

Title (en)

Method for controlling a defrost operation of an evaporator

Title (de)

Verfahren zum Steuern des Abtauprozesses eines Verdampfers

Title (fr)

Procédé de commande de l'opération de dégivrage d'un évaporateur

Publication

EP 1367346 B1 20070328 (DE)

Application

EP 03010509 A 20030509

Priority

DE 10223716 A 20020528

Abstract (en)

[origin: EP1367346A2] Relative humidity of air recycled from the coolant evaporator is measured, and represents the saturated state, having passed through the evaporator. Volumetric flowrate V_L of air circulated through the evaporator is determined. From the state equation for humid air, absolute humidities are determined at the evaporator inlet (XRL) and outlet (XZL). The quantity of water stored in the evaporator is given by $\Delta T_{AX} = X_{RL} - X_{ZL}$. The equation $m_W = \rho_L V_L \Delta T_{AX} \Delta T_{At}$, is used to determine the quantity of water stored during the interval ΔT_{At} at the evaporator, where ρ_L is the density of air. Between two defrosting processes, water masses m_W determined in this way are summed and compared with an adjustable, desired value. Once this is reached, the defrosting process is initiated.

IPC 8 full level

F25D 21/06 (2006.01); **F25B 47/02** (2006.01); **F25D 21/00** (2006.01); **F25D 21/02** (2006.01)

CPC (source: EP)

F25B 47/02 (2013.01); **F25D 21/006** (2013.01); **F25D 21/02** (2013.01)

Cited by

EP1916490A1; EP1725819A4; WO2005083337A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

EP 1367346 A2 20031203; **EP 1367346 A3 20050803**; **EP 1367346 B1 20070328**; AT E358264 T1 20070415; DE 10223716 A1 20031211; DE 50306888 D1 20070510; ES 2283677 T3 20071101

DOCDB simple family (application)

EP 03010509 A 20030509; AT 03010509 T 20030509; DE 10223716 A 20020528; DE 50306888 T 20030509; ES 03010509 T 20030509