With tightened international emission standards for ships and stabilization of LNG prices, consumption of LNG as a ship fuel is expected to increase.

【Disclosure】

【Technical Problem】

[7] A ship using LNG as fuel may include a plurality of engines and LNG may be supplied under various conditions depending on the type of engine.

[8] Embodiments of the present invention seek to provide a fuel supply system and method which can ensure smooth fuel supply in a ship including both an engine fueled by a high-pressure gas and an engine fueled by a gas at a lower pressure.

【Technical Solution】

[9] In accordance with one aspect of the present invention, a fuel supply system for a ship engine includes: a first channel connected to an LNG storage tank of a ship to pump LNG from the LNG storage tank, re-gasify the LNG, and supply the LNG to a first engine of the ship;

[10] a decompression channel branching off from the first channel to decompress the pumped and re-gasified LNG and supply the LNG to a second engine of the ship; and

[11] a pressure containing channel branching off from the decompression channel to supply the decompressed LNG to the LNG storage tank.

[12] Preferably, the decompressed LNG is supplied thorough the pressure containing channel to a lower portion of the LNG storage tank to prevent a pressure drop in the LNG storage tank.

[13] Preferably, the fuel supply system further includes: a second channel supplying boil-off gas (BOG) generated in the LNG storage tank to the second engine; and a heater disposed in the second channel and heating the BOG to be supplied to the second engine.

[14] Preferably, the fuel supply system further includes: a high pressure pump disposed in the first channel to pressurize LNG to a high pressure; and a vaporizer re-gasifying the LNG pressurized by the high pressure pump and supplying the LNG

【Advantageous Effects】

[23] Embodiments of the present invention provide a fuel supply system which includes: a first channel for pumping LNG from an LNG storage tank, re-gasifying the LNG, and supply the LNG to a first engine of the ship; a decompression channel branching off from the first channel to decompress the pumped and re-gasified LNG and supply the LNG to a second engine of the ship; and a pressure containing channel branching off from the decompression channel to supply the decompressed LNG to the LNG storage tank to prevent pressure drop in the LNG storage tank.

[24] Since pressure drop of the LNG storage tank T due to fuel supply is prevented, supply of BOG to the second engine can be stably and smoothly achieved, and calorific value of fuel to be supplied to the engines can be regulated.

[25] In addition, there is no need to provide a separate vaporizer, heater, or pipe for preventing pressure drop in the LNG storage tank T while eliminating a need to provide a component for regulating the methane number of LNG, whereby the system can have a compact structure, thereby improving space utilization in the ship.

【Description of Drawings】

[26] Fig. 1 is a diagram illustrating a basic concept of a system for supplying fuel from an LNG storage tank to a plurality of engines according to one embodiment of the present invention, and Fig. 2 is a diagram illustrating an improvement of the system of Fig. 1, which is provided with a pressure containing channel.

[27] Fig. 3 is a diagram illustrating a modification of the system of Fig. 2.

【Best Mode】

[28] The above and other aspects, features, and advantages of the present invention will become apparent from the detailed description of the following embodiments in conjunction with the accompanying drawings.

[29] Hereinafter, exemplary embodiments of the present invention will be described in detail with reference to the accompanying drawings. It should be noted that like components will be denoted by like reference numerals throughout the