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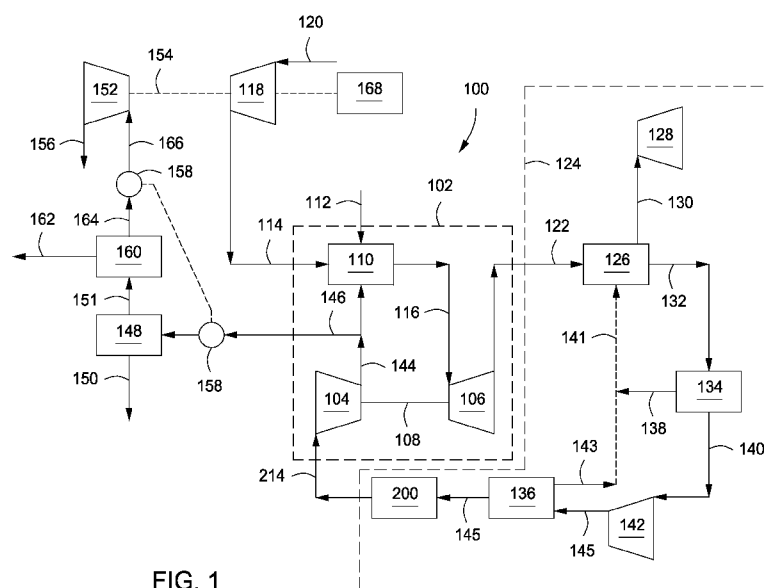
(54) Title: STOICHIOMETRIC COMBUSTION WITH EXHAUST GAS RECIRCULATION AND DIRECT CONTACT
COOLER

FIG. 1

(57) Abstract: Methods and systems for low emission power generation in hydrocarbon recovery processes are provided. One system includes a gas turbine system configured to stoichiometrically combust a compressed oxidant and a fuel in the presence of a compressed recycle exhaust gas and expand the discharge in an expander to generate a gaseous exhaust stream and drive a main compressor. A boost compressor can receive and increase the pressure of the gaseous exhaust stream and inject it into an evaporative cooling tower configured to use an exhaust nitrogen gas having a low relative humidity as an evaporative cooling media. The cooled gaseous exhaust stream is then compressed and recirculated through the system as a diluent to moderate the temperature of the stoichiometric combustion.



**Declarations under Rule 4.17:**

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