there has been a problem in that only the protruding portion formed in the center section of the thermal insulation panel is in contact with the tank surface, and therefore a rotational moment, the origin of which is the contact section between the protruding portion and the tank surface, is readily produced, thereby extending the damage to the support members.

[0006]

Embodiments of the present invention were conceived in view of these problems, and embodiments of the present invention seek to provide a heat-insulating structure and a heat-insulating tank that may enable support member damage to be suppressed even when a thermal insulation panel is applied to the side surface of the tank.

Solution to Problem

[0006a]

According to an aspect of the present invention, there is provided a heat-insulating structure disposed on the side surface of a tank that has, on the inside thereof, a stiffener which is provided in a horizontal direction and a support member which is disposed on a surface corresponds to the position where the the stiffener is disposed, the heat-insulating structure comprising: a thermal insulation panel that has, in a center section thereof, a fixed section which is fixed to the support member; a first pad that is long in a horizontal direction is disposed between the fixed section and the side surface of the tank; and a second pad that is disposed

in a position vertically below the first pad and between the side surface of the tank and the thermal insulation panel, and has smaller horizontal width than the first pad.

[0007]

According to embodiments of the present invention, there is provided a heat-insulating structure installed on the side surface of a tank on the surface of which a support member is disposed, the heat-insulating structure including : a thermal insulation panel that has, in a center section thereof, a fixed section which is fixed to the support member; a first pad that is disposed between the fixed section and the side surface of the tank; and a second pad that is disposed in a position below the first pad and between the side surface

of the tank and the thermal insulation panel.

[0008]

Furthermore, according to embodiments of the present invention, there is provided a heat-insulating tank over the whole surface of which a heat-insulating structure is formed, the heat-insulating structure being disposed on the side surface of a tank on the surface of which a support member is installed and the heat-insulating tank including: a thermal insulation panel that has, in a center section thereof, a fixed section which is fixed to the support member; a first pad that is disposed between the fixed section and the side surface of the tank; and a second pad that is disposed in a position below the first pad and between the side surface of the tank and the thermal insulation panel.

[0009]

In the heat-insulating structure and the heat-insulating tank, the thickness Db of the second pad may be configured with a size equal to or less than the thickness Da of the first pad. Furthermore, the thickness Db of the second pad may be configured to vary in size according to the separation thereof from the first pad.

[0010]

In addition, the second pad may be disposed so as to be in contact with the first pad or may be configured to be integral with the first pad. Furthermore, the second pad

may be disposed in a position spaced apart from the first pad.

[0011]

Further, the thermal insulation panel may have a mark indicating the orientation thereof when same is installed on the side surface of the tank.

[0012]

In addition, the heat-insulating tank has, on the inside the side surface thereof, a stiffener which is provided so as to extend in a horizontal direction, and the support member may be disposed in alignment with the stiffener.

Advantageous Effects of Invention

[0013]

According to the foregoing heat-insulating structure and heat-insulating tank according to embodiments of the present invention, by installing, in addition to the first pad that supports the thermal insulation panel in a state of being spaced apart from the side surface of the tank, a second pad that is positioned between the thermal insulation panel and the tank and in a position below the first pad, it is possible to draw the lower section of the thermal insulation panel outward using the second pad when the side surface of the tank has expanded outward.

[0014]

CLAIMS

1. A heat-insulating structure disposed on the side surface of a tank that has, on the inside thereof, a stiffener which is provided in a horizontal direction and a support member which is disposed on a surface corresponds to the position where the the stiffener is disposed, the heat-insulating structure comprising:

a thermal insulation panel that has, in a center section thereof, a fixed section which is fixed to the support member;

a first pad that is long in a horizontal direction is disposed
between the fixed section and the side surface of the tank; and

a second pad that is disposed in a position vertically below the first pad and between the side surface of the tank and the thermal insulation panel, and has smaller horizontal width than the first pad.

2. The heat-insulating structure according to claim 1, wherein a thickness Db of the second pad is configured with a size equal to or less than a thickness Da of the first pad.

3. The heat-insulating structure according to claim 2, wherein the thickness Db of the second pad is configured to vary in size according to the separation thereof from the first pad.

4. The heat-insulating structure according to claim 1, wherein the second pad is disposed so as to be in contact with the first pad or is configured to be integral with the first pad.

5. The heat-insulating structure according to claim 1, wherein the second pad is disposed in a position spaced apart from the first pad.

6. The heat-insulating structure according to claim 1, wherein the thermal insulation panel has a mark indicating the orientation thereof when same is installed on the side surface of the tank.

7. A heat-insulating tank over the whole surface of which a heat-insulating structure is formed, wherein the heat-insulating structure is the heat-insulating structure according to any one of claims 1 to 6.