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(54) Title: HEAT EXCHANGER CONFIGURATION FOR A HIGH PRESSURE EXPANDER PROCESS AND A METHOD OF NATURAL GAS LIQUEFACTION USING THE SAME

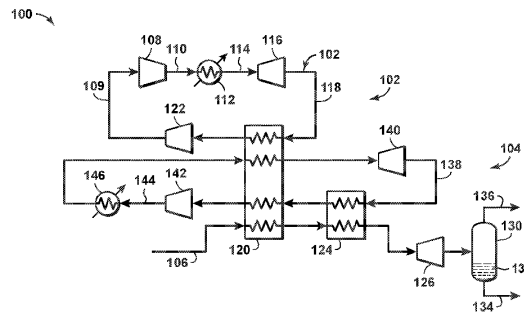


FIG. 1
(Prior Art)

(57) Abstract: A method for liquefying a feed gas stream. A compressed first refrigerant stream is cooled and expanded to produce an expanded first refrigerant stream. The feed gas stream is cooled to within a first temperature range by exchanging heat only with the expanded first refrigerant stream to form a liquefied feed gas stream and a warmed first refrigerant stream. A compressed second refrigerant stream is provided is cooled to produce a cooled second refrigerant stream. At least a portion of the cooled second refrigerant stream is further cooled by exchanging heat with the expanded first refrigerant stream, and then is expanded to form an expanded second refrigerant stream. The liquefied feed gas stream is cooled to within a second temperature range by exchanging heat with the expanded second refrigerant stream to form a sub-cooled LNG stream and a first warmed, second refrigerant stream.

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