CLAIMS

1. A boil-off gas processing apparatus which reliquefies a boil-off gas generated within a liquefied gas tank storing a liquefied gas and returns the reliquefied gas to an interior of the liquefied gas tank, the boil-off gas processing apparatus comprising:

a boil-off gas discharge line configured to discharge the boil-off gas from the liquefied gas tank to outside; and

a boil-off gas reliquefaction line configured to immerse at least part of the boil-off gas discharge line in the liquefied gas within the liquefied gas tank,

wherein the boil-off gas reliquefaction line maintains a pressure necessary for reliquefaction of the boil-off gas and has a length sufficient to be able to release an amount of heat necessary for reliquefaction of the boil-off gas.

2. The boil-off gas processing apparatus according to claim 1, wherein the boil-off gas reliquefaction line includes a pressure holding device configured to condense and trap the boil-off gas and release the boil-off gas in liquid form into the liquefied gas.

3. The boil-off gas processing apparatus according to claim 1, wherein the boil-off gas reliquefaction line reliquefies all or part of the boil-off gas to be released into the liquefied gas.

4. The boil-off gas processing apparatus according to claim 1, further comprising: an outward guidance line configured to guide the boil-off gas reliquefaction line to outside of the liquefied gas tank; a pressure holding device attached to a distal end of the outward guidance line and configured to condense and trap the boil-off gas and release the boil-off gas in liquid form; and a return

line configured to return the liquid released from the pressure holding device into the liquefied gas within the liquefied gas tank.

5. The boil-off gas processing apparatus according to claim 4, further comprising a liquid receiver tank inserted between the pressure holding device and the return line to temporarily hold the liquid released from the pressure holding device.

6. The boil-off gas processing apparatus according to claim 1, wherein the boil-off gas discharge line includes a compressor configured to discharge the boil-off gas or to increase pressure of the boil-off gas.

7. A liquefied gas tank comprising a heat-insulating container storing a liquefied gas,

wherein the liquefied gas tank is equipped with the boil-off gas processing apparatus according to any one of claims 1 to 6.

CLAIMS

1. A boil-off gas processing apparatus which reliquefies a boil-off gas generated within a liquefied gas tank storing a liquefied gas and returns the reliquefied gas to an interior of the liquefied gas tank, the boil-off gas processing apparatus comprising:

a boil-off gas discharge line configured to discharge the boil-off gas from the liquefied gas tank,

a boil-off gas reliquefaction line branching off from the boil-off gas discharge line and immersed in the liquefied gas within the liquefied gas tank,

wherein the boil-off gas reliquefaction line maintains a pressure necessary for reliquefaction of the boil-off gas and has a length sufficient to be able to release an amount of heat necessary for reliquefaction of the boil-off gas, and wherein the boil-off gas reliquefaction line includes a pressure holding device configured to condense and trap the boil-off gas and release the boil-off gas in liquid form into the liquefied gas.

2. The boil-off gas processing apparatus according to claim 1, wherein the boil-off gas reliquefaction line reliquefies all or part of the boil-off gas to be released into the liquefied gas.

3. The boil-off gas processing apparatus according to claim 1, further comprising: an outward guidance line configured to guide the boil-off gas reliquefaction line to outside of the liquefied gas tank; a pressure holding device attached to a distal end of the outward guidance line and configured to condense and trap the boil-off gas and release the boil-off gas in liquid form; and a return line configured to return the liquid released from the pressure holding device into the liquefied gas within the liquefied gas tank.

4. The boil-off gas processing apparatus according to claim 3, further comprising a liquid receiver tank inserted between the pressure holding device and the return line to temporarily hold the liquid released from the pressure holding device.

5. The boil-off gas processing apparatus according to claim 1, wherein the boil-off gas discharge line includes a compressor configured to discharge the boil-off gas or to increase pressure of the boil-off gas.

6. A liquefied gas tank comprising a heat-insulating container storing a liquefied gas,

wherein the liquefied gas tank is equipped with the boil-off gas processing apparatus according to any one of claims 1 to 5.