

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  $\Delta T_{At}$  at the evaporator, where  $\rho_L$  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

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CPC (source: EP)

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Cited by

EP1916490A1; EP1725819A4; WO2005083337A1

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