

Title (en)

Apparatus for recovering and purifying refrigerant.

Title (de)

Vorrichtung für Rückgewinnung und Reinigung von Kältemittel.

Title (fr)

Dispositif pour la récupération et la purification de réfrigérant.

Publication

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Application

EP 91118875 A 19911106

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- US 61264190 A 19901113
- US 61264290 A 19901113
- US 61264390 A 19901113

Abstract (en)

An apparatus (10) for recovering and purifying refrigerant contained in a refrigeration system has a first mode of operation wherein refrigerant is withdrawn from the system being serviced, compressed, condensed and delivered in liquid form to a refrigerant storage means (86). The pressure ratio across the recovery compressor (44) is monitored, and, when the pressure ratio exceeds a value above which the compressor (44) may be adversely affected withdrawal of the refrigerant from the refrigeration system is terminated. The system is then operated in a closed, cooling mode wherein refrigerant recovered from the system and stored in the storage means (86) is withdrawn therefrom by the compressor (44), compressed condensed, and expanded and returned to the storage means (86) to thereby lower the temperature and pressure of the storage means (86) and the refrigerant contained therein. Means for purifying (32) the withdrawn refrigerant are located upstream from the compressor suction port (42) so that refrigerant purification takes place during all modes of operation. When the temperature in the refrigerant storage cylinder (86) falls to a predetermined level the system is returned to the recovery mode. During the second recovery cycle, because of the substantially lower temperature in the recovery system (10), the refrigerant storage cylinder (86) effectively serves as a condenser. The system (10) may be operated in a liquid recovery cycle wherein liquid refrigerant is delivered directly to the storage means (86). The system (10) is shifted from liquid recovery to vapor recovery responsive to, either, a decrease in liquid level increase in the storage means (86), or, several system control parameters. Apparatus for sampling the purity (104) of refrigerant flowing through the recovery system is provided. <IMAGE>

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Citation (search report)

- [A] WO 8912792 A1 19891228 - MURRAY CORP [US]
- [A] FR 2645948 A1 19901019 - MATHIEU CHRISTIAN [FR]
- [A] US 4285206 A 19810825 - KOSER RICHARD
- [AD] US 4923806 A 19900508 - KLODOWSKI HARRY F [US]

Cited by

EP1736721A3; CN112856864A; EP0550382A1; CN111829217A; FR2758998A1; EP0936425A1; EP0519859B1; EP0519860B1

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