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(54) Title: INTEGRATION OF PRESSURE SWING ADSORPTION WITH A POWER PLANT FOR CO₂ CAPTURE/UTILIZATION AND N₂ PRODUCTION

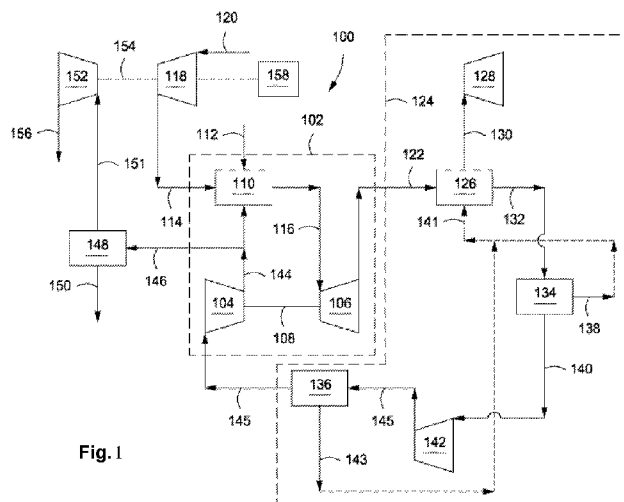


Fig. 1

(57) Abstract: Systems and methods are provided for combined cycle power generation while reducing or mitigating emissions during power generation. Recycled exhaust gas from a power generation combustion reaction can be separated using a swing adsorption process so as to generate a high purity CO₂ stream while reducing/minimizing the energy required for the separation and without having to reduce the temperature of the exhaust gas. This can allow for improved energy recovery while also generating high purity streams of carbon dioxide and nitrogen.



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