first threshold value or higher for a first period of time and supplying electric power to the DC bus when the voltage of the DC bus is maintained at a second threshold value or less for a second period of time; and a first resistor consuming electric power when the voltage of the DC bus is maintained at the first threshold value or higher for a third period of time, wherein the third period of time is longer than the first period of time.

[24] The hybrid power supply apparatus may further include a first DC/DC converter connected to the DC bus, wherein the first power storage unit and the first resistor may be connected to the first DC/DC converter.

[25] The hybrid power supply apparatus may further include: a first DC/DC converter connected to the DC bus; and a second DC/DC converter connected to the DC bus, wherein the first power storage unit is connected to the first DC/DC converter, and the first resistor is connected to the second DC/DC converter.

[26] The first power storage unit may be an ultracapacitor.

[27] The electric power load may be a draw-works.

[28] The electric power load may be a top drive.

[29] In accordance with another aspect of the present invention, there is provided a hybrid power supply method for an offshore plant, including: measuring a voltage of a DC bus; storing, by a power storage unit, electric power when a voltage of the DC bus is maintained at a first threshold value or higher for a first period of time; supplying, by the power storage unit, electric power to the DC bus when the voltage of the DC bus is maintained at a second threshold value or less for a second period of time, consuming, by a resistor, electric power when the voltage of the DC bus is maintained at the first threshold value or higher for a third period of time, wherein the DC bus is connected to an electric power load generating regenerative power and wherein the third period of time is longer than the first period of time.

[30] The hybrid power supply method may further include consuming, by a resistor, electric power when the voltage of the DC bus is maintained at the first threshold value or higher for a third period of time, wherein the third period of time may be longer than the first period of time.

[31] The DC bus may be connected to a first DC/DC converter, and the power storage unit and the resistor may be connected to the first DC/DC converter.

[32] The DC bus may be connected to a first DC/DC converter and a second

The hybrid power supply apparatus according to claim 1, wherein the first power storage unit is an ultracapacitor.

【Claim 5】

The hybrid power supply apparatus according to claim 1, wherein the electric power load is a draw-works.

【Claim 6】

The hybrid power supply apparatus according to claim 1, wherein the electric power load is a top drive.

【Claim 7】

A hybrid power supply method for an offshore plant, comprising:

measuring voltage of a DC bus;

storing, by a power storage unit, electric power when a voltage of the DC bus is maintained at a first threshold value or higher for a first period of time;

supplying, by the power storage unit, electric power to the DC bus when the voltage of the DC bus is maintained at a second threshold value or less for a second period of time,

consuming, by a resistor, electric power when the voltage of the DC bus is maintained at the first threshold value or higher for a third period of time,

wherein the DC bus is connected to an electric power load generating regenerative power and wherein the third period of time is longer than the first period of time.

【Claim 8】

The hybrid power supply method according to claim 7, wherein the DC bus is connected to a first DC/DC converter, and the power storage unit and the resistor

are connected to the first DC/DC converter.

【Claim 9】

The hybrid power supply method according to claim 7, wherein the DC bus is connected to a first DC/DC converter and a second DC/DC converter, and the power storage unit is connected to the first DC/DC converter and the resistor is connected to the second DC/DC converter.

【Claim 10】

The hybrid power supply method according to claim 7, wherein the power storage unit is an ultracapacitor.

【Claim 11】

The hybrid power supply method according to claim 7, wherein the electric power load is a draw-works.

【Claim 12】

The hybrid power supply method according to claim 7, wherein the electric power load is a top drive.