

steel beam for fixedly connecting a bracket to the side surface of a column or girder and a steel beam to the bracket so that the steel beam is connected to the side surface of the column or girder, the structure including: the bracket having one end coupled to the side surface of the column or girder and the other end whose lower portion formed slantly to an acute angle; a first connection plate coupled to the slant end portion of the bracket in such a manner as to protrude from the top of the bracket by a given length; the steel beam having one end whose lower portion formed slantly to an obtuse angle in such a manner as to correspond to the slant other end of the bracket; and a second connection plate coupled to the slant end portion of the steel beam in such a manner as to protrude from the top of the steel beam by a given length, wherein the first connection plate has a pair of guide parts protruding from the steel beam side lower portion thereof in such a manner as to be spaced apart from each other, and the second connection plate has chamfered portions formed on both sides of the lower end thereof in such a manner as to allow the lower end thereof to be inserted into the pair of guide parts; and each of the bracket and the steel beam has an upper flange, a lower flange and a web connecting the upper flange and the lower flange with each other, so that the bracket and the steel beam are connected to each other by fastening the first connection plate and the second connection plate to each other by means of tension bolts above and under the upper flanges of the bracket and the steel beam to transfer tension forces between the upper flanges.

According to the present invention, desirably, the bracket is an H beam.

According to the present invention, desirably, the steel beam is an H beam or a composite beam made by bending steel plates to charge concrete into the bent steel plates.

5 According to the present invention, desirably, the lower portions of the first connection plate and the second connection plate are fastened to each other by means of tension bolts for lateral force resistance.

10 According to the present invention, desirably, each guide part includes a bolt member coupled to the rear surface of the first connection plate in such a manner as to protrude from the front surface of the first connection plate and a pipe member having a screw thread formed at the inside thereof in such a manner as to be screw-coupled to the protruding portion of the bolt member.

15 According to the present invention, desirably, the guide parts are formed of plates coupled to the corners of the lower portion of the front surface of the first connection plate in such a manner as to be inclined inwardly toward the lower portion thereof to correspond to the chamfered portions
20 of the lower end of the second connection plate.

According to the present invention, desirably, the first connection plate and the second connection plate protrude from the sides of the bracket and the steel beam by a given length, and reinforcement plates are coupled to the spaces
25 between the sides of the upper flanges of the bracket and the steel beam and the protruding portions of the first connection plate and the second connection plate from the sides of the bracket and the steel beam.

[Advantageous Effects]

30 The joint structure of steel beam of the present invention has the following advantages.

[CLAIMS]

[Claim 1]

A joint structure of steel beam for fixedly connecting a bracket to the side surface of a column or girder and a steel beam to the bracket so that the steel beam is connected to the side surface of the column or girder, the joint structure of steel beam comprising:

the bracket having one end coupled to the side surface of the column or girder and the other end whose lower portion formed slantly to an acute angle;

a first connection plate coupled to the slant end portion of the bracket in such a manner as to protrude from the top of the bracket by a given length;

the steel beam having one end whose lower portion formed slantly to an obtuse angle in such a manner as to correspond to the slant other end of the bracket; and

a second connection plate coupled to the slant end portion of the steel beam in such a manner as to protrude from the top of the steel beam by a given length,

wherein the first connection plate has a pair of guide parts protruding from the steel beam side lower portion thereof in such a manner as to be spaced apart from each other, and the second connection plate has chamfered portions formed on both sides of the lower end thereof in such a manner as to allow the lower end thereof to be inserted into the pair of guide parts; and

each of the bracket and the steel beam has an upper flange, a lower flange and a web connecting the upper flange and the lower flange with each other, so that the bracket and the steel beam are connected to each other by fastening the first connection plate and the second connection plate to

each other by means of tension bolts TB above and under the upper flanges of the bracket and the steel beam.

[Claim 2]

The joint structure of steel beam according to claim 1,
5 wherein the bracket is an H beam.

[Claim 3]

The joint structure of steel beam according to claim 1
or 2, wherein the steel beam is an H beam or a composite beam
made by bending steel plates to charge concrete into the bent
10 steel plates.

[Claim 4]

The joint structure of steel beam according to claim 1,
wherein the lower portions of the first connection plate and
the second connection plate are fastened to each other by
15 means of tension bolts LTB for lateral force resistance.

[Claim 5]

The joint structure of steel beam according to claim 1,
wherein each guide part comprises a bolt member coupled to
20 the rear surface of the first connection plate in such a
manner as to protrude from the front surface of the first
connection plate and a pipe member having a screw thread
formed at the inside thereof in such a manner as to be screw-
coupled to the protruding portion of the bolt member.

25 [Claim 6]

The joint structure of steel beam according to claim 1,
wherein the guide parts are formed of plates coupled to the
corners of the lower portion of the front surface of the
first connection plate in such a manner as to be inclined
30 inwardly toward the lower portion thereof to correspond to
the chamfered portions of the lower end of the second
connection plate.

[Claim 7]

The joint structure of steel beam according to claim 1, wherein the first connection plate and the second connection plate protrude from the sides of the bracket and the steel beam by a given length, and reinforcement plates are coupled to the spaces between the sides of the upper flanges of the bracket and the steel beam and the protruding portions of the first connection plate and the second connection plate from the sides of the bracket and the steel beam.