Claims

1. A H-beam joint structure for joining an end of a steel material (11) adjacent to a H-beam (10) to each other, wherein the steel material (11) and the H-beam (10) both have at least a flange (12) and a web (13), comprising:

a transmission plate (2) of the H-beam (10) arranged parallel to a front surface on at least one side of the web (13) of the H-beam (10), and welded to a back surface of the flange (12) of the H-beam (10);

a transmission plate (2) of the steel material (11) arranged parallel to a front surface of the web (13) of the steel material (11), wherein the transmission plate (2) of the steel material (11) is on a similar side of the web (13) as the transmission plate (2) of the H-beam (10), and welded to a back surface of the flange (12) of the steel material (11); and

a coupling plate (3), wherein

the coupling plate (3) is provided in close contact with the transmission plates (2) of the H-beam (10) and the steel material (11) to connect the H-beam (10) and the steel material (11), and wherein

the web (13) of the H-beam (10), the web (13) of the steel material (11) and the transmission plates (2) of the H-beam (10) and the steel material (11) are bolted via the coupling plate (3).

2. A H-beam joint structure for joining an end of a steel material (11) adjacent to a H-beam (10) to each other, wherein the steel material (11) and the H-beam (10) both have at least a flange (12) and a web (13), comprising:

a transmission plate (2) of the H-beam (10) arranged parallel to a front surface on at least one side of the web (13) of the H-beam (10), and welded to a back surface of the flange (12) of the H-beam (10);

a transmission plate (2) of the steel material (11) arranged parallel to a front surface of the web (13) of the steel material (11), the transmission plate (2) of the steel material (11) is on a similar side of the web (13) as the transmission plate (2) of the H-beam (10), and welded to a back surface of the flange (12) of the steel material (11); and

a coupling plate (3), wherein

the coupling plate (3) is provided on an opposite side of the webs (13) of the H-beam (10) and the steel material (11) to the side where the transmission plates (2)

of the H-beam (10) and the steel material (11) are arranged to connect the H-beam (10) and the steel material (11), and wherein

the web (13) of the H-beam (10), the web (13) of the steel material (11) and the transmission plates (2) of the H-beam (10) and steel material (11) are bolted via the coupling plate (3).

3. The H-beam joint structure according to claim 1 or 2, wherein

the transmission plates (2) of the H-beam (10) and the steel material (11) are arranged in close contact with the front surface of the webs (13) of the H-beam (10) and the steel material (11) , and the coupling plate (3) is arranged in close contact with the front surface of the transmission plates (2) of the H-beam (10) and the steel material (11), or the front surface of the webs (13) of the H-beam (10) and the steel material (11).

4. The H-beam joint structure according to claim 1 or 2, wherein

the transmission plates (2) of the H-beam (10) and the steel material (11) are arranged by being welded to the back surface of the flanges (12) of the H-beam (10) and the steel material (11) at an interval corresponding to a thickness of the coupling plate (3) from the front surface of the webs (13) of the H-beam (10) and the steel material (11), and

the coupling plate (3) is arranged so as to be held in close contact between the transmission plates (2) of the H-beam (10) and the steel material (11) and the webs (13) of the H-beam (10) and the steel material (11).

5. The H-beam joint structure according to claim 1 or 2, wherein

a plurality of the transmission plates (2) of the H-beam (10) and the steel material (11) are arranged at an interval corresponding to a thickness of the coupling plate (3), and

the coupling plate (3) is arranged so as to be held in close contact between the webs (13) and the transmission plate (2) of the H-beam (10) and the steel material (11), and/or between the plurality of transmission plates (2) of the H-beam and the steel material (11).

6. A H-beam joint structure for joining an end of a steel material (11) adjacent to a H-beam (10) to each other, wherein the steel material (11) and the H-beam (10) both have an upper flange (12), a lower flange and a web (13), comprising:

an upper H-beam joint structure according to claim 1 provided at the upper flange (12) of the H-beam (10) and the upper flange (12) of the steel structure (11),

a lower H-beam joint structure according to claim 1 provided at the lower flange (12) of the H-beam (10) and the lower flange (12) of the steel structure (11),

a shearing coupling plate (4) connecting the transmission plates (2) of the upper and lower H-beam joint structures, and the coupling plates (3) of the upper and lower H-beam joint structures is provided between the transmission plates (2) of the upper and lower H-beam joint structures, and the coupling plates (3) of the upper and lower H-beam joint structures.

7. The H-beam joint structure according to any one of claims 1 to 6, wherein

the steel material (11) is any of an H-beam, a channel steel, a Z-beam, and an I-beam.

8. A H-beam joint structure for joining a H-beam (10) and a structure, the H-beam joint structure comprising:

a transmission plate (2) of the H-beam (10) arranged parallel to a front surface on at least one side of a web (13) of the H-beam (10), and welded to a back surface of a flange (12) of the H-beam (10); and

a coupling plate (3), wherein

the coupling plate (3) is provided in close contact with the transmission plate (2) of the H-beam (10) to connect the H-beam (10) and the structure, and wherein

a part of the coupling plate (3) is welded or bolted to the structure, and at least one end of the coupling plate (3) is bolted to the web (13) of the H-beam (10) and the transmission plate (2) of the H-beam (10).

9. A H-beam joint structure for joining a H-beam (10) and a structure, the H-beam joint structure, comprising:

a transmission plate (2) of the H-beam (10) arranged parallel to a front surface on at least one side of a web (13) of the H-beam (10), and welded to a back surface of a flange (12) of the H-beam (10); and

a coupling plate (3), wherein

the coupling plate (3) is provided on an opposite side of the web (13) of the H beam (10) to the side where the transmission plate (2) of the H-beam (10) is arranged to connect the H-beam (10) and the structure, and wherein

a part of the coupling plate (3) is welded or bolted to the structure, and at least one end of the coupling plate (3) is bolted to the web (13) of the H-beam (10) and the transmission plate (2) of the H-beam (10).

10. The H-beam joint structure according to claim 8 or 9, wherein

the transmission plate (2) of the H-beam (10) is arranged in close contact with the front surface of the web (13), and

the coupling plate (3) is welded to the structure, and at least one end of the coupling plate (3) is arranged in close contact with the front surface of the transmission plate (2) of the H-beam (10) or the front surface of the web (13) of the H-beam (10).

11. The H-beam joint structure according to claim 8 or 9, wherein

the transmission plate (2) of the H-beam (10) is arranged by being welded to the back surface of the flange (12) of the H-beam at an interval corresponding to a thickness of the coupling plate (3) from the front surface of the web (13) of the H-beam (10), and

the coupling plate (3) is welded to the structure and at least one end of the coupling plate (3) is arranged so as to be held in close contact between the transmission plate (2) and the web (13) of the H-beam (10).

12. The H-beam joint structure according to claim 8 or 9, wherein

a plurality of the transmission plates (2) of the H-beam (10) are arranged at an interval corresponding to a thickness of the coupling plate (3), and

the coupling plate (3) is welded to the structure and at least one end of the coupling plate (3) is arranged so as to be held in close contact between the web (13) and the transmission plate (2) of the H-beam (10) and/or between the plurality of transmission plates (2) of the H-beam (10).

13. The H-beam joint structure according to any one of claims 8 to 12, wherein

the structure is any of an H-beam, a channel steel, a Z-beam, an I-beam, a square steel tube, and a foundation anchor plate.