WHAT IS CLAIMED IS:

1. A container carrier comprising:

a hull comprising a side plating forming a double hull structure with an outer side plating and an inner side plating, a bottom plating forming a double bottom structure with an outer bottom plating and an inner bottom plating, and an upper deck;

a cargo hold partitioned by transverse bulkheads inside the hull;

lower cell guides installed at regular intervals on sides of the transverse bulkheads;

top bridges installed extending to left and right edges of the upper deck between the cargo holds and disposed in a plurality of rows in a longitudinal direction of the hull; and

upper cell guides installed on both sides of the top bridge, each of the upper cell guides being connected to each of the lower cell guides to be integrally formed.

2. The container carrier of claim 1, wherein the upper cell guide is installed up to an uppermost part of the top bridge, or installed lower or higher than the uppermost part.

3. The container carrier of claim 2, wherein at least one of a lashing eye, a lashing ring, a lashing plate, a plug, and a cone, which are fixing devices of a lashing system, is additionally disposed at the uppermost part of the top bridge.

4. The container carrier of claim 1, wherein the top bridge comprises a combination of a plurality of vertical members and a plurality of horizontal members,

two outer vertical members of the plurality of vertical members disposed on the upper deck on each of left and right sides of the hull are disposed at an interval corresponding to a width of a small container or a large container, and

a plurality of intermediate vertical members disposed between the outer vertical members of the plurality of vertical members are disposed at intervals corresponding to twice the width of the small container or the large container.

5. The container carrier of claim 4, wherein the top bridge further comprises a plurality of oblique members installed to reduce a load applied to the plurality of vertical members and the plurality of horizontal members, and

wherein the plurality of oblique members are installed with an upward slope in a center direction of the hull from a lower end of each of the two outer vertical members disposed on the upper deck on each of the left and right sides of the hull and a lower end of at least one intermediate vertical member of the plurality of intermediate vertical members.

6. The container carrier of claim 4, wherein the top bridge further comprises a plurality of plate members installed to reduce a load applied to the plurality of vertical members and the plurality of horizontal members, and

wherein the plurality of plate members are installed between one intermediate vertical member adjacent to each of the outer vertical members among the plurality of intermediate vertical members, and between two intermediate vertical members disposed in a center part of the hull among the plurality of intermediate vertical members, respectively.

7. The container carrier of claim 4, wherein the upper cell guides are disposed between each of the outer vertical members, the plurality of intermediate vertical members, and the plurality of intermediate vertical members, and configured to guide ascent and descent of the small container or the large container.

8. The container carrier of claim 1, further comprising:

a drainage hole installed through the side plating of the double hull structure to an outside on a freeboard deck so that water is drained from a dock to the outside.

9. The container carrier of claim 1, further comprising:

a drainage system installed on the bottom plating, to drain water infiltrating through an entrance of the cargo hold to an outside,

wherein the drainage system is configured to collect water entering through a drainage hole formed in the inner bottom plating in a bilge well formed in a box shape under the inner bottom plating at lower ends of left and right sides of the transverse bulkhead, and drain the water collected in the bilge well by a bilge pump of an engine room through a drainage pipe of a pipe duct.

10. The container carrier of claim 1, further comprising:

a container stacking assistance device applied to at least any one of the cargo hold so that a container having at least one or more specifications is loaded on its upper side; and

a location adjusting member disposed in a horizontal direction between the neighboring lower cell guides in each of a plurality of cells inside the cargo hold, and installed in at least one or more places at an arbitrary location in a vertical direction of the transverse bulkhead partitioning the cargo hold.

11. The container carrier of claim 10, wherein the container stacking assistance device comprises:

a frame having a width and length of 1 to n times (n is a natural number) to a width and length of the container, while having a flat cross section smaller than an entrance of the cargo hold;

a support provided in a height direction on the frame; and

a protruding member protruding to an outward direction from the frame or the support so as to be capable of being mounted at an arbitrary location of the cargo hold,

wherein the upper deck of the entrance of the cargo hold has a groove through which the protruding member passes at a portion where the protruding member is mounted, and

wherein the location adjusting member mounts the container stacking assistance device passing through the groove formed in the upper deck and descended inside the cargo hold.

12. The container carrier of claim 1, further comprising:

support structures disposed at predetermined intervals on a bottom surface of the cargo hold to support the container upwardly and spaced apart,

wherein the support structures allow a flow path for foreign substances flowing into the cargo hold to be formed, between the bottom surface of the cargo hold and the container of a lowermost layer.

13. A method of loading and unloading container for a container carrier in which a container stacking assistance device comprising a frame having a width and length of 1 to n times (n is a natural number) to a width and length of a container, while having a flat cross section smaller than an entrance of a cargo hold, a support provided in a height direction

on the frame, and a protruding member protruding to an outward direction from the frame or the support so as to be capable of being mounted at an arbitrary location of the cargo hold, is applied to at least one of the cargo hold to load the container, comprising:

by performing an operation of loading the container into the cargo hold by using a crane, completing the loading of the container into the cargo hold;

by performing an operation of mounting the container stacking assistance device on an upper deck of an entrance of the cargo hold using the crane, covering the entrance of the cargo hold with the container stacking assistance device;

by performing an operation of loading the container on an upper part of the container stacking assistance device using the crane, completing the loading of the container on the upper part of the container stacking assistance device;

performing an operation of unloading the container loaded on the upper part of the container stacking assistance device using the crane;

by performing an operation of removing the container stacking assistance device from the entrance of the cargo hold using the crane, opening the entrance of the cargo hold; and

performing an operation of unloading the container loaded inside the cargo hold using the crane.

14. The method of loading and unloading container of claim 13, wherein the mounting of the container stacking assistance device on the upper deck of the entrance of the cargo hold using the crane comprises transporting the container stacking assistance device to the cargo hold of the container carrier using the crane in a state where it is stored on land, or to the cargo hold of the container carrier using the crane in a state where it is stored at an arbitrary place of the upper deck of the container carrier, and

the performing of the operation of removing the container stacking assistance device from the entrance of the cargo hold using the crane comprises unloading the container stacking assistance device onto land or transporting the container stacking assistance device to the arbitrary place of the upper deck.

15. The method of loading and unloading container of claim 13, wherein the container carrier comprises:

a hull, an exterior of the hull being formed by the upper deck, a side plating, and a bottom plating;

cargo holds partitioned by transverse bulkheads inside the hull;

lower cell guides installed at regular intervals on sides of the transverse bulkheads;

a plurality of top bridges installed extending to left and right edges of the upper deck between the cargo holds and disposed in a longitudinal direction of the hull; and

upper cell guides connected to each of the lower cell guides, and installed on both sides of the top bridge, and

the container stacking assistance device is stowed and stored between the top bridges facing in a front-rear direction on the upper deck in the opening of the entrance of the cargo hold.

16. The method of loading and unloading container of claim 13, further comprising:

after the completing of the loading of the container into the cargo hold by performing the operation of loading the container into the cargo hold by using the crane,

connecting the container stacking assistance devices in parallel using a coupling member; and

transporting the container stacking assistance devices in a state where the container stacking assistance devices are connected in parallel using the crane.

17. The method of loading and unloading container of claim 16, wherein, in the connecting of the container stacking assistance devices in parallel using the coupling member,

the number of the container stacking assistance devices connected in parallel is an odd number to align a center of gravity when transporting them by the crane, and the center of gravity is aligned during transport by connecting a spreader attached to the crane to a container stacking

assistance device located in a center among the odd number of connected container stacking assistance devices.

18. The method of loading and unloading container of claim 16, wherein the container carrier comprises:

a hull, an exterior of the hull being formed by the upper deck, a side plating, and a bottom plating;

a plurality of top bridges installed extending to left and right edges of the upper deck between the cargo holds and disposed in a longitudinal direction of the hull; and

upper cell guides connected to respective lower cell guides in the cargo hold, and installed on both sides of the top bridge,

wherein the upper cell guides mounts the container stacking assistance devices on the upper deck of the entrance of the cargo hold using the crane in a state in which the container stacking assistance devices are connected in parallel using the coupling member, or are inserted into gaps between the container stacking assistance devices connected in parallel to guide ascent and descent when they are removed from the entrance of the cargo hold.

19. A container carrier that loads and unloads the container, and mounts the container stacking assistance device on the upper deck of the entrance of the cargo hold, or removes the container stacking assistance

device from the entrance of the cargo hold according to the method of loading and unloading container of claim 13.

WHAT IS CLAIMED IS:

1. A container carrier comprising:

a hull comprising a side plating forming a double hull structure with an outer side plating and an inner side plating, a bottom plating forming a double bottom structure with an outer bottom plating and an inner bottom plating, and an upper deck;

a plurality of cargo holds partitioned by transverse bulkheads in a front-rear direction inside the hull;

lower cell guides installed at regular intervals on the transverse bulkheads;

top bridges provided between the plurality of cargo holds in a front-rear direction on the upper deck and extending to left and right edges of the upper deck, and disposed in a plurality of rows in a longitudinal direction of the hull;

upper cell guides installed in the top bridge, each of the upper cell guides being integrally connected with each of the lower cell guides to form a guide path of continuous containers; and

a container loading aid which is applied to the cargo hold so that the container is loaded on its upper side, and

wherein the container loading aid is introduced into the guide path while being guided by the upper cell guide, and at least a part thereof is mounted on the hull to transfer a load of the container loaded on the upper side of the container loading aid to the hull.

2. The container carrier of claim 1, wherein at least one of a lashing eye, a lashing ring, a lashing plate, a plug, and a cone, which are fixing devices of a lashing system, is additionally disposed at the uppermost part of the top bridge.

3. The container carrier of claim 1, wherein the top bridge comprises a combination of a plurality of vertical members and a plurality of horizontal members,

outer vertical members of the plurality of vertical members disposed on the upper deck on each of left and right sides of the hull are disposed at an interval corresponding to a width of a small container or a large container, and

a plurality of intermediate vertical members disposed between the outer vertical members of the plurality of vertical members are disposed based on the width of the small container or the large container.

4. The container carrier of claim 1, comprising:

a hybrid type bridge in which the top bridges disposed in the plurality of rows in the longitudinal direction of the hull to which a cell guide system in which the upper cell guides are installed is applied and a lashing bridge disposed in a partial section on left and right sides of some or one of the plurality of rows and to which a lashing system for fastening and fixing the container is applied are mixed and installed.

5. The container carrier of claim 3, wherein each of the upper cell guides is disposed between each of the outer vertical members and the plurality of intermediate vertical members and disposed between the plurality of intermediate vertical members, and is configured to guide ascent and descent of the small container or the large container.

6. The container carrier of claim 1, further comprising:

a drainage hole installed through the side plating of the double hull structure to an outside on a freeboard deck so that water is drained from a dock to the outside.

7. The container carrier of claim 1, further comprising:

a drainage system installed on the bottom plating, to drain water infiltrating through an entrance of the cargo hold to an outside,

wherein the drainage system is configured to collect water entering through a drainage hole formed in the inner bottom plating in a bilge well formed in a box shape under the inner bottom plating at lower ends of left and right sides of the transverse bulkhead, and drain the water collected in the bilge well by a bilge pump of an engine room through a drainage pipe of a pipe duct.

8. The container carrier of claim 1, further comprising:

a location adjusting member disposed in a horizontal direction between the neighboring lower cell guides in each of a plurality of cells

inside the cargo hold, and installed in at least one or more places at an arbitrary location in a vertical direction of the transverse bulkhead partitioning the cargo hold.

9. The container carrier of claim 8, wherein the container loading aid comprises:

a main body whose left and right width corresponds to a left and right width of the container and whose front and rear length is smaller than a front and rear length of an entrance of the cargo hold;

a support provided in a height direction on the main body; and

a protruding member protruding to an outward direction from the main body or the support so as to be capable of being mounted at an arbitrary location of the cargo hold,

wherein, in the upper deck of the entrance of the cargo hold, a groove through which the protruding member passes at a portion where the protruding member is mounted is formed, and

wherein the location adjusting member mounts the container loading aid passing through the groove formed in the upper deck and descended inside the cargo hold.

10. The container carrier of claim 1, further comprising:

support structures disposed at predetermined intervals on a bottom surface of the cargo hold to support the container upwardly and spaced apart,

wherein the support structures allow a flow path for foreign substances flowing into the cargo hold to be formed, between the bottom surface of the cargo hold and the container of a lowermost layer.

11. A container loading and unloading method for a container carrier equipped with a container loading aid, wherein the container carrier comprises:

a hull comprising a side plating forming a double hull structure with an outer side plating and an inner side plating, a bottom plating forming a double bottom structure with an outer bottom plating and an inner bottom plating, and an upper deck;

a cargo hold partitioned by transverse bulkheads inside the hull;

lower cell guides installed at regular intervals on the transverse bulkheads;

upper cell guides provided in an upper part of the upper deck; and

a container loading aid which is applied to the cargo hold so that a container is loaded on its upper side,

each of the upper cell guides is integrally connected with each of the lower cell guides to form a guide path of continuous containers, and

the container loading aid comprises a main body whose left and right width corresponds to a left and right width of the container and whose front and rear length is smaller than a front and rear length of an entrance of the cargo hold, and a protruding member protruding to an outward

direction of the main body so as to be capable of being mounted at an arbitrary location of the cargo hold, and

wherein the container loading and unloading method comprises:

loading the container inside the cargo hold by using a crane;

descending the container loading aid to be guided by the upper cell guide and introduced into the guide path using the crane;

mounting the container loading aid at any position of the cargo hold using the crane; and

by performing an operation of loading the container on an upper part of the container loading aid using the crane, completing the loading of the container on the upper part of the container loading aid.

12. The container loading and unloading method of claim 11, wherein the mounting of the container loading aid at any position of the cargo hold using the crane comprises transporting the container loading aid to the cargo hold of the container carrier using the crane in a state where it is stored on land, or to the cargo hold of the container carrier using the crane in a state where it is stored at an arbitrary place of the upper deck of the container carrier.

13. The container loading and unloading method of claim 11, wherein the container carrier further comprises a plurality of top bridges installed extending to left and right edges of the upper deck between the cargo holds and disposed in a longitudinal direction of the hull, and

when the container loading aid is transported to and stored at an arbitrary place of the upper deck, the container loading aid is stowed and stored between the top bridges facing in a front-rear direction on the upper deck of an upper part of the side plating.

14. The container loading and unloading method of claim 11, wherein the container loading aid further comprises a coupling member configured to connect two or more main bodies disposed adjacent to each other, and

wherein the container loading and unloading method further comprises:

connecting the container loading aids in parallel using the coupling member; and

transporting the container loading aids in a state where the container loading aids are connected in parallel using the crane.

15. The container loading and unloading method of claim 11, further comprising:

performing an operation of unloading the container loaded on the upper part of the container loading aid using the crane;

performing the operation of removing the container loading aid from the entrance of the cargo hold by lifting the container loading aid to be drawn out within the guide path while the container loading aid is guided by the upper cell guide using the crane to unload the removed container

loading aid on land or transport to and store at the removed container loading aid to an arbitrary location on the upper deck; and

performing an operation of unloading the container loaded inside the cargo hold using the crane.

16. A container carrier that loads and unloads the container, and mounts the container loading aid on an arbitrary location of the cargo hold, or removes the container loading aid from an arbitrary location of the cargo hold according to the container loading and unloading method of claim 11.