

CLAMPING ASSEMBLY FOR POSITIONING A MESHED MEMBER TO BE TESTED

The present invention relates to a clamping assembly and, more particularly, to a clamping assembly for securely positioning a meshed member undergo a strength test to check a welding quality of each joint of the meshed member.

A meshed member is generally used to bear a weight of goods, which is composed of a plurality of metal plates arranged crosswise. Each joint of the meshed member is securely combined by way of welding so as to ensure a better structural strength to bear a heavy load. A testing machine is used to test a strength of welding of each of the joints by disposing the meshed member to the machine and exerting a force to the meshed member to find a breaking point of each of the joints. There is no suitable clamping assembly to fixedly position the meshed members to be tested because the meshed members could have thousands of different arrangements.

The present invention intends to provide a clamping assembly which fixedly positions the meshed member and provides a uniform support to the meshed member so as to receive an accurate test result.

The present invention provides a clamping assembly which comprises a base having a plurality of first holes defined therethrough and a top member extending from a first side thereof. The top member has a first bolt hole defined therein.

A plurality of separating members each have at least

two second bolt holes defined in a first end thereof and a plurality of third bolt holes defined in a second end thereof. The separating members are connected to a second side of the base by extending bolts through the first holes and which are then threadedly received in the second bolt holes of the separating members.

A plate has a plurality of second holes defined there-through so as to be connected to the second ends of the separating members by extending bolts through the second holes and the bolts are then threadedly received in the third bolt holes of the separating members with a meshed member being adapted to be disposed between the plate and the separating members.

It is an object of the present invention to provide a clamping assembly to uniformly clamp a meshed member therein.

It is another object of the present invention to provide a clamping assembly which is adopted to accommodate meshed members with different arrangements.

Other objects, advantages, and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

IN THE DRAWINGS

Fig. 1 is a perspective view, seen from a top of a clamping assembly in accordance with the present invention;

Fig. 2 is an exploded view, from a bottom, of the clamping assembly in accordance with the present invention;

Fig. 3 is a perspective view, seen from the top, of

the clamping assembly with a meshed member fixedly clamped thereto;

Fig. 4 is a side elevational view of a testing machine wherein the clamping assembly clamping a meshed member therein is disposed in the machine, and

Fig. 5 is a front elevational view of the testing machine shown in Fig. 4.

Referring to the drawings and initially to Figs. 1 through 3, a clamping assembly in accordance with the present invention generally includes a base 10 having four first holes 11 and four engaging holes 12 respectively defined therethrough. A top member 21 is fixedly connected to a first side of the base 10 by extending bolts 210 through holes 211 defined in the top member 21 after which they are threadedly received in the engaging holes 12. The top member 21 has a disk 22 extending therefrom which has a first bolt hole 221 defined therein.

A plurality of separating members 31 each have at least two second bolt holes 312 defined in a first end thereof and a plurality of third bolt holes 311 defined in a second end thereof. The separating members 31 are connected to a second side of the base 10 by extending bolts 100 through the first holes 11 after which they are threadedly received in the second bolt holes 312 of the separating members 31. A distance 32 is defined between each two adjacent separating members 31.

A plate 40 has a plurality of second holes 41 defined therethrough so as to be connected to the second ends of the

separating members 31 by extending bolts 42 through the second holes 41 after which they are threadedly received in the third bolt holes 311 of the separating members 31.

A meshed member 50 to be tested is composed of a plurality of elongated plates 51 each having a plurality of recesses 510 defined in one of two sides thereof and a plurality of rods 52 respectively and fixedly received in the recesses 510 by way of welding. The meshed member 50 is firmly disposed between the plate 40 and the separating members 31 being with each one of the separating members 31 located between two respective adjacent elongated plates 51.

Referring to Figs. 4 and 5, a testing machine comprises two posts 61 each with a smooth outer periphery, two threaded posts 62, a stationary platform 63 disposed between the two posts 61 and a movable platform 64 disposed between the two threaded posts 62, wherein the movable platform 64 is able to be moved up and down along the two threaded posts 62. A rail member 67 is disposed to a surface of a base 69 of the machine and a movable supporting member 68 is movably disposed to the rail member 67 by two guide ballscrews 66. The supporting member 68 has a pair of frames 680 extending therefrom so as to rotatably connect a roller 681 therebetween such that the elongated plates 51 are supported on the two rollers 681. In testing, a main bolt 651 extends through the movable platform 64 and is threadedly received in the first bolt hole 221 in the disk 22. The movable platform 64 is then moved downwardly toward the meshed member 50 rotation of the threaded posts 62 which rotated by conventional means,

so that the separating members 31 exert an appropriate downward force to the rods 52 to determine the strength and quality of the welding areas. By this way, the quality of the welding between the rods 52 and the elongated plates 51 can be tested.

The meshed member 50 is uniformly clamped between the plate 40 and the separating members 31 so that the downward force is uniformly exerted to the meshed member 50 such that an accurate and practical testing result is valuable.

Although the invention has been explained in relation to its preferred embodiment, it is to be understood that many other possible modifications and variations can be made without departing from the spirit and scope of the invention as hereinafter claimed.



Claims:

1. A clamping assembly comprising:

a base having a plurality of first holes defined therethrough and a top member extending from a first side thereof, said top member having a first bolt hole defined therein;

a plurality of separating members each having at least two second bolt holes defined in a first end thereof and a plurality of third bolt holes defined in a second end thereof, said separating members connected to a second side of said base by extending bolts through said first holes and being threadedly received in said second bolt holes of said separating members, and

a plate having a plurality of second holes defined therethrough so as to be connected to said second ends of said separating members by extending bolts through said second holes and being threadedly received in said third bolt holes of said separating members with a meshed member being adapted to be disposed between said plate and said separating members.

2. The clamping assembly as claimed in claim 1 wherein said top member includes a disk extending therefrom wherein said first bolt hole is defined through said round disk.