

Title (en)

OPERATING MEDIUM FOR CARBON DIOXIDE-COOLING SYSTEMS AND AIR-CONDITIONING SYSTEMS

Title (de)

BETRIEBSMITTEL FÜR KOHLENDIOXID-KÄLTE- UND KLIMAAANLAGEN

Title (fr)

AGENTS D'EXPLOITATION POUR INSTALLATIONS FRIGORIFIQUES ET DE CLIMATISATION AU DIOXYDE DE CARBONE

Publication

**EP 1461404 B1 20101110 (DE)**

Application

**EP 02795046 A 20021224**

Priority

- DE 0204741 W 20021224
- DE 10164056 A 20011229

Abstract (en)

[origin: US7303693B2] The invention relates to resource operating medium compositions containing additivated lubricants based on polyalkylene glycols and/or neopentyl polyol esters, which are additivated with alkylated triaryl phosphate esters which are suitable for lubricating refrigerators, air-conditioning systems, heat pumps and similar systems which are operated using carbon dioxide as an operating medium.

IPC 8 full level

**C10M 169/04** (2006.01); **C10M 105/38** (2006.01); **C10M 107/34** (2006.01); **C10M 133/12** (2006.01); **C10M 137/04** (2006.01); **C10M 171/00** (2006.01); **C10N 20/04** (2006.01); **C10N 40/30** (2006.01)

CPC (source: EP KR US)

**C10M 105/38** (2013.01 - KR); **C10M 105/42** (2013.01 - KR); **C10M 137/04** (2013.01 - KR); **C10M 169/04** (2013.01 - EP US); **C10M 171/008** (2013.01 - EP US); **C10M 2207/2835** (2013.01 - EP US); **C10M 2209/1033** (2013.01 - EP US); **C10M 2209/1055** (2013.01 - EP US); **C10M 2209/1075** (2013.01 - EP US); **C10M 2209/1085** (2013.01 - EP US); **C10M 2209/1095** (2013.01 - EP US); **C10M 2223/041** (2013.01 - EP US); **C10N 2030/06** (2013.01 - EP US); **C10N 2040/30** (2013.01 - EP US)

Designated contracting state (EPC)

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

Designated extension state (EPC)

LT LV

DOCDB simple family (publication)

**US 2005127320 A1 20050616**; **US 7303693 B2 20071204**; AT E487780 T1 20101115; AU 2002360924 A1 20030724; DE 10164056 A1 20030710; DE 10164056 B4 20060223; DE 50214767 D1 20101223; DK 1461404 T3 20110221; EP 1461404 A1 20040929; EP 1461404 B1 20101110; ES 2356123 T3 20110405; JP 2005514492 A 20050519; KR 100695190 B1 20070319; KR 20040075914 A 20040830; WO 03057804 A1 20030717

DOCDB simple family (application)

**US 50062905 A 20050216**; AT 02795046 T 20021224; AU 2002360924 A 20021224; DE 0204741 W 20021224; DE 10164056 A 20011229; DE 50214767 T 20021224; DK 02795046 T 20021224; EP 02795046 A 20021224; ES 02795046 T 20021224; JP 2003558106 A 20021224; KR 20047010241 A 20021224