【Summary】

[7] In accordance with one aspect of the present disclosure, there is provided a fuel supply method for ships, including: 1) supplying an excess amount of liquefied gas as fuel to an incompressible fluid-fueled engine (E); 2) cooling unconsumed fuel discharged from the engine (E) through heat exchange with liquefied gas discharged from a storage tank (T); 3) returning the unconsumed fuel discharged from the engine (E) and having been cooled through heat exchange in step 2) to the storage tank (T); and 4) supplying the liquefied gas discharged from the storage tank (T) and having been used as refrigerant for heat exchange in step 2) to the engine (E), whereby cavitation in the engine (E) is prevented through supply of the excess amount of liquefied gas in excess of the amount required by the engine sufficient to accommodate variation in load of the engine (E) to the engine (E).

[8] In accordance with another aspect of the present disclosure, there is provided a fuel supply system for ships, including: a line through which unconsumed fuel discharged from an incompressible fluid-fueled engine (E) is returned to a storage tank (T); and a heat exchanger (30) provided to the line and cooling the unconsumed fuel through heat exchange with liquefied gas discharged from the storage tank (T), wherein the liquefied gas discharged from the storage tank (T) and having been used as refrigerant in the heat exchanger (30) is supplied to the engine (E), an excess amount of liquefied gas in excess of the amount required by the engine is supplied as fuel to the engine (E) to accommodate variation in load of the engine (E), and fuel remaining after use in the engine (E) is discharged from the engine (E) and is sent back to the storage tank (T) after passing through the heat exchanger (30).

[9] The fuel supply system may further include: a first pump (10) disposed in the storage tank (T) and pumping the liquefied gas out of the storage tank (T).

[10] The fuel supply system may further include: a second pump (20) disposed upstream of the heat exchanger (30) and pumping the liquefied gas discharged from the storage tank (T).

[11] The fuel supply system may further include: a second pump (20) disposed downstream of the heat exchanger (30) and pumping the liquefied gas having

【CLAIMS】

【Claim 1】

A fuel supply method for ships, comprising:

1) supplying an excess amount of liquefied gas as fuel to an incompressible fluid-fueled engine;

2) cooling unconsumed fuel discharged from the engine through heat exchange with liquefied gas discharged from a storage tank;

3) returning the unconsumed fuel discharged from the engine and having been cooled through heat exchange in step 2) to the storage tank; and

4) supplying the liquefied gas discharged from the storage tank and having been used as refrigerant for heat exchange in step 2) to the engine,

whereby cavitation in the engine is prevented through supply of the excess amount of liquefied gas in excess of the amount required by the engine sufficient to accommodate variation in load of the engine to the engine.

【Claim 2】

A fuel supply system for ships, comprising:

a line through which unconsumed fuel discharged from an incompressible fluid-fueled engine is returned to a storage tank; and

a heat exchanger provided to the line and cooling the unconsumed fuel through heat exchange with liquefied gas discharged from the storage tank,

wherein the liquefied gas discharged from the storage tank and having been used as refrigerant in the heat exchanger is supplied to the engine,

an excess amount of liquefied gas in excess of the amount required by the engine is supplied as fuel to the engine to accommodate variation in load of the engine, and

fuel remaining after use in the engine is discharged from the engine and is sent back to the storage tank after passing through the heat exchanger.

【Claim 3】

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

a first pump disposed in the storage tank and pumping the liquefied gas out of the storage tank.

【Claim 4】

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

a second pump disposed upstream of the heat exchanger and pumping the liquefied gas discharged from the storage tank.

【Claim 5】

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

a second pump disposed downstream of the heat exchanger and pumping the liquefied gas having undergone heat exchange in the heat exchanger.

【Claim 6】

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

a heater heating the liquefied gas discharged from the storage tank and having been used as refrigerant in the heat exchanger to a temperature required for the engine.

【Claim 7】

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

a decompression unit decompressing the unconsumed fuel discharged from the engine and having been cooled by the heat exchanger to an internal pressure of the storage tank and sending the decompressed fuel to the storage tank.