QUERY DANIEL S [US]
- [XI] FR 2555715 A1 19850531 - APPLIC THERMIQUE CIE INDLE [FR]

Cited by

CN104121755A

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

EP 2189740 A2 20100526; **EP 2189740 A3 20110427**; KR 20100058813 A 20100604; US 2010126191 A1 20100527

DOCDB simple family (application)

EP 09167220 A 20090805; KR 20080117363 A 20081125; US 45780709 A 20090622