

SPECIFICATION

Reinforcing bar support for joining concrete structures

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The invention concerns a reinforcing bar support for joining concrete structures.

The rational erection of concrete walls is effected by means of shuttering. A drawback in this connection is that the main walls must be cut out for joining partitions, stairs, intermediate floors, etc. This is a difficult, time-consuming and relatively expensive job.

Processes and devices for applying these processes have already been published, notably for joining vertical partitions. DE-AS 2'307'073 makes public a system for flashing wall joining bars. The flashing component consists of a long flashing back, of a corresponding flashing front with recesses for the wall joining bars bent off in an angular shape and which protrude in their installed position with one leg from the recesses, with the other leg from wall joining bars arranged between the flashing front and the flashing back, and spacer ridges between the flashing front and the flashing back. The flashing back, the flashing front and the spacer ridges are made of an elastic workable material and the recesses in the flashing front are elastic, too.

This known flashing component has the advantage that for clearing the end sections used for joining, it can be withdrawn as a whole in the direction of the end sections located between the flashing front and back, which saves considerable time. It is, however, quite expensive and its scope of application is limited.

FR-PS 2'142'140 has made public a process with a system for supporting joining bars when concreting a wall, wherein the joining bars feature a U-shaped stirrup in the horizontal plane which will be installed in the wall to be concreted. The two legs of the reinforcing bars protrude through the vertical system shaped as a trapezoid tray and after the passage holes in the tray they are bent off perpendicular to the plane determined by the U-shaped stirrup, so that the leg ends are resting close to the tray. The bent-off reinforcing bars are bent up to the U plane for joining a wing wall so that the tray can be removed from the wall in the direction of these reinforcing bars.

CH-PS 562'376 has already proposed a process for making reinforcing parts as well as a support for reinforcing bars made according to this process. The reinforcing bars are embedded in a trapezoid form made of cast foam material. After the reinforcing bars are set in concrete, the foam material is scraped off so that a dove-tailed rabbet appears for joining a partition.

This invention represents an improvement for setting such reinforcing bars in concrete, with the possibility of making the support component for the reinforcing bars inexpensively by series production and of shipping such components in space-saving shipments, of reducing reinforcing bar anchoring work and of removing the support component easier after the concreting.

The drawing shows, by way of example, one embodiment of the object of the invention.

Figure 1 shows a reinforcing bar support made of plastic material according to a perspective view,

70 Figure 2 shows a sectional view according to line II-II in figure 1,

Figure 3 shows a sectional view according to line III-III in figure 1,

75 Figure 4 shows a sectional view through a concreted main wall where the shuttering is removed, and

Figure 5 shows a view of the reinforcing bar support after the concreting, with the reinforcing bar support open.

80 The reinforcing bar support shown features a hollow body 1 of prismatic shape. It is formed by a front part 2 and a cover part 3. The front part 2 has a front side 4, two longitudinal narrow sides 5 and two cross sides 6 (figure 1). These sides 5, 6 are held rigid and they are designed in such a manner that the cover part 3 can be clamped thereto and released therefrom. The front side 4 of the front part 2 is provided with an inwards-pointed longitudinal center groove 7 and with equidistant cross grooves 8 which are perpendicular to said center groove. The cross grooves serve for marking holes 9 scheduled to be drilled subsequently, the distance of which can be measured advantageously from the longitudinal center groove 7. The grooves 7, 8 improve, in addition, the concrete connection. The holes 9 are used for hooking in the two free bent-off leg ends 11 of reinforcing bars 10. The latter feature a U-shaped stirrup 12 and the leg ends 11 are resting in a plane that is perpendicular to the U plane of the stirrup 12 and they are bent off in such a manner that they are mutually converging. The leg ends 11 are resting close to the front side 4 of the front part 2. The stirrup 12 protrudes from the hollow body 1 so that it will be set in concrete in the main wall 13 (figure 4). The hooking in of the leg ends 11 is effected advantageously with the cover part 3 removed. The cover part 3 is secured to the front part 2 after the reinforcing bars 10 are hooked in. The hollow body 1 is set in concrete in the main wall 13 with the stirrups 12, with the cover part 3 resting against the shuttering.

The reinforcing bar support shown in the drawing is made of plastic material that is as anti-adhesive as possible, e.g. polyvinyl, polyvinylchloride or polyethylene, and it features a trapezoid cross section (figure 3). This produces a dove-tailed anchoring of the concrete partition. The hollow body 1 can be easily removed from the main concrete wall 13. Prior to the joining concreting, the leg ends 11 are bent up into the stirrup plane.

In view of multiple use, the hollow body 1 may be made of metal such as aluminium and provided with a rectangular cross section.

125 The cover part 3 also allows for shipping reinforcing bar supports with installed reinforcing bars 10.

CLAIMS

1. A reinforcing bar support for joining concrete structures, characterized in that it features a hollow



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This invention represents an improvement for setting such reinforcing bars in concrete, with the possibility of making the support component for the reinforcing bars inexpensively by series production and of shipping such components in space-saving shipments, of reducing reinforcing bar anchoring work and of removing the support component easier after the concreting.

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CLAIMS

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16

body of prismatic form which is composed of a front part and a cover part, that the front part has a front side, two longitudinal narrow sides and two cross sides and that these are so designed that the cover part can be clamped thereto and released therefrom and that the external surface of the front side is provided with a longitudinal center groove and with equidistant cross grooves which are perpendicular to said longitudinal center groove.

10 2. A reinforcing bar support according to claim 1, characterized in that the hollow body features a trapezoid cross section and that it is made of non-adhesive plastic material.

15 3. A reinforcing bar support according to claim 1, characterized in that the hollow body features a rectangular cross section and that it is made of metal.

20 4. A reinforcing bar support substantially as described herein with reference to the accompanying drawings;

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