upper member, thereby causing no section losses of the lower member and the upper member and saving machining costs for the bolt coupling holes.

It is still another object of the present invention to provide a connection structure for shaped steel members of a column that is configured to allow traverse support members to be freely disposed on connection portions between a lower member and an upper member, thereby preventing buckling from being generated around the connection portions.

【Technical Solution】

To accomplish the above-mentioned objects, according to the present invention, there is provided a connection structure for shaped steel members of a column to connect a lower member and an upper member, which respectively comprises a plurality of 'L'-shaped steel members disposed on outer edges of the column and traverse support members for connecting the shaped steel members to each other, to build a steel-concrete composite column, wherein first coupling plates and second coupling plates are fixed to tops of the shaped steel members of the lower member and undersides of the shaped steel members of the upper member respectively, and the first coupling plates and the second coupling plates are coupled to each other to connect the upper member and the lower member with each other, wherein the first coupling plates and the second coupling plates are coupled to each other by means of fastening bolts and nuts which are located on the insides of both legs of the shaped steel members and so that a compression force is transferred through bearing of the first coupling plate and the second coupling plate, and a tensile force is transferred directly through the fastening bolt.

To accomplish the above-mentioned objects, according to the present invention, there is provided a connection structure for shaped steel members of a column to connect a lower member and an upper member, which respectively comprises a plurality of shaped steel members disposed on outer edges of the column and traverse support members for connecting the shaped steel members to each other, to build a steel-concrete composite column, wherein first coupling plates and second coupling plates are fixed to tops of the shaped steel members of the lower member and undersides of the shaped steel members of the upper member respectively, and the first coupling plates and the second coupling plates are coupled to each other to connect the upper member and the lower member with each other.

【Mode for Invention】

Hereinafter, an explanation on a connection structure for shaped steel members of a column according to the present invention will be in detail given with reference to the attached drawings.

FIG.2 is a perspective view showing a connection structure for shaped steel members of a column according to the present invention and FIG.3 is an enlarged perspective view showing connection portions of upper and lower shaped steel members in the connection structure according to the present invention.

As shown in FIGS.2 and 3, a connection structure for shaped steel members of a column according to the present invention is configured to connect a lower member 1a and an upper member 1b, which respectively comprises a plurality of 'L'-shaped steel members 11a and 11b disposed on outer edges of a column and traverse support members 12a and 12b for connecting the shaped steel members 11a and 11b to each other,

to build a steel-concrete composite column, wherein first coupling plates 13a and second coupling plates 13b are fixed to tops of the shaped steel members 11a of the lower member 1a and undersides of the shaped steel members 11b of the upper member 1b respectively, and the first coupling plates 13a and the second coupling plates 13b are coupled to each other to connect the upper member 1b and the lower member 1a with each other, wherein the first coupling plates 13a and the second coupling plates 13b are coupled to each other by means of fastening bolts 21 and nuts 22 which are located on the insides of both legs of the shaped steel members 11a and 11b so that a compression force is transferred through bearing of the first coupling plate 13a and the second coupling plate 13b, and a tensile force is transferred directly through the fastening bolt 21.

The lower member 1a and the upper member 1b have the shaped steel members 11a and 11b disposed on the corners of the column and the traverse support members 12a and 12b for connecting the adjacent shaped steel members 11a and 11b.

The traverse support members 12a and 12b are spaced apart from each other in longitudinal directions of the shaped steel members 11a and 11b.

The traverse support members 12a and 12b are coupled to the shaped steel members 11a and 11b by means of bolts or welding.

Other shaped steel members are disposed between the shaped steel members 11a and 11b arranged on the corners of the column.

The lower member 1a and the upper member 1b are prefabricated in a factory and are then moved and built in a construction site.

The first coupling plates 13a and the second coupling plates 13b are coupled to coupled ends of the shaped steel members 11a and 11b of the lower member 1a and the upper member 1b coupled to each other.

In detail, the first coupling plates 13a are coupled to tops of the shaped steel members 11a of the lower member 1a, and the second coupling plates 13b are coupled to undersides of the shaped steel members 11b of the upper member 1b.

【CLAIMS】

【Claim 1】

A connection structure for shaped steel members of a column to connect a lower member 1a and an upper member 1b, which respectively comprises a plurality of 'L'-shaped steel members 11a and 11b disposed on outer edges of the column and traverse support members 12a and 12b for connecting the shaped steel members 11a and 11b to each other, to build a steel-concrete composite column, wherein first coupling plates 13a and second coupling plates 13b are fixed to tops of the shaped steel members 11a of the lower member 1a and undersides of the shaped steel members 11b of the upper member 1b respectively, and the first coupling plates 13a and the second coupling plates 13b are coupled to each other to connect the upper member 1b and the lower member 1a with each other, wherein the first coupling plates 13a and the second coupling plates 13b are coupled to each other by means of fastening bolts 21 and nuts 22 which are located on the insides of both legs of the shaped steel members 11a and 11b so that a compression force is transferred through bearing of the first coupling plate 13a and the second coupling plate 13b, and a tensile force is transferred directly through the fastening bolt 21.

【Claim 2】

The column steel connection structure according to claim 1, wherein each fastening bolt 21 comprises a head 211 and a body 212 and the body 212 has a tool insertion groove 213 formed on an end portion thereof or a rotation tail part 214 protruding from the end portion thereof in such a manner as to be fastened to a tool to rotate the fastening bolt 21.

【Claim 3】

The column steel connection structure according to claim 1, wherein each fastening bolt 21 comprises a head 211 and a body 212 and the head 211 has a tool insertion groove 213 formed at the center of top thereof in such a manner as to be fastened to a tool to rotate the fastening bolt 21.