Claims

1. A four-lobe cargo tank for transporting and/or storage of liquified gases,
wherein the tank comprises four main lobes, each with a cylinder sector outer shell and main lobe axis,
wherein said four main lobes are arranged with said four main lobe axis axial-parallel with and about a common main central axis,
wherein said four main lobes are joined by four web frames with four corresponding diagonally arranged perforated bulkheads directed outwardly from said main central axis,
wherein said tank further comprises first and second end covers, each end cover comprising four quarter spherical shell portions, each forming an end portion of said cylinder sector outer shell, and
wherein said quarter spherical shell portions of said first and second end covers, are respectively joined and closing toward said main central axis by first and second four diagonally arranged cylindrical 45-degree cut pipe portions, each arranged with an axis thereof transverse to said main central axis.

2. The four-lobe cargo tank of claim 1, further comprising a central pipe arranged co-axial with said common main central axis,
wherein said central pipe join said first and second four diagonally arranged cylindrical 45-degree cut pipe portions and said four web frames at either end portion of said central pipe, and
wherein said four perforated bulkheads extend radially out from said central pipe.

3. The four-lobe cargo tank of claim 1, further comprising at least one circumferential reinforcing ring stiffener to reinforce said cylinder sector outer shell.

4. The four-lobe cargo tank of claim 1, wherein said second four diagonally arranged cylindrical 45-degree cut pipe portions with its transversely arranged axis inclined toward the corresponding end portion of said central common pipe.

5. The four-lobe cargo tank of claim 1, wherein said liquefied gases comprise liquefied carbon dioxide.

6. The four-lobe cargo tank of claim 5, further arranged for said liquefied gases to comprise liquefied natural gas, liquefied ammonia, or compressed natural gas.

7. The four-lobe cargo tank of claim 1, is a pressure vessel for pressure up to 12 barg.

8. The four-lobe cargo tank of claim 7, wherein said pressure vessel is also cryogenic arranged for holding liquefied Carbon Dioxide (CO2).

9. The four-lobe cargo tank of claim 1, further arranged for holding liquefied natural gas (LNG) at ambient pressure.

10. A vessel comprising at least one four-lobe cargo tank according to claim 1.

11. A method of transporting gas, comprising the steps of:
using the vessel according to claim 10,
loading liquefied natural gas (LNG) under cryogenic conditions to said one or more four-lobe tanks at an LNG loading terminal;
sailing said vessel to an LNG unloading terminal;
unloading said liquefied natural gas (LNG) at said unloading terminal for consumption;
if necessary, sailing said vessel to a loading terminal for liquefied carbon Dioxide (CO2);
loading captured liquefied Carbon Dioxide (CO2) into said one or more four-lobe tanks; and
sailing said captured liquefied Carbon Dioxide (CO2) to a liquefied Carbon Dioxide (CO2) unloading terminal for permanent storage,or for industrial consumption.

12. A method of transporting gas, comprising the steps of:
using the vessel according to claim 10:

loading liquefied natural gas (LNG) under cryogenic conditions to one or more cryogenic cargo tanks at an LNG loading terminal,
sailing said vessel to an LNG unloading terminal,
unloading said liquefied natural gas (LNG) at said unloading terminal for consumption;
if necessary, sailing said vessel to a loading terminal for liquefied carbon Dioxide (CO2);
loading captured liquefied Carbon Dioxide (CO2) into said one or more four-lobe tanks;
sailing said captured liquefied Carbon Dioxide (CO2) to a liquefied Carbon Dioxide (CO2) unloading terminal for permanent storage, or for industrial consumption.

13. A vessel comprising at least one four-lobe cargo tank according to claim 2.

14. A vessel comprising at least one four-lobe cargo tank according to claim 3.

15. A vessel comprising at least one four-lobe cargo tank according to claim 4.

16. A vessel comprising at least one four-lobe cargo tank according to claim 5.

17. A vessel comprising at least one four-lobe cargo tank according to claim 6.

18. A vessel comprising at least one four-lobe cargo tank according to claim 7.

19. A vessel comprising at least one four-lobe cargo tank according to claim 8.

20. A vessel comprising at least one four-lobe cargo tank according to claim 9.