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(54) **SYSTEMS AND METHODS FOR CONTROLLING, MONITORING, AND OPERATING REMOTE OIL AND GAS FIELD EQUIPMENT OVER A DATA NETWORK WITH APPLICATIONS TO RAW NATURAL GAS PROCESSING AND FLARE GAS CAPTURE**

(52) **U.S. Cl.**
CPC **C10G 5/06** (2013.01); **H04W 76/02** (2013.01); **G05B 15/02** (2013.01); **C10L 3/10** (2013.01); **C10L 2290/30** (2013.01); **C10L 2290/46** (2013.01); **C10L 2290/58** (2013.01); **C10L 2290/60** (2013.01)

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(57) **ABSTRACT**

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An intelligent controls system for a field-deployable system for producing dry natural gas (NG) and natural gas liquids (NGLs) from a raw gas stream is disclosed. The control system is used to ensure correct specifications of both dry NG (above a desired minimum methane number) and NGLs (below a desired maximum vapor pressure) from any supplied raw natural gas source by controlling three system parameters: inlet gas flow rate, system operating pressure, and separator-reboiler temperature set point. The input parameters include: heat content of the input gas stream, volume of the input gas stream, desired methane number of the NG, and desired vapor pressure of the NGLs. The controls system allows any piece of remote field equipment for performing complex chemical processing to be monitored, controlled, and operated remotely. A large array of distributed field equipment situated around the world can all be controlled primarily through a single interface provided in a central control center.

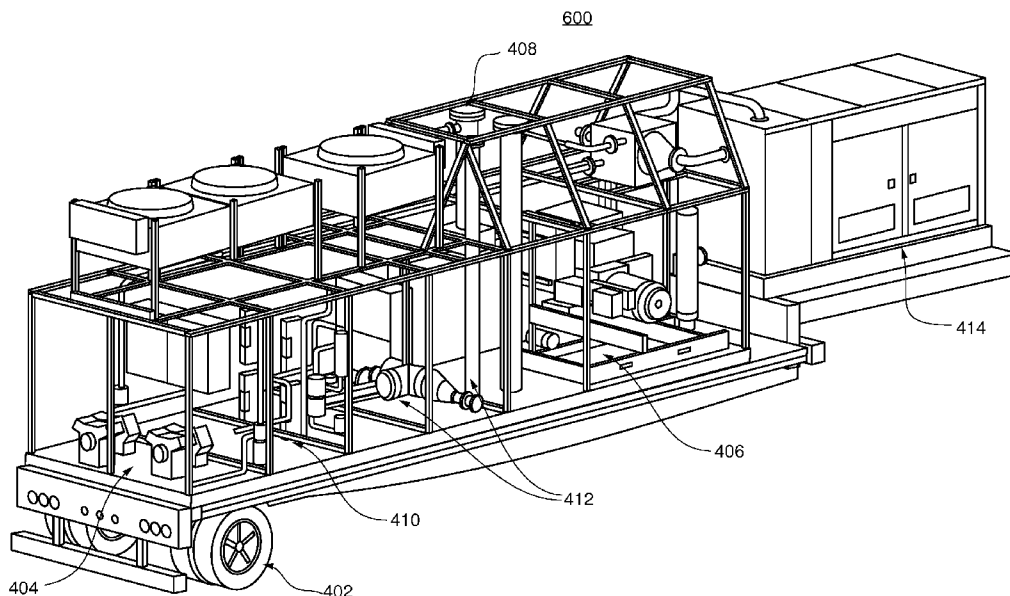


Fig. 1

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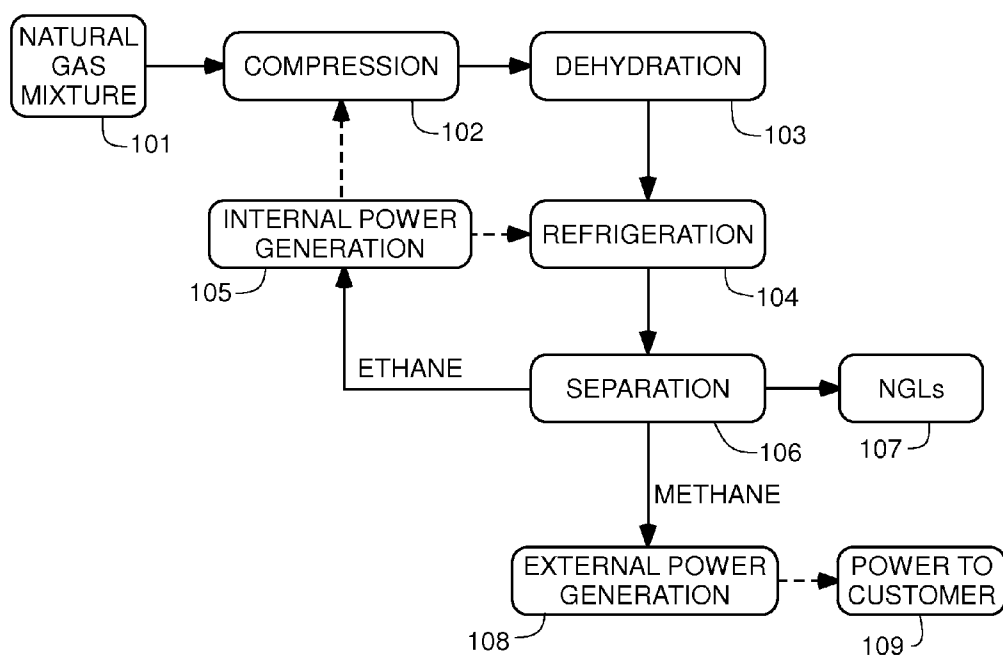


Fig. 2

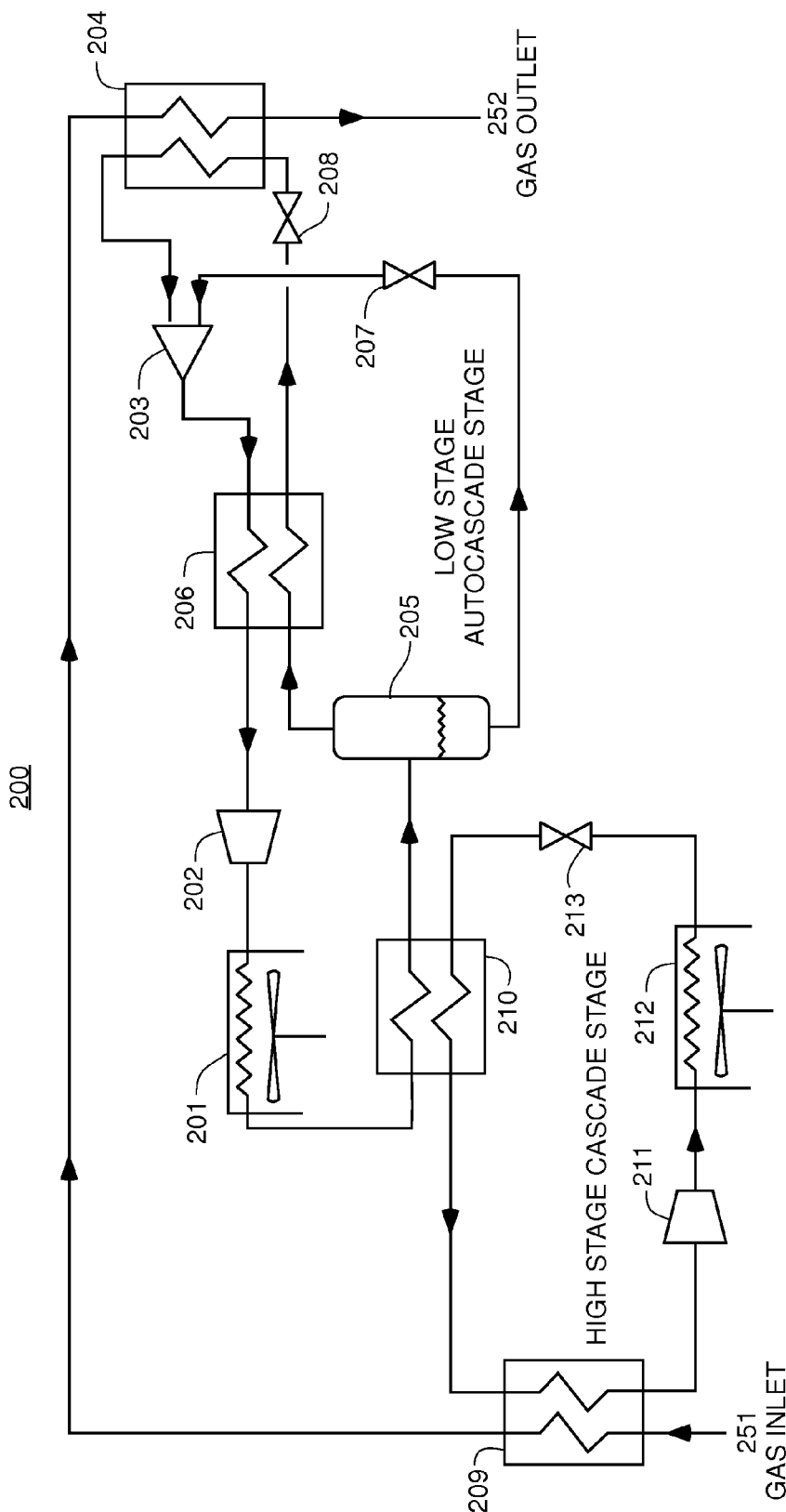
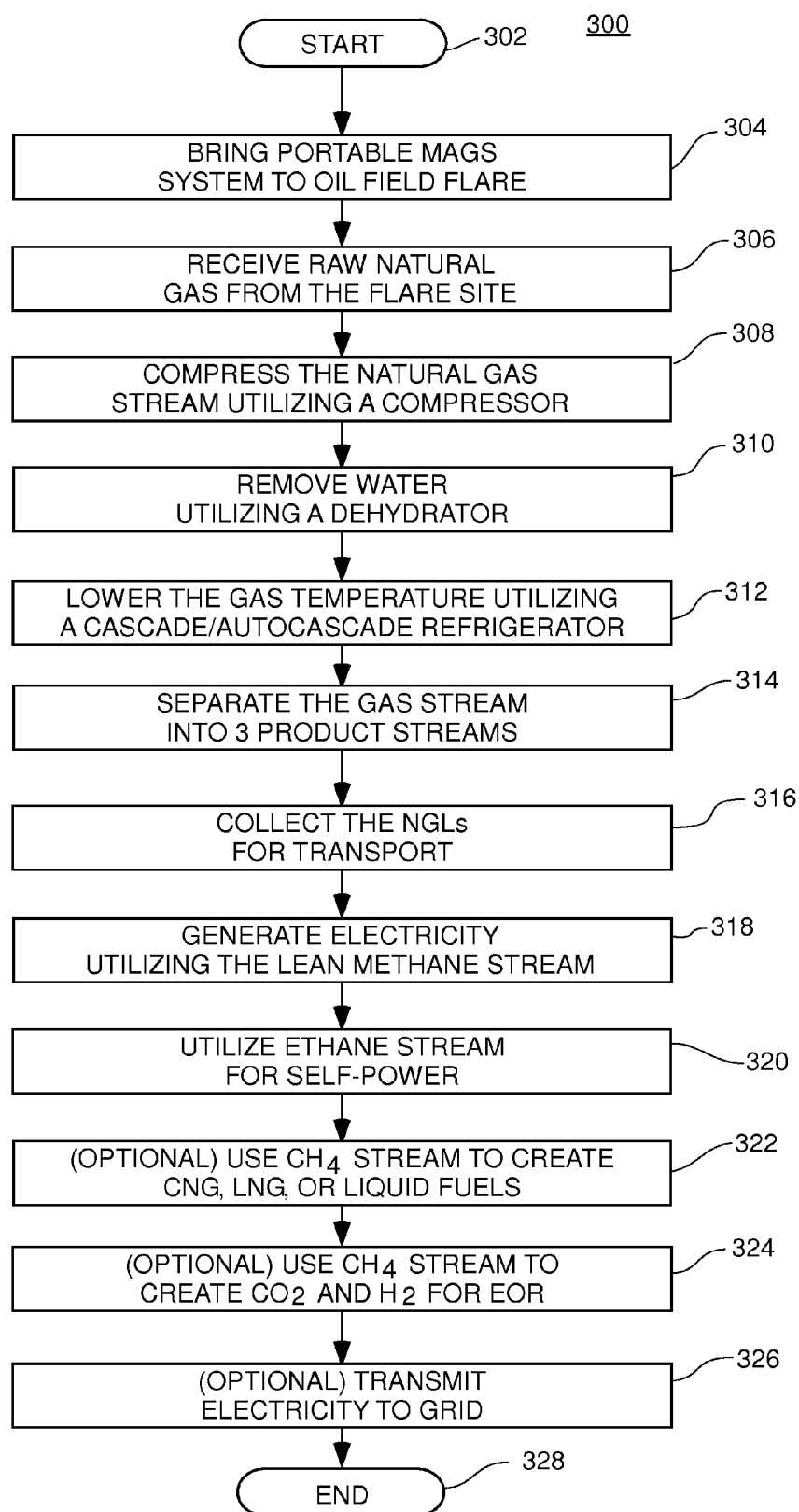
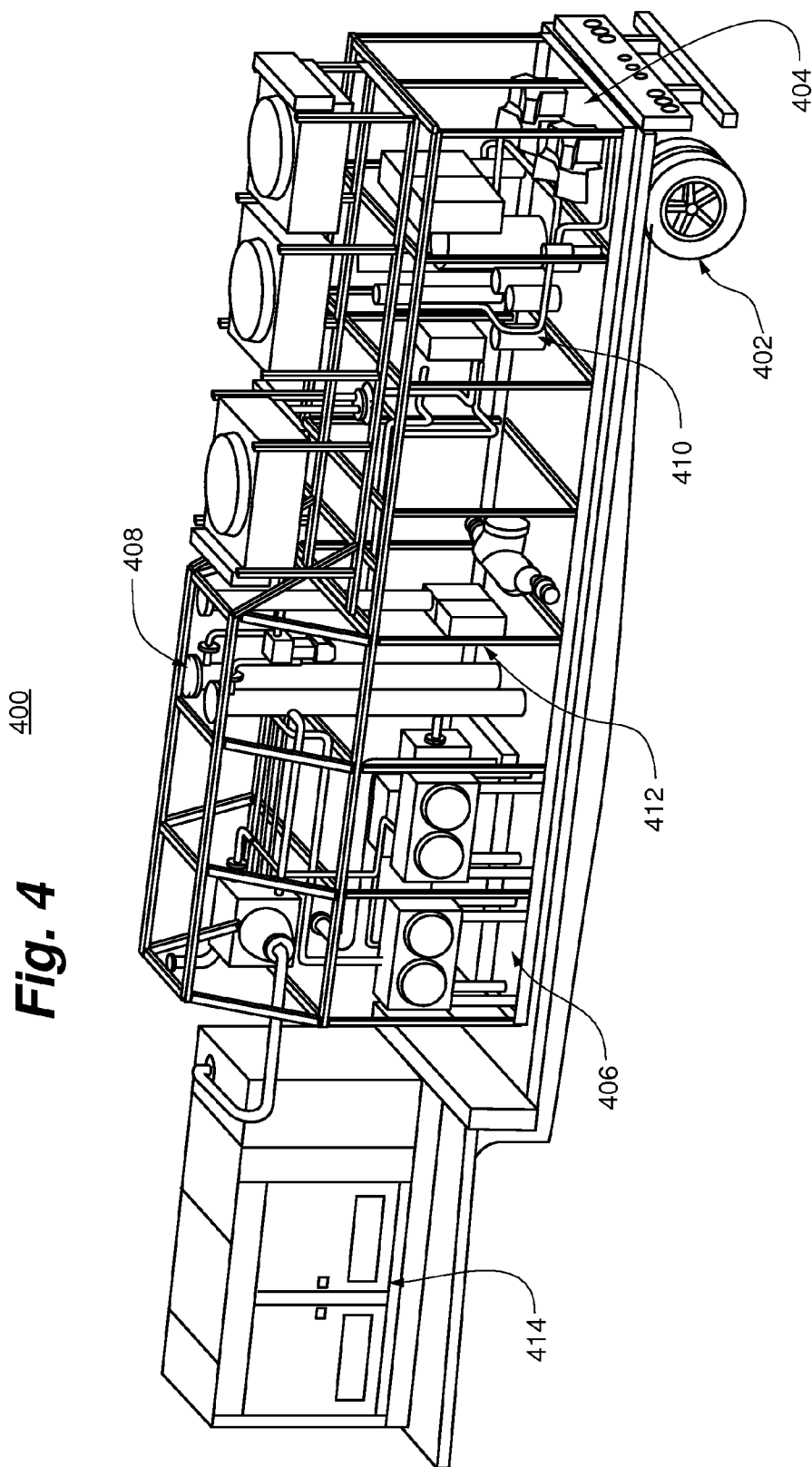


Fig. 3



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