



# MINERAL OIL ABSORPTION SYSTEM

## MINERAL OIL ABSORPTION SYSTEM (MOS)

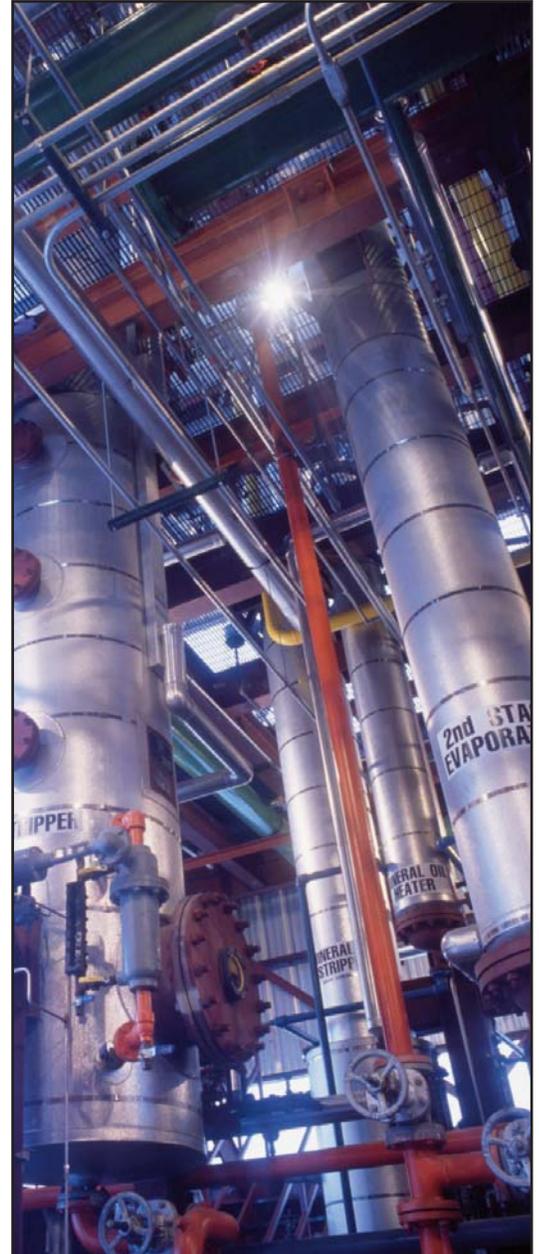
### SOLVENT AIR SEPARATION SYSTEM

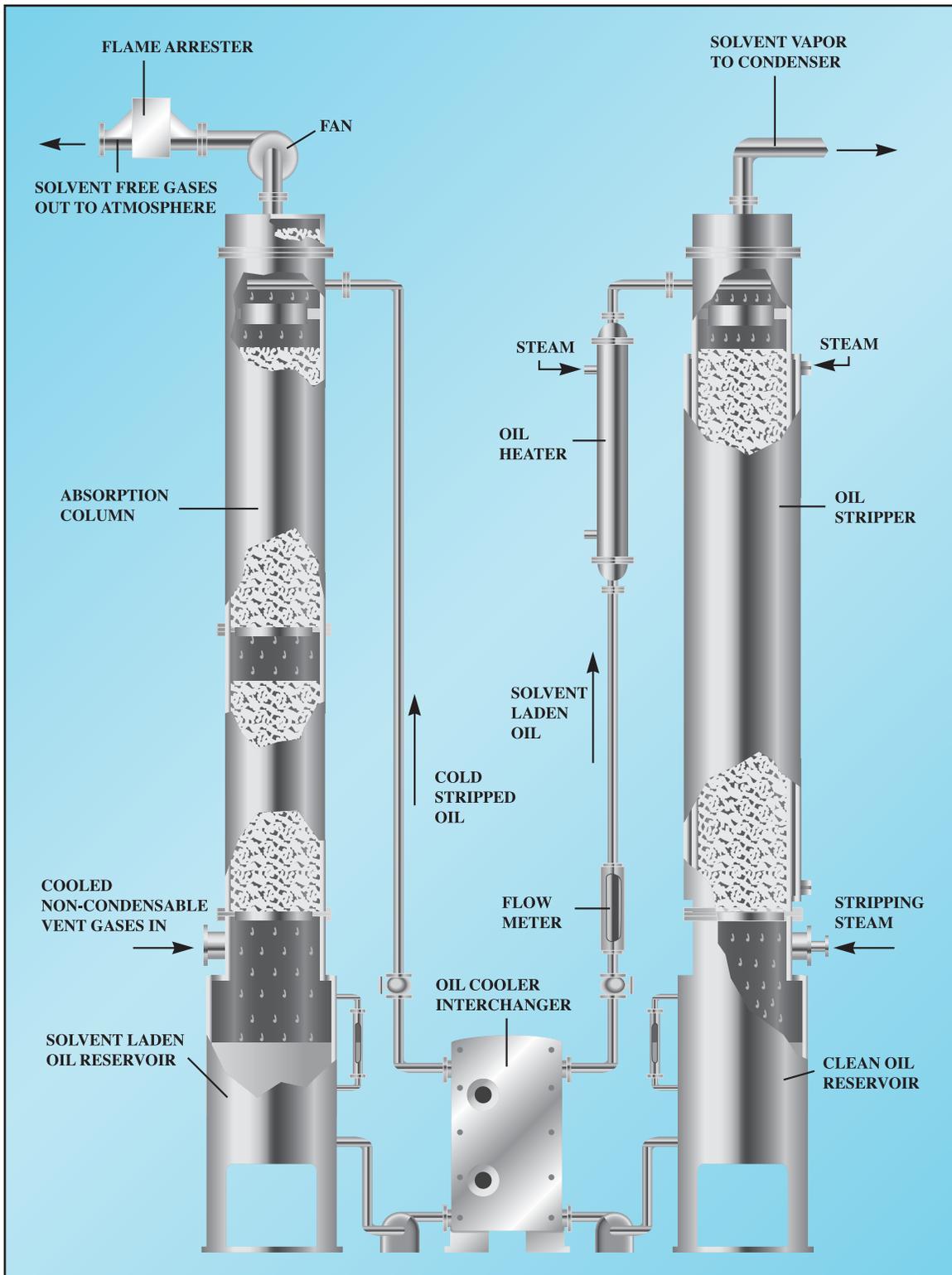
Various methods of solvent recovery, including refrigeration and absorption, have been used to recover solvent vapors from exhaust gases. The mineral oil absorption system has proven time and time again to be the safest and most economical system.

Since 1948, oilseed extraction plants fabricated by Crown Iron Works Company have successfully used a mineral oil absorption system called the Crown Solvent-Air Separator. This system uses cold mineral oil to absorb solvent from vent gases. As an option for warm climates, chiller systems can be furnished.

The Solvent Air Separation System, also known as the Mineral Oil System (MOS), removes solvent from vent gasses before discharging out to the atmosphere. Non-condensable gases enter the mineral oil absorber at the bottom and rise through the tower packing. The non-condensable gasses are flowing counter-currently to the cold mineral oil admitted at the top. The solvent is subsequently absorbed by the mineral oil, and desolventized gasses are drawn off through a demister at the top.

Air is drawn through a fan and vented through a flame arrester well below lower explosive limits. The solvent-laden mineral oil collected at the bottom of the absorption column is pumped through a heat exchanger, then to the Mineral Oil Heater, and finally to the top of the Mineral Oil Stripper. Here the solvent is removed from the mineral oil by live steam evaporation as the mineral oil trickles down through the tower packing. The solvent vapors drawn off at the top of the stripping column travel back to the evaporator condenser (or in some cases the vent condenser). Solvent-free mineral oil collected at the bottom of the mineral oil stripper is recycled through the Mineral Oil Interchanger/Cooler, then back to the absorption column where the cycle is repeated.





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