

Title (en)
Refrigeration system

Title (de)
Kühlsystem

Title (fr)
Système frigorifique

Publication
EP 1134514 A1 20010919 (EN)

Application
EP 00105695 A 20000317

Priority
EP 00105695 A 20000317

Abstract (en)
The invention relates to a cascade type refrigeration system. The refrigeration system comprises a first closed refrigeration circuit (17) and a second closed refrigeration circuit (18). The two refrigeration circuits (17,18) are linked by means of a cascade heat exchanger (5) comprising the first condenser and the second evaporator arranged so that the first condenser is cooled by means of the evaporation of the second liquid refrigerant in the second evaporator. The refrigeration system is characterised in that said first liquid refrigerant consist substantially of CO₂ and the first evaporator (3) is operating at pressures above 120 psig. The invention also relates to a method of refrigeration. <IMAGE>

IPC 1-7
F25B 7/00; **F25B 9/00**

IPC 8 full level
F25B 7/00 (2006.01); **F25B 9/00** (2006.01)

CPC (source: EP US)
F25B 7/00 (2013.01 - EP US); **F25B 9/008** (2013.01 - EP US); **F25B 2309/06** (2013.01 - EP US); **F25B 2400/13** (2013.01 - EP US); **F25B 2400/23** (2013.01 - EP US)

Citation (applicant)
US 5042262 A 19910827 - GYGER ROGER F [US], et al

Citation (search report)
• [DXY] US 5042262 A 19910827 - GYGER ROGER F [US], et al
• [A] WO 9830847 A1 19980716 - NORILD AS [NO], et al
• [A] DE 29906359 U1 19990805 - FUHRMANN & SCHREINER GMBH [DE]
• [A] EP 0675331 A2 19951004 - TOSHIBA KK [JP]
• [Y] HEINRICH, REINHART: "Lehrbuch der Kältetechnik, Band 1, 4. Auflage", 1997, C.F. MÜLLER VERLAG, HEIDELBERG, XP002143605
• [A] CHEN J: "Performance characteristics of a two-stage irreversible combined refrigeration system at maximum coefficient of performance", ENERGY CONVERSION AND MANAGEMENT,GB,ELSEVIER SCIENCE PUBLISHERS, OXFORD, vol. 40, no. 18, December 1999 (1999-12-01), pages 1939 - 1948, XP004179090, ISSN: 0196-8904

Cited by
DE102005016180B4; AU2008322843B2; EP2330368A3; CN106288475A; EP2552182A1; DE10138255B4; GB2559658A; EP2261570A3; CN106247656A; CN106322806A; EP2924372A4; US9664424B2; US7065979B2; US6915652B2; WO2009063055A1; WO2004042291A3; US8544283B2; US9335085B2; US8991204B2; US9657977B2; US9513033B2; US10260779B2; US10989445B2; US11549727B2; WO2008112566A3; WO2008112569A3; WO02066908A1

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 1134514 A1 20010919; JP 2001304704 A 20011031; US 2001023594 A1 20010927

DOCDB simple family (application)
EP 00105695 A 20000317; JP 2001075123 A 20010316; US 79663901 A 20010302