

**LUBRICATING OIL DEWAXING USING MEMBRANE
SEPARATION OF COLD SOLVENT FROM DEWAXED OIL**

ABSTRACT

5 A process for solvent dewaxing a waxy oil feed to
obtain petroleum oil lubricating stock comprising the steps
of counter-currently contacting a warm waxy oil feed with a
selective permeable membrane to selectively transfer cold
solvent from a cold oil/solvent filtrate stream through the
membrane to the warm waxy oil feed. The transfer of the
10 cold solvent to the warm waxy oil feed simultaneously cools
the warm waxy oil feed, dilutes the warm waxy oil feed with
solvent and separates the solvent from the cold oil/solvent
filtrate stream. The waxy oil feed after cooling and
dilution is further cooled by indirect heat exchange first
15 with cold filtrate, then with refrigerant, to crystallize
and precipitate the wax in the oil feed to form an
oil/solvent/wax mixture, the oil/solvent wax mixture is
further diluted with cold solvent to adjust the viscosity
of the mixture and the mixture is fed to a filter which
20 filters and removes the wax from the cold oil/solvent/wax
mixture. A cold wax cake is recovered and a cold
oil/solvent filtrate stream is recovered. The cold
oil/solvent filtrate stream is fed to the selective
permeable membrane for counter-current contact with the
25 warm waxy oil feed to transfer a portion of the solvent
from the cold oil/solvent filtrate to the warm waxy oil
feed. The cold filtrate, after removal of a portion of the
solvent, is sent to an oil/solvent separation operation in
which the solvent is removed from the dewaxed oil and
30 recycled to the dewaxing process and the wax free
lubricating oil stock product is recovered.

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