**CLAIMS**

1. A deck plate system having continuous haunched end portions with a cap plate, the deck plate system comprising:

a deck plate body (11) having a cross-section with a plurality of parallel open ribs (121) that are separated from each other by a flat part (111), the deck plate body having a predetermined width;

a negative moment reinforcing cap plate (13), the cap plate being placed at a location spaced at a predetermined distance from an end of the deck plate body (11) and including: a cover part (131) for closing an associated open rib (121) at opposite end portions thereof in a longitudinal direction of the deck plate body (11), and a coupling part (132) horizontally extending from the opposite end portions of the cover part (131) and being seated on and coupled to the flat part (111); and

a truss-type prefabricated reinforcing bar (14) placed in a lateral direction of the deck plate body (11) so as to connect the flat parts (111) together, wherein

the deck plate body (11) is configured such that opposite end portions thereof in a longitudinal direction are integrally provided with respective end-reinforcing bent plates (125) each including: top-reinforcing bent parts (125a) provided by downwardly bending a predetermined section from an end portion

of the flat part (111) at a predetermined angle so as to prevent cast-in-place concrete from intruding and to close and reinforce a cross-section of the end of the flat part, and a side-reinforcing bent parts (125b) provided by bending lateral sides (121a) of each of the open ribs (121) to be overlapped on the top-reinforcing bent parts (125a); and

each of the open ribs (121) is configured such that a bottom surface thereof is provided with a dovetail groove (121c), and end coupling parts having a shape in which a dovetail rib (121d) defining the dovetail groove (121c) is vertically divided in half are used to lap-splice end portions of a deck plate and an adjacent deck plate in lateral directions of the deck plates.

2. A deck plate system having continuous haunched end portions with a cap plate, the deck plate system comprising:

a deck plate body (11) having a cross-section with a plurality of parallel open ribs (121) that are separated from each other by a flat part (111), the deck plate body having a predetermined width;

a negative moment reinforcing cap plate (13), the cap plate being placed at a location spaced at a predetermined distance from an end of the deck plate body (11) and including: a cover part (131) for closing an associated open rib (121) at opposite end portions thereof in a longitudinal direction of

the deck plate body (11), and a coupling part (132) horizontally extending from the opposite end portions of the cover part (131) and being seated on and coupled to the flat part (111); and

a truss-type prefabricated reinforcing bar (14) placed in a lateral direction of the deck plate body (11) so as to connect the flat parts (111) together, wherein

a deck plate and an adjacent deck plate both being disposed on an upper surface of a beam are connected to each other by extending the cap plate (13);

the deck plate body (11) is configured such that opposite end portions thereof in a longitudinal direction are integrally provided with respective end-reinforcing bent plates (125) each including: top-reinforcing bent parts (125a) provided by downwardly bending a predetermined section from an end portion of the flat part (111) at a predetermined angle so as to prevent cast-in-place concrete from intruding and to close and reinforce a cross-section of the end of the flat part, and a side-reinforcing bent parts (125b) provided by bending lateral sides (121a) of each of the open ribs (121) to be overlapped on the top-reinforcing bent parts (125a); and

each of the open ribs (121) is configured such that a bottom surface thereof is provided with a dovetail groove (121c), and end coupling parts having a shape in which a dovetail rib (121d) defining the dovetail groove (121c) is

vertically divided in half are used to lap-splice end portions of a neighboring deck plates in lateral directions of the deck plates.

3. The deck plate system of claim 1, wherein

the negative moment reinforcing cap plate (13) includes a cut-off groove (13c) provided between the cover part (131) and the coupling part (132) by being grooved so as to be engaged with the associated open rib (121); and the cut-off groove (13c) is seated on a stop protrusion (121f) provided on the lateral sides (121a) of the deck plate body (11).

4. The deck plate system of claim 1 or 3, wherein

the flat parts (111) are provided with respective connecting depressions (111b) on centers thereof, the connecting depressions being spaced at predetermined intervals; and the truss-type prefabricated reinforcing bar (14) is provided with connectors (145) at a lower portion thereof, the connectors being spaced at predetermined intervals, whereby the connectors (145) are seated in and engaged with the respective connecting depressions (111b) of the flat part (111).

5. The deck plate system of claim 2, further comprising:

a connecting bar (30) seated on and engaged with a connecting bar groove (133) that is provided on the cover part

(131), thereby allowing the cap plates (13) for resisting negative moment of the neighboring deck plates disposed on the upper surface of the beam to be continuously connected to each other.

6. The deck plate system of claim 5, further comprising:

a lower connection plate (33) allowing bottom surfaces (121b) of the open ribs (121) of the neighboring deck plates disposed on the upper surface of the beam to be continuously connected to each other.

7. The deck plate system of claim 6, wherein

the lower connection plate (33) is slidingly engaged with the dovetail rib (121d) to overlap therewith by having a same cross sectional shape as the dovetail rib.

8. The deck plate system of claim 1 or 3, wherein

the cover part (131) of the negative moment reinforcing cap plate (13) is provided with a concrete pouring hole (131a).