

AIR SEPARATION UNIT

ABSTRACT

[Problem] To provide an air separation unit capable of reducing the risk of combustion of a heat exchanger connected to an oxygen turbine.

[Solution] An air separation unit A1 comprises: a main heat exchanger 1; an intermediate-pressure rectification column 2; a low-pressure rectification column 4; a crude-argon column 5; a nitrogen condenser 3; a crude-argon condenser 6; an oxygen turbine 9; an oxygen turbine inlet pipe L32 for feeding oxygen gas drawn out from a bottom section of the low-pressure rectification column 4 or a gas phase in a refrigerant storage section of the nitrogen condenser 3 into the oxygen turbine 9 via the main heat exchanger 1, and feeding the oxygen gas to the main heat exchanger 1 again; an oxygen bypass pipe L321 which branches from the oxygen turbine inlet pipe L32; and a dilution stream pipe L42 for drawing out a nitrogen-containing gas, in which the oxygen concentration is lower than the oxygen concentration in the oxygen gas drawn out from the bottom section of the low-pressure rectification column 4 or the gas phase in the refrigerant storage section, as a dilution stream, and introducing the dilution stream into the oxygen turbine inlet pipe L32.

[Fig. 1]