A B S T R A C T

A PROCESS FOR LIQUEFYING NATURAL GAS AND FOR RECOVERING ANY LIQUID FROM THE NATURAL GAS, THE PROCESS COMPRISING TWO SEMI-OPEN REFRIGERANT CYCLES WITH NATURAL GAS AND ONE CLOSED REFRIGERANT CYCLE WITH GAS REFRIGERANT

The invention relates to a process for liquefying a natural gas comprising a mixture of hydrocarbons predominating in methane, the process comprising a first semi-open refrigerant cycle with natural gas in which any natural gas liquids that have condensed are separated from the natural gas feed stream, which stream then passes through a main cryogenic heat exchanger (4) in order to contribute by heat exchange to pre-cooling a main natural gas stream (F-P) and to cooling an initial refrigerant gas stream (G-0), a second semi-open refrigerant cycle with natural gas for contributing to pre-cooling the natural gas and the refrigerant and also to liquefying the natural gas, and a closed refrigerant cycle with refrigerant gas for subcooling the liquefied natural gas and for delivering refrigeration power in addition to the other two cycles. The invention also provides a natural gas liquefaction installation for performing such a process.

Figure 1