CLAIMS

[Claim 1] An ammonia gas leakage suppression method, comprising:

supplying, into a storage tank that stores liquefied ammonia, a low-temperature liquid having a temperature lower than stored liquefied ammonia stored in the storage tank in a state where a roof portion of the storage tank is opened and an internal space of the storage tank communicates with an external space.

[Claim 2] The ammonia gas leakage suppression method according to claim 1, wherein

the temperature of the low-temperature liquid is -196°C or higher and -35°C or lower.

[Claim 3] The ammonia gas leakage suppression method according to claim 1 or 2, wherein

the low-temperature liquid is liquid nitrogen or liquefied ammonia in a subcooled state.

[Claim 4] The ammonia gas leakage suppression method according to claim 1 or 2, wherein

the low-temperature liquid is supplied into a liquid phase in the storage tank.

[Claim 5] The ammonia gas leakage suppression method according to claim 1 or 2, wherein

the low-temperature liquid is supplied into a gas phase in the storage tank.

[Claim 6] The ammonia gas leakage suppression method according to claim 1 or 2, wherein

an inert gas is further supplied into a gas phase in the storage tank.

[Claim 7] The ammonia gas leakage suppression method according to claim 6, wherein

the inert gas is a nitrogen gas or a carbon dioxide gas.

[Claim 8] A liquefied ammonia storage apparatus, comprising:

a storage tank that stores liquefied ammonia; and

a low-temperature liquid supply unit that supplies, into the storage tank, a low-temperature liquid having a temperature lower than stored liquefied ammonia stored in the storage tank, wherein

the low-temperature liquid supply unit supplies the low-temperature liquid into the storage tank when a roof portion of the storage tank that stores the stored liquefied ammonia is opened and an internal space of the storage tank communicates with an external space.

[Claim 9] The liquefied ammonia storage apparatus according to claim 8, wherein

the low-temperature liquid supply unit is disposed so as to supply the low-temperature liquid into a liquid phase in the storage tank.

[Claim 10] The liquefied ammonia storage apparatus according to claim 8 or 9, wherein

the low-temperature liquid supply unit is disposed so as to supply the low-temperature liquid into a gas phase in the storage tank.

[Claim 11] The liquefied ammonia storage apparatus according to claim 8 or 9, further comprising:

an inert gas supply unit that supplies an inert gas into a gas phase in the storage tank.

[Claim 12] The liquefied ammonia storage apparatus according to claim 11, wherein

the liquefied ammonia storage apparatus includes a plurality of the inert gas supply units.