Title (en)

Method for determining the performance of a cooling machine

Title (de)

Verfahren zur Bestimmung der Leistungszahl einer Kältemaschine

Title (fr)

Procédé de détermination du facteur de puissance d'une machine frigorifique

Publication

EP 2196740 B1 20141029 (DE)

Application

EP 09014744 A 20091126

Priority

DE 102008061631 A 20081211

Abstract (en)

[origin: EP2196740A2] The method involves determining refrigerant temperatures (T1-T3) in an inlet region of a compressor (14) and outlet regions of a condenser (16) and an expansion valve (18) using temperature sensors (28, 30, 32) arranged in a closed loop (10), respectively. Enthalpies of the closed loop are calculated from the determined temperatures. Heat energy and electrical energy of cooling machine are calculated from difference of calculated enthalpies. A coefficient of performance of the cooling machine is determined from quotient of the calculated heating and electrical energies. An independent claim is also included for a cooling machine comprising an evaluation device.

IPC 8 full level

F24F 11/00 (2006.01); **F25B 49/00** (2006.01); **F25B 49/02** (2006.01); **G01L 3/26** (2006.01)

CPC (source: EP US)

F24F 11/30 (2017.12 - EP US); **F24F 11/46** (2017.12 - EP US); **F24F 11/62** (2017.12 - EP US); **F25B 49/005** (2013.01 - EP US); F24F 2110/00 (2017.12 - EP US); F25B 2500/19 (2013.01 - EP US); F25B 2700/193 (2013.01 - EP US); F25B 2700/1933 (2013.01 - EP US); F25B 2700/21151 (2013.01 - EP US); F25B 2700/21152 (2013.01 - EP US); F25B 2700/21163 (2013.01 - EP US); F25B 2700/21174 (2013.01 - EP US)

Cited by

CN110741212A; CN109140678A; CN107328048A; DE102019135437A1; DE102019135437B4

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 2196740 A2 20100616; **EP 2196740 A3 20100915**; **EP 2196740 B1 20141029**; DE 102008061631 A1 20100617; US 2010153057 A1 20100617; US 8775123 B2 20140708

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EP 09014744 A 20091126; DE 102008061631 A 20081211; US 63501909 A 20091210