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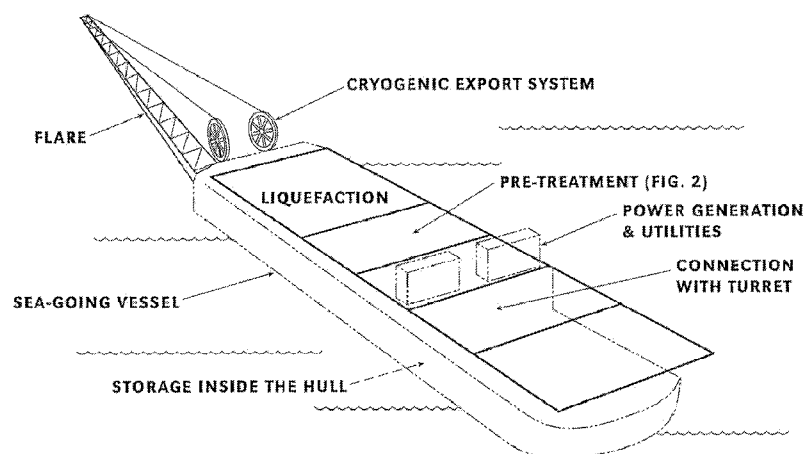


Fig. 1

(57) Abstract: A pretreatment system and method for a floating liquid natural gas ("FLNG") facility are presented. The inlet natural gas stream (19) flows through a membrane system (30) to remove carbon dioxide and a heat exchanger (40), producing first and second cooled CO₂-depleted non-permeate streams (41, 43). The first cooled CO₂-depleted non-permeate stream (41) is routed to additional pretreatment equipment, while the second cooled CO₂-depleted non-permeate stream (43) is routed directly to a LNG train (70). Alternatively, the inlet natural gas stream (19) may flow through a membrane system to produce a single cooled CO₂-depleted non-permeate stream (71) that is routed to the LNG train (70) after sweetening and dehydration. Because the pretreatment system delivers the incoming gas stream to the LNG train (70) at a lower temperature than conventional systems, less energy is needed to convert the gas stream to LNG. In addition, the pretreatment system has a smaller footprint than conventional pretreatment systems.