

CONNECTING ASSEMBLY

The invention relates to a connecting assembly, more particularly to a connecting assembly adapted for connecting two reinforcing steel rods.

5 Friction welding is a solid state welding process which produces coalescence of materials by the heat obtained from mechanically-induced sliding motion between rubbing surfaces of two work pieces. The work pieces are held together under pressure. This process
10 usually involves rotating one of the two work pieces against the other of the two work pieces to generate frictional heat at the junction. When a suitable high temperature has been reached, rotational motion is ceased and additional pressure is applied so that the
15 coalescence occurs.

Female and male connectors of a conventional connecting assembly are welded to two reinforcing steel rods, respectively, using the friction welding in a plant, and the female and male connectors are then engaged to
20 each other at a work site so as to connect the reinforcing steel rods together.

However, each of the female and male connectors used in the prior art is a single-thread screw. Therefore, the engagement of the female connector to the male
25 connector is relatively labor-consuming.

Therefore, the object of the present invention is to provide a connecting assembly which can connect two

reinforcing steel rods relatively efficiently and firmly.

The connecting assembly according to this invention is used for connecting two reinforcing steel rods, and includes a female connector and a male connector. The female connector includes a closed end, an open end opposite to the closed end, and an annular wall extending between the open and closed ends. The closed end has an outer welding surface adapted to be welded to one of the reinforcing steel rods. The annular wall has an inner surface and a female multiple-thread screw formed on the inner surface. The male connector includes a shaft portion, and a threaded portion opposite to the shaft portion. The shaft portion has a welding end face adapted to be welded to the other one of the reinforcing steel rods. The threaded portion has an outer surface and a male multiple-thread screw formed on the outer surface to engage the female multiple-thread screw of the female connector.

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiment with reference to the accompanying drawings, of which:

Figure 1 is an exploded perspective view of a preferred embodiment of a connecting assembly according to this invention; and

Figure 2 is a partly sectional view of the preferred

embodiment in a state of connecting two reinforcing steel rods.

Referring to Figures 1 and 2, the preferred embodiment of a connecting assembly according to this invention is shown to be adapted for connecting first and second reinforcing steel rods 11, 12, and includes a female connector 2 and a male connector 3. The female connector 2 includes a closed end 22, an open end 23 opposite to the closed end 22, and an annular wall 21 extending between the open and closed ends 23, 22. The closed end 22 has an outer welding surface 26 adapted to be welded to the first reinforcing steel rod 11 by friction welding. The annular wall 21 has an inner surface 24 and a female multiple-thread screw 25 formed on the inner surface 24. In this preferred embodiment, the female multiple-thread screw 25 is a double-thread screw.

The male connector 3 includes a shaft portion 31, and a threaded portion 32 opposite to the shaft portion 31. The shaft portion 31 has a welding end face 33 adapted to be welded to the second reinforcing steel rod 12. The threaded portion 32 tapers along an axial direction away from the shaft portion 31 of the male connector 3, and has an outer surface 34 and a male multiple-thread screw 35 formed on the outer surface 34 to engage the female multiple-thread screw 25 of the female connector 2. In this preferred embodiment, the male multiple-thread screw 35 is a double-thread screw.

In use, the female connector 2 and the male connector 3 are welded to the first reinforcing steel rod 11 and the second reinforcing steel rod 12, respectively, in a plant. The first and second reinforcing steel rods 11,12 welded with the female and male connectors 2,3, respectively, are transported to a work site where the first and second reinforcing steel rods 11,12 can be connected to each other by engaging the female and male connectors 2,3 together.

In the conventional connecting assembly, each of the female and male connectors is formed with a single-thread screw. For the single-thread screw, the lead, which is the distance a nut advances in one revolution, is equal to the pitch. In the preferred embodiment of the connecting assembly of this invention, each of the female and male connectors 2,3 is formed with a double-thread screw. The lead (L) for the female and male connectors 2,3 of the preferred embodiment is equal to twice the pitch (P). Therefore, the engagement of the female and male connectors 2,3 of the connecting assembly of this invention is relatively efficient. The labor-consumption for connecting the reinforcing steel rods 11,12 can be reduced accordingly.

I CLAIM:

1. A connecting assembly adapted for connecting two reinforcing steel rods, characterized by:

5 a female connector including a closed end, an open end opposite to said closed end, and an annular wall extending between said open and closed ends, said closed end having an outer welding surface adapted to be welded to one of the reinforcing steel rods, said annular wall having an inner surface and a female multiple-thread screw formed on said inner surface; and

10 a male connector including a shaft portion, and a threaded portion opposite to said shaft portion, said shaft portion having a welding end face adapted to be welded to the other one of the reinforcing steel rods, said threaded portion having an outer surface and a male multiple-thread screw formed on said outer surface to engage said female multiple-thread screw of said female connector.

20 2. The connecting assembly as claimed in Claim 1, characterized in that said threaded portion of said male connector tapers along an axial direction away from said shaft portion of said male connector.

25 3. The connecting assembly as claimed in Claim 1, characterized in that each of said female multiple-thread screw and said male multiple-thread screw is a double-thread screw.