WHAT IS CLAIMED IS:

1. An article transport system, in which an article is transported between an article storage unit storing the article at a first temperature and an external space at a second temperature higher than the first temperature, comprising:

a first lifter which transports the article in a vertical direction, the first lifter being placed in a first lifter installation space which is covered with a wall material between the external space and the article storage unit;

a second lifter which transports the article in the vertical direction, the second lifter being placed in a second lifter installation space which is covered with a wall material between the first lifter installation space and the article storage unit;

a first loading and unloading port which allows communication between the first lifter installation space and the second lifter installation space;

a second loading and unloading port which allows communication between the external space and the first lifter installation space; and

a third loading and unloading port which allows communication between the second lifter installation space and the article storage unit,

wherein

the first loading and unloading port is placed above the second loading and unloading port and the third loading and unloading port,

the first lifter transports the article between the first loading and unloading port and the second loading and unloading port, and

the second lifter transports the article between the first loading and unloading port and the third loading and unloading port.

2. The article transport system according to claim 1, wherein

the first lifter includes a first mast, a first lifting part that moves up and down along the first mast, and a first conveyor installed on the first lifting part,

the second lifter includes a second mast, a second lifting part that moves up and down along the second mast, and a second conveyor installed on the second lifting part,

the first lifter conveys the article, mounted on the first conveyor, in the vertical

direction between a position at which a height of a top surface of the first conveyor corresponds to the first loading and unloading port and a position at which the height of the top surface of the first conveyor corresponds to the second loading and unloading port, and

the second lifter conveys the article, mounted on the second conveyor, in the vertical direction between a position at which a height of a top surface of the second conveyor corresponds to the first loading and unloading port and a position at which the height of the top surface of the second conveyor corresponds to the third loading and unloading port.

3. The article transport system according to claim 1 or 2, further comprising at least one air curtain provided on an article transport route between the article storage unit and the external space to interfere with a flow of air on the article transport route.

4. The article transport system according to any one of claims 1 to 3, wherein the first lifter installation space and the second lifter installation space are formed of a heat-insulating wall material.

5. An article transport system~~,~~ in which an article is transported between an article storage unit storing the article at a first temperature and an external space at a second temperature higher than the first temperature, comprising:

a lifter which transports the article in a vertical direction;

a cover part with which a transport route of the lifter is covered;

a first loading and unloading port provided in the cover part to open to a side of the article storage unit; and

a second loading and unloading port provided in the cover part to open to a side of the external space, wherein

the first loading and unloading port is placed above the second loading and unloading port, and

the lifter transports the article between the first loading and unloading port and

the second loading and unloading port,

wherein the lifter is set as a first lifter and the cover part is set as a first cover part, and the article transport system further comprises:

a second lifter which transports the article in the vertical direction on the side of the article storage unit rather than the first loading and unloading port;

a second cover part with which a transport route of the second lifter is covered;

a third loading and unloading port provided in the second cover part to open to the side of the article storage unit;

a fourth loading and unloading port provided in the second cover part to open to a side of the first loading and unloading port; and

an intermediate conveyance device which conveys the article between the first loading and unloading port and the fourth loading and unloading port, wherein

the fourth loading and unloading port is placed above the third loading and unloading port, and

the second lifter transports the article between the third loading and unloading port and the fourth loading and unloading port.

6. The article transport system according to claim 5, wherein the intermediate conveyance device is set as a first intermediate conveyance device, and the article transport system further comprises:

a fifth loading and unloading port provided in the first cover part to open to a side of the second lifter;

a sixth loading and unloading port provided in the second cover part to open to a side of the first lifter; and

a second intermediate conveyance device which conveys the article between the fifth loading and unloading port and the sixth loading and unloading port,

wherein the fifth loading and unloading port is placed below the first loading and unloading port and above the second loading and unloading port, and the sixth loading and unloading port is placed above the third loading and unloading port and below the fourth loading and unloading port.

7. The article transport system according to any one of claims 1 to 6, wherein a room temperature of the article storage unit rises from bottom to top.

8. An article transport system, in which an article is transported between an article storage unit storing the article at a first temperature and an external space at a second temperature higher than the first temperature, comprising:

a first lifter placed in a first lifter installation space which is formed between the external space and the article storage unit and conveys the article in a vertical direction;

a second lifter placed in a second lifter installation space which is formed between the first lifter installation space and the article storage unit and conveys the article in the vertical direction;

a first loading and unloading port which allows communication between the first lifter installation space and the second lifter installation space;

a second loading and unloading port which allows communication between the external space and the first lifter installation space;

a third loading and unloading port which allows communication between the second lifter installation space and the article storage unit; and

an intermediate conveyance device which conveys the article between the first lifter and the second lifter via the first loading and unloading port;

wherein

the first loading and unloading port is placed above the second loading and unloading port and the third loading and unloading port,

the first lifter transports the article between the intermediate conveyance device and the second loading and unloading port, and

the second lifter transports the article between the intermediate conveyance device and the third loading and unloading port.