Claims

[Claim 1]

A floating structure comprising:

a floating main structure;

a first tank disposed in the floating main structure and capable of storing carbon dioxide having a gas phase and a liquid phase;

a second tank disposed in the floating main structure and storing a liquefied combustible gas whose temperature in a liquid state is lower than a temperature of the liquid phase of the carbon dioxide;

a first heat exchanger that exchanges heat between the carbon dioxide and the liquefied combustible gas;

a feed line that guides the carbon dioxide to the first heat exchanger from the first tank;

a return line that guides a liquid of the carbon dioxide to the first tank from the first heat exchanger;

a second heat exchanger that vaporizes the liquefied combustible gas by exchanging heat of the liquefied combustible gas passing through the first heat exchanger with a heat medium; and

a combustor that combusts the liquefied combustible gas vaporized by the second heat exchanger,

wherein the feed line guides a liquid of the carbon dioxide to the first heat exchanger from the liquid phase in a lower portion inside the first tank.

[Claim 2]

The floating structure according to Claim 1, further comprising:

an unloading pump provided in an unloading pipe that delivers the liquid of the carbon dioxide inside the first tank to an outside of the floating main structure,

wherein the feed line connects the unloading pump and the first heat exchanger, and guides the liquid of the carbon dioxide to the first heat exchanger from an inside of the first tank.

[Claim 3]

The floating structure according to Claim 1 or 2, further comprising:

an injection unit that injects the liquid of the carbon dioxide returned to the first tank from the first heat exchanger through the return line to an upper portion inside the first tank.

[Claim 4]

A floating structure comprising:

a floating main structure;

a first tank disposed in the floating main structure and storing carbon dioxide having a gas phase and a liquid phase;

a second tank disposed in the floating main structure and capable of storing a liquefied combustible gas whose temperature in a liquid state is lower than a temperature of the liquid phase of the carbon dioxide;

a first heat exchanger that exchanges heat between the liquefied combustible gas and a refrigerant;

a circulation line that circulates the refrigerant between an inside of the first tank and the first heat exchanger;

a circulation pump provided in an intermediate portion of the circulation line to circulate the refrigerant;

a second heat exchanger that vaporizes the liquefied combustible gas by exchanging heat of the liquefied combustible gas passing through the first heat exchanger with a heat medium; and

a combustor that combusts the liquefied combustible gas vaporized by the second heat exchanger,

wherein the circulation line passes through at least a gas phase of the first tank.