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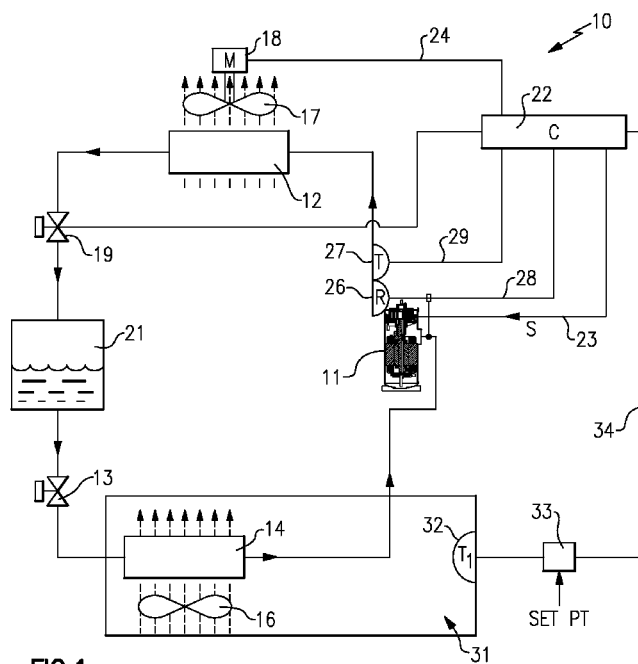


FIG. 1

(57) Abstract: A refrigerant vapor compression system using CO₂ as the working fluid and operating in a transcritical cycle, compression of the refrigerant is accomplished by use of a digital scroll compressor adapted to a variable duty cycle in a pulse width modulation manner. The compression ratio is maintained at an acceptable level by selective control of various components within the system, depending on the mode of operation.