CLAIMS

1. A connector assembly, comprising an upper connector coupled to a lower connector and a gusset plate sandwiched between the upper and lower connectors,

the lower connector comprising:

a lower connector body having a lower connector body column receiving end and a lower connector body gusset contact end, the column receiving end being adapted for receiving a first end of a first module frame and the gusset contact end being adapted for coupling to the gusset plate;

at least a pair of lower connector arms, each lower connector arm coupled to and extending from the lower connector body and having lower connector arm inner face, a lower connector arm outer face, a lower connector arm gusset contact face, a lower connector arm load bearing face and a lower connector arm beam contact face, the beam contact face being positioned distal from the lower connector body, and each lower connector arm having at least one fixing aperture on the load bearing face for receiving a fastening means to couple the lower connector to the upper connector; and

a lower connector arm boss coupled to and extending from the beam contact face of each arm, the boss having a lower connector arm weld receiving bevel extending from the distal end of the arm and a lower connector arm weld backer extending from the bevel;

the gusset plate comprising:

a gusset plate first face, a gusset plate second face and gusset plate through holes for receiving the coupling and fastening means to couple the upper and lower connectors.

2. A connector assembly according to Claim 1, further comprising a locating pin positioned on the gusset plate first face for engaging a locating pin receiving aperture on a lower connector body gusset contact face for positioning the lower connector on the gusset plate.

3. A connector assembly according to Claim 1, in which the lower connector arm gusset contact face lies in a plane defined by the lower connector body gusset contact face.

4. A connector assembly according to Claim 1, in which the fixing apertures are positioned proximate to the lower connector arm inner face providing a load bearing surface proximate to the lower connector arm outer face.

5. A connector assembly according to Claim 1, in which the lower connector arm load bearing face is spaced from the lower connector body column receiving end.

6. A connector assembly according to Claim 1, in which the lower connector arm boss is positioned proximate to the lower connector arm outer face and spaced from the edge proximate to the lower connector arm inner face.

7. A connector assembly, comprising an upper connector coupled to a lower connector and a gusset plate sandwiched between the upper and lower connectors,

the upper connector comprising:

an upper connector body having an upper connector body column receiving end and an upper connector body gusset contact end, the column receiving end being adapted for receiving a first end of a second module frame and the gusset contact end being adapted for coupling to the gusset plate;

at least a pair of upper connector arms, each upper connector arm coupled to and extending from the upper connector body and having an upper connector arm inner face, an upper connector arm outer face, an upper connector arm gusset contact face, an upper connector arm load bearing face and an upper connector arm beam contact face, the beam contact face being positioned distal from the upper connector body, and each upper connector arm having at least one upper connector arm fixing aperture for receiving a fastening means to couple the lower connector to the upper connector and at least one upper connector arm gusset coupling aperture for receiving a second fastening means to couple the upper connector to the gusset plate; and

an upper connector arm boss coupled to and extending from the upper connector arm beam contact face of each upper connector arm, the boss having an upper connector arm weld receiving bevel extending from the distal end of the arm and an upper connector arm weld backer extending from the bevel;

the gusset plate comprising:

a gusset plate first face, a gusset plate second face and gusset plate through holes for receiving the coupling and fastening means to couple the upper and lower connectors.

8. A connector assembly according to Claim 7, in which the upper connector arm gusset contact face lies in a plane defined by the upper connector body gusset contact face.

9. A connector assembly according to Claim 7, in which the upper connector arm fixing apertures are positioned proximate to the upper connector arm inner face providing an upper connector arm load bearing surface proximate to the upper connector arm outer face.

10. A connector assembly according to Claim 7, in which the upper connector arm load bearing face is spaced from the upper connector body column receiving end, with the upper connector arm load bearing face being more proximate to the upper connector body gusset contact face than the upper connector body column receiving end.

11. A connector assembly according to Claim 7, in which the upper connector arm boss is positioned proximate to the upper connector arm outer face and spaced from the edge proximate to the upper connector arm inner face.

12. A connector assembly according to Claim 7, in which the upper connector body have one or more bores adapted for receiving affixing means.

13. A connector assembly according to Claim 7, in which the upper connector body gusset contact face has a T-shaped opening.

14. A connector assembly according to Claim 7, in which the upper connector body has a column receiving bevel and a weld backer for cooperatively engaging a frame structure.

15. A connector assembly according to Claim 1, further comprising a flange or plate extending from the arms of the lower connector towards the inner face of the lower connector.

16. A connector assembly according to Claim 15, in which the flange or plate is coplanar with the lower connector arm load bearing face.

17. A connector assembly according to Claim 1, in which the lower connector has a cut-out on the outer face and the arms of the connector extend towards the outer face of the arm.

18. A connector assembly according to Claim 1, in which the lower connector further comprises slots on the gusset contact face for receiving bars on a gusset face.

19. A hoistable connector assembly, comprising a connector assembly as defined in Claim 1 and a lifting device detachably attachable to the connector assembly.

20. A hoistable connector assembly, comprising a connector assembly as defined in Claim 7 and a lifting device detachably attachable to the connector assembly.

CLAIMS

1. A connector assembly, comprising an upper connector coupled to a lower connector and a gusset plate sandwiched between the upper and lower connectors,

the lower connector comprising:

a lower connector body having a lower connector body column receiving end and a lower connector body gusset contact end, the column receiving end being adapted for receiving a first end of a first module frame and the gusset contact end being adapted for coupling to the gusset plate;

at least a pair of lower connector arms, each lower connector arm coupled to and extending from the lower connector body and having lower connector arm inner face, a lower connector arm outer face, a lower connector arm gusset contact face, a lower connector arm load bearing face and a lower connector arm beam contact face, the beam contact face being positioned distal from the lower connector body, and each lower connector arm having at least one fixing aperture on the load bearing face for receiving a fastening means to couple the lower connector to the upper connector; and

a lower connector arm boss coupled to and extending from the beam contact face of each arm, the boss having a lower connector arm weld receiving bevel extending from a distal end of the arm and a lower connector arm weld backer extending from the bevel;

the gusset plate comprising:

a gusset plate first face, a gusset plate second face and gusset plate through holes for receiving the coupling and fastening means to couple the upper and lower connectors.

2. A connector assembly according to Claim 1, further comprising a locating pin positioned on the gusset plate first face for engaging a locating pin receiving aperture on a lower connector body gusset contact face for positioning the lower connector on the gusset plate.

3. A connector assembly according to Claim 1, in which the lower connector arm gusset contact face lies in a plane defined by the lower connector body gusset contact face.

4. A connector assembly according to Claim 1, in which the fixing apertures are positioned proximate to the lower connector arm inner face providing a load bearing surface proximate to the lower connector arm outer face.

5. A connector assembly according to Claim 1, in which the lower connector arm load bearing face is spaced from the lower connector body column receiving end.

6. A connector assembly according to Claim 1, in which the lower connector arm boss is positioned proximate to the lower connector arm outer face and spaced from an edge proximate to the lower connector arm inner face.

7. A connector assembly, comprising an upper connector coupled to a lower connector and a gusset plate sandwiched between the upper and lower connectors,

the upper connector comprising:

an upper connector body having an upper connector body column receiving end and an upper connector body gusset contact end, the column receiving end being adapted for receiving a first end of a second module frame and the gusset contact end being adapted for coupling to the gusset plate;

at least a pair of upper connector arms, each upper connector arm coupled to and extending from the upper connector body and having an upper connector arm inner face, an upper connector arm outer face, an upper connector arm gusset contact face, an upper connector arm load bearing face and an upper connector arm beam contact face, the beam contact face being positioned distal from the upper connector body, and each upper connector arm having at least one upper connector arm fixing aperture for receiving a fastening means to couple the lower connector to the upper connector and at least one upper connector arm gusset coupling aperture for receiving a second fastening means to couple the upper connector to the gusset plate; and

an upper connector arm boss coupled to and extending from the upper connector arm beam contact face of each upper connector arm, the boss having an upper connector arm weld receiving bevel extending from a distal end of the arm and an upper connector arm weld backer extending from the bevel;

the gusset plate comprising:

a gusset plate first face, a gusset plate second face and gusset plate through holes for receiving the coupling and fastening means to couple the upper and lower connectors.

8. A connector assembly according to Claim 7, in which the upper connector arm gusset contact face lies in a plane defined by the upper connector body gusset contact face.

9. A connector assembly according to Claim 7, in which the upper connector arm fixing apertures are positioned proximate to the upper connector arm inner face providing an upper connector arm load bearing surface proximate to the upper connector arm outer face.

10. A connector assembly according to Claim 7, in which the upper connector arm load bearing face is spaced from the upper connector body column receiving end, with the upper connector arm load bearing face being more proximate to the upper connector body gusset contact face than the upper connector body column receiving end.

11. A connector assembly according to Claim 7, in which the upper connector arm boss is positioned proximate to the upper connector arm outer face and spaced from an edge proximate to the upper connector arm inner face.

12. A connector assembly according to Claim 7, in which the upper connector body have one or more bores adapted for receiving affixing means.

13. A connector assembly according to Claim 7, in which the upper connector body gusset contact face has a T-shaped opening.

14. A connector assembly according to Claim 7, in which the upper connector body has a column receiving bevel and a weld backer for cooperatively engaging a frame structure.

15. A connector assembly according to Claim 1, further comprising a flange or plate extending from the arms of the lower connector towards the inner face of the lower connector.

16. A connector assembly according to Claim 15, in which the flange or plate is coplanar with the lower connector arm load bearing face.

17. A connector assembly according to Claim 1, in which the lower connector has a cut-out on the outer face and the arms of the connector extend towards the outer face of the arm.

18. A connector assembly according to Claim 1, in which the lower connector further comprises slots on the gusset contact face for receiving bars on a gusset face.

19. A hoistable connector assembly, comprising a connector assembly as defined in Claim 1 and a lifting device detachably attachable to the connector assembly.

20. A hoistable connector assembly, comprising a connector assembly as defined in Claim 7 and a lifting device detachably attachable to the connector assembly.