CLAIMS

1. A method for producing ethylene oxide comprising:

supplying an ethylene oxide-containing reaction product gas produced in an ethylene oxidation reaction step, in which ethylene is subjected to catalytic gas phase oxidation using a molecular oxygen-containing gas in the presence of a silver catalyst, to an ethylene oxide absorption column;

bringing the reaction product gas into contact with an absorption liquid supplied to the ethylene oxide absorption column;

supplying an ethylene oxide-containing column bottom liquid of the ethylene oxide absorption column to an ethylene oxide purification system;

supplying an ethylene oxide-containing uncondensed gas discharged from the ethylene oxide purification system to an ethylene oxide reabsorption column; and

circulating the column bottom liquid of the ethylene oxide reabsorption column to the ethylene oxide stripper column, and wherein

an operation pressure (column top pressure) of the ethylene oxide reabsorption column is set to 3 to 50 kPa gauge.

2. The production method according to claim 1, wherein

the operation pressure (column top pressure) of a ethylene oxide stripper column is set to 3 to 60 kPa gauge.

3. The production method according to claim 1 or 2, wherein the method further comprises supplying an uncondensed gas to the ethylene oxide reabsorption column from the ethylene oxide stripper column through an ethylene oxide dehydrating column, and wherein

a pressure control valve is not disposed in a conduit for supplying an uncondensed gas.

4. The production method according to any one of claims 1 to 3, wherein

a suction pressure of a compressor used for boosting the uncondensed gas of the ethylene oxide reabsorption column is 3 to 5 kPa gauge.

5. The method for producing ethylene oxide according to any one of claims 1 to 4, comprising:

supplying the ethylene oxide-containing uncondensed gas discharged from a column top part of the ethylene oxide reabsorption column to a carbon dioxide gas absorption column; and

recovering a carbon dioxide gas.