【CLAIMS】

【Claim 1】

A fuel supply system for ships, comprising:

a pump (10) compressing liquefied gas discharged from a storage tank (T) to a pressure required for an engine (E);

a heat exchanger (20) heating the liquefied gas compressed by the pump (10) to a temperature required for the engine (E) through heat exchange; and

a buffer tank (50) temporarily storing the liquefied gas discharged from the storage tank (T) and having passed through the pump (10) and the heat exchanger (20) before supplying the liquefied gas to the engine (E); and

a gas supply line (F3) supplying a gas to the buffer tank (50),

wherein the engine E use an incompressible liquid fluid as fuel,

as much liquefied gas as required for the engine (E) is supplied from the buffer tank (50) to the engine (E) through maintenance and adjustment of pressure inside the buffer tank (50) by supplying the gas, and

the liquefied gas is returned from the buffer tank (50) to the storage tank (T) when a liquefied gas level in the buffer tank (50) increases due to decrease in load of the engine.

【Claim 2】

The fuel supply system according to claim 1, further comprising:

a return line (F4) along which the liquefied gas is returned from the buffer tank (50) to the storage tank (T) when a liquefied gas level in the buffer tank (50) increases.

【Claim 3】

The fuel supply system according to claim 2, further comprising:

a vent line (F5) delivering a gas inside the buffer tank (50) to the storage tank (T).

【Claim 4】

The fuel supply system according to claim 2, further comprising:

a vent line (F5) delivering a gas inside the buffer tank (50) to a vent master.

【Claim 5】

The fuel supply system according to any one of claims 2 to 4, further comprising:

a level sensor (L) measuring the liquefied gas level in the buffer tank (50); and

a third valve (V3) disposed in the return line (F4), the third valve (V3) regulating a flow rate of the liquefied gas discharged from the buffer tank (50) based on the liquefied gas level measured by the level sensor (L).

【Claim 6】

The fuel supply system according to claim 5, wherein the third valve V3 is maintained in a closed state during normal operation and is switched to an open state when the liquefied gas level measured by the level sensor (L) is a second predetermined value or more.

【Claim 7】

The fuel supply system according to claim 3 or 4, further comprising:

a third pressure sensor (P3) measuring a pressure inside the buffer tank (50).

【Claim 8】

The fuel supply system according to claim 7, further comprising:

a fifth valve (V5) disposed in the gas supply line (F3), the fifth valve (V5) regulating a flow rate of a fluid based on the pressure measured by the third pressure sensor (P3).

【Claim 9】

The fuel supply system according to claim 7, further comprising:

a fourth valve (V4) disposed in the vent line (F5), the fourth valve (V5)

regulating a flow rate of a fluid based on the pressure measured by the third pressure sensor (P3).

【Claim 10】

The fuel supply system according to any one of claims 1 to 4, further comprising:

a first filter (31) filtering out impurities from the liquefied gas to be supplied to the engine (E).

【Claim 11】

The fuel supply system according to claim 10, wherein the first filter (31) is disposed between the heat exchanger (20) and the buffer tank (50).

【Claim 12】

A fuel supply method for ships, comprising:

compressing and heating liquefied gas,

storing a compressed and heated liquefied gas temporarily in a buffer tank 50, and

supplying the compressed and heated liquefied gas as much as required for an engine (E) from the buffer tank (50) to the engine (E) through maintenance and adjustment of pressure inside the buffer tank (50) by supplying a gas to the buffer tank (50),

wherein the engine(E) use an incompressible liquid fluid as fuel, and

when a liquefied gas level in the buffer tank (50) increases due to decrease in load of the engine, the liquefied gas is returned to a storage tank (T) from the buffer tank (50).

【Claim 13】

The fuel supply method according to claim 12, wherein a gas inside the buffer tank (50) is sent to the storage tank (T).

【Claim 14】

The fuel supply method according to claim 12, wherein a gas inside the buffer tank 50 is sent to a vent master.