clean energy source cannot be used at a low power. In general, a ship sails at a low power around a harbor. When the ship uses oil as an energy source at a low power, large amounts of environmental pollutant materials such as $SO_x$ and $NO_x$ are discharged. Recently, more and more countries tend to set up storing regulations against the discharge of environmental pollutant materials around a harbor.

Therefore, there is a demand for a new propulsion system which is capable of using fuel gas, which is cheap and produces small amounts of environmental pollutant materials, as fuel even at a low power.

## DISCLOSURE

### TECHNICAL PROBLEM

An embodiment of the present invention is directed to a ship having a propulsion system capable of using fuel gas as fuel even when the ship is operated at a low power.

### SUMMARY OF INVENTION

According to a first aspect, there is provided a ship comprising: a high-pressure injection engine which uses only oil as fuel when operating at less than a predetermined power and uses oil and fuel gas as fuel when operating at more than the predetermined power to obtain a propulsion power of the ship; a generator engine using fuel gas as fuel to generate electricity; a motor generating a power by using the electricity generated from the generator engine; a propulsion propelling the ship; a main clutch power-connecting the high-pressure injection engine to the propulsion; and an auxiliary clutch power-connecting a motor to the propulsion through a gear box, wherein the high-pressure injection engine and the motor are selectively power-connected to the propulsion to obtain the propulsion power of the ship, and wherein when the ship is operated at less than the predetermined power, the high-pressure injection engine is stopped and electricity generated by the generator engine is transmitted to the propulsion throughout the motor, the gear box, and the auxiliary clutch to obtain the propulsion power of the ship.

## ADVANTAGEOUS EFFECTS

According to the embodiment of the present invention, the ship includes the fuel gas main propulsion engine and the fuel gas generator engine, and obtains a propulsion power by using the electricity generated by the gas fuel generator engine, at a low power level. Therefore, it is possible to save a fuel cost and to solve an environmental problem.

Furthermore, a separate facility for treating BOG which is produced when fuel gas is gasified may not be required, and the BOG may be used as fuel gas in the main propulsion engine 10 or the generator engine 20. Therefore, the precious energy source may be reused without being discarded.

## BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a diagram schematically illustrating a ship having a main propulsion engine and a generator engine according to an embodiment of the present invention.

FIG. 2 is a diagram showing a state in which the main propulsion engine is not connected to a propulsion, but the propulsion is driven by the generator engine.

FIG. 3 is a diagram showing a case in which only a main clutch is connected and