· at least one said first heat exchanger (EC1) comprising at least:

· a first flow duct (S1) passing through said first heat exchanger (EC1) and suitable for causing a first stream (S1) of first refrigerant fluid in the liquid state to flow therethrough;

· a second flow duct (S1A) passing through said first heat exchanger (EC1) and suitable for causing a said second stream of first refrigerant fluid in the gaseous or liquid state to flow therethrough; and

· a third duct (Sg) passing through said first heat exchanger (EC1) and suitable for causing said natural gas for liquefying to flow therethrough;

· a first expander (D1) between the cold outlet of said first duct (S1) and a first inlet at the cold end (BB1) of the enclosure of said first heat exchanger;

· a second expander (D1A) between the cold outlet of said second duct (S1A) and a second inlet at the cold end (BB2) of the enclosure of said first heat exchanger;

· a first compressor (C1) with a connection pipe between an outlet (AA3) at the hot end of the enclosure of said first heat exchanger (EC1) and the inlet of said first compressor (C1);

· a first condenser (H0) with a connection pipe between the outlet of said first compressor (C1) and the inlet of said first condenser;

· a first separator tank (R1) with a connection pipe between the outlet from said first condenser and said first separator tank;

· a second compressor (C1A) with a connection pipe between the top outlet from said first separator tank and the inlet of said second compressor;

· a desuperheater (DS) <u>including micronization means</u> with a connection pipe between the outlet from said second compressor and an inlet for admitting gas (1) into said desuperheater;