

Title (en)  
REFRIGERATION CYCLE DEVICE

Title (de)  
KÄLTEKREISLAUFVORRICHTUNG

Title (fr)  
DISPOSITIF À CYCLE DE RÉFRIGÉRATION

Publication  
**EP 2476973 B1 20180926 (EN)**

Application  
**EP 09850230 A 20091007**

Priority  
JP 2009067459 W 20091007

Abstract (en)  
[origin: EP2476973A1] In a refrigeration cycle apparatus that recovers power in an expander, obtaining a refrigeration cycle apparatus that is capable of reliably starting up the expander compared to conventional refrigeration cycle apparatuses. The refrigeration cycle apparatus includes a refrigerant circuit having a first compressor 2, a radiator 4, an expander 5 and an evaporator 6 connected in series with a piping; and a second compressor 3 disposed between the first compressor 2 and the radiator 4, the second compressor 3 being driven by power recovered by the expander 5. The second compressor being a positive displacement compressor. The refrigeration cycle apparatus, further including a pressure regulating device (a bypass and an on-off valve) that maintains a pressure on a discharge side of the second compressor to be lower than a pressure on a suction side of the second compressor at least until the second compressor is started up.

IPC 8 full level  
**F25B 1/10** (2006.01); **F25B 9/06** (2006.01)

CPC (source: EP US)  
**F25B 9/06** (2013.01 - EP US); **F25B 13/00** (2013.01 - EP US); **F25B 2400/0401** (2013.01 - EP US); **F25B 2400/0403** (2013.01 - EP US); **F25B 2400/14** (2013.01 - EP US); **F25B 2500/26** (2013.01 - EP US); **F25B 2600/2501** (2013.01 - EP US)

Cited by  
RU2709761C2; US11300339B2; WO2016156756A1

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