CLAIMS

1. A vessel for the transport of liquefied gas, comprising:

- a hull;

- at least one cargo storage tank arranged in the hull for storing liquefied gas;

- at least one engine to propel the vessel;

- at least one compressor having a compressor inlet connected to a vapour space of the at least one cargo storage tank for receiving boil-off gas at a first pressure (P_1) and a compressor outlet for supplying pressurized boil-off gas to the at least one engine at a second pressure (P_2) exceeding the first pressure; and

- a boil off gas (BOG) recovery system for recovery of boil off gas, the BOG recovery system comprising:

- a cooling section having a cooling section inlet connected to the compressor outlet to recondense at least part of the pressurized boil-off gas and a cooling section outlet for providing recondensed pressurized boil-off gas; and

- at least one recovery tank, the recovery tank having a recovery tank inlet connected to the cooling section outlet for storing the recondensed pressurized boil-off gas;

wherein the recovery tank has a total volume for storing the recondensed pressurized boil-off gas of about 0.5% to 5% of the total volume of the at least one cargo tank;

wherein the recovery tank has a first outlet connected to the at least one engine; and

wherein the at least one recovery tank is separate from the at least one storage tank.

2. The vessel of claim 1, wherein the at least one recovery tank is arranged on the hull.

3. The vessel of claim 1 or 2, wherein the BOG recovery system comprises a first pump arranged between the cooling section outlet and the recovery tank inlet.

4. The vessel of any one of claims 1 to 3, wherein the cooling section comprises a recondenser having a recondenser inlet and a recondenser outlet for providing the recondensed pressurized boil-off gas.

5. The vessel of claim 4, wherein the cooling section comprises a pre-cooler section having a pre-cooler inlet connected to the compressor outlet and a pre-cooler outlet to provide pre-cooled pressurized boil-off gas to the recondenser inlet.

6. The vessel of claim 4 or 5, wherein the recondenser is adapted to operate at a third pressure (P_3) being substantially the same or lower than the second pressure (P_2).

7. The vessel of claim 4 or 5, wherein the first pump is connected to the recondenser outlet, and the first pump has a first pump outlet for providing the recondensed pressurized boil-off gas at a fourth pressure (P_4), the fourth pressure exceeding the third pressure (P_3), to a secondary pre-cooler inlet for heat exchange of the recondensed pressurized boil-off gas against the pressurized boil-off gas.

8. The vessel of claim 7, wherein a secondary pre-cooler outlet is connected to the recovery tank inlet.

9. The vessel of any one of the previous claims, wherein the cooling section comprises a recondenser heat exchanger for heat exchanging the pressurized boil-off gas with part of the liquefied gas stored in the at least one cargo storage tank.

10. The vessel of claim 9, wherein the recondenser heat exchanger is arranged inside the recondenser.

11. The vessel of claim 4, wherein the recondenser is provided with spray headers to spray liquefied gas from the at least one cargo storage tank into the recondenser.

12. The vessel of any one of the previous claims, wherein the recovery tank is provided with a first spray header connected to the at least one cargo storage tank, the first spray header being adapted to spray liquefied gas into the recovery tank.

13. The vessel of any one of the previous claims, wherein the cooling section is provided with a second spray header connected to the at least one cargo storage tank, wherein the second spray header is adapted to spray liquefied gas into the cooling section.

14. The vessel of any one of the previous claims, wherein the recovery tank has a second outlet connected to a second pump for pumping the recondensed pressurized boil-off gas to the at least one cargo storage tank.

15. The vessel of any one of the previous claims, wherein the liquefied gas is liquefied natural

gas (LNG).

16. The vessel of any one of the previous claims, wherein the recovery tank is a C-type cryogenic storage tank.

17. A method for the transport of liquefied gas, comprising:

- transporting liquefied gas in a vessel, the vessel comprising:
  - a hull,
  - at least one cargo storage tank arranged in the hull for storing liquefied gas, and
  - at least one engine to propel the vessel;
- receiving boil-off gas at a compressor inlet of at least one compressor, the compressor inlet connected to a vapour space of the at least one cargo storage tank, at a first pressure (P_1);
- using the compressor to supply pressurized boil-off gas to the at least one engine at a second pressure (P_2) exceeding the first pressure;
- diverting at least part of the pressurized boil-off gas to a boil off gas (BOG) recovery system for recovery of boil off gas;
- recondensing the at least part of the pressurized boil-off gas in a cooling section of the BOG recovery system to provide recondensed pressurized boil-off gas; and
- storing the recondensed pressurized boil-off gas in at least one recovery tank;

wherein the recovery tank has a total volume for storing the recondensed pressurized boil-off gas of about 0.5% to 5% of the total volume of the at least one cargo tank;

wherein the recovery tank has a first outlet connected to the at least one engine; and

wherein the at least one recovery tank is separate from the at least one storage tank.

18. The method of claim 17, wherein the at least one recovery tank is arranged on the hull.

19. The method of claim 17 or 18, comprising the further step of:

- providing vaporized boil-off gas from the at least one recovery tank to the at least one engine.