[Document Type] CLAIMS

What is claimed is:

1. A beam-to-column connection comprising:

a concrete column;

a steel frame beam that is joined to the concrete column; and

a plurality of reinforcing bars that are provided in a surface layer region of the concrete column in a joining location of the concrete column and the steel frame beam,

wherein a continuous portion which extends over the surface layer region of the concrete column from a corner portion to a corner portion, a pair of elongated portions which is bent from both ends of the continuous portion and extends along the surface layer region of the concrete column, and a protrusion portion which is bent from one of or both the pair of elongated portions and protrudes toward an inside of the concrete column are formed in each of the reinforcing bars in an integrally continuous manner,

wherein the entirety of the continuous portions respectively formed in the plurality of reinforcing bars forms a hoop over a whole circumference of the surface layer region of the concrete column,

wherein the continuous portion of each of the reinforcing bars is continuously formed without being divided,

wherein the continuous portion of each of the reinforcing bars is inserted through a penetration hole penetrating the steel frame beam in a sheet thickness direction, and

wherein a length of the elongated portion of each of the reinforcing bars is longer than a length from an end portion of the steel frame beam to the penetration hole.

2. The beam-to-column connection according to Claim 1,

wherein the protrusion portion is bent from both the pair of elongated portions and protrudes toward the inside of the concrete column.

3. The beam-to-column connection according to Claim 1 or 2,

wherein a protrusion length of the protrusion portion of each of the reinforcing bars is a length of ten times or greater than a diameter of each of the reinforcing bars and a length of half or smaller than a length of the continuous portion.

4. The beam-to-column connection according to any one of Claims 1 to 3,

wherein in the plurality of reinforcing bars, four reinforcing bars are provided in a partially overlapping manner such that the entirety of the continuous portions of the four reinforcing bars forms a hoop over the whole circumference of the surface layer region of the concrete column.

5. The beam-to-column connection according to any one of Claims 1 to 4,

wherein the steel frame beam and the concrete column are subjected to semi-rigid joining or pin joining.

6. The beam-to-column connection according to any one of Claims 1 to 5, wherein in the steel frame beam, a face bearing plate which covers an inner measurement portion formed by an upper flange, a lower flange, and a web of the steel frame beam is provided along a side surface of the concrete column.

7. The beam-to-column connection according to any one of Claims 1 to 6, wherein the concrete column is a steel framed reinforced concrete column internally having a steel frame column.