PLASTIC SUPPORT BRACKET FOR CONCRETE REINFORCING RODS

Filed Oct. 11, 1968
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Filed Oct. 11, 1968, Ser. No. 766,858
Int. Cl. E04e 5/16; E04g 17/06
U.S. Cl. 52—687

2 Claims

ABSTRACT OF THE DISCLOSURE

A plastic support bracket is provided for supporting the reinforcing rods in reinforced concrete while the concrete is being poured. The particular support bracket of the present invention is specially suited for use, for example, in casting reinforced concrete beams. The support brackets of the invention serves to position the reinforcing rods precisely at predetermined distances from the sides of the concrete beams, or other similar members, and the brackets serve to assure that the reinforcing rods are positively held so as to extend along the beam in parallel relationship with the sides thereof throughout the length of the beam.

BACKGROUND OF THE INVENTION

Since concrete is strong in compression but weak in tension, and because it is likely to crack due to normal shrinkage, and due to expansion and contraction from ambient temperature changes, it is necessary to use steel reinforcing rods or bars in the concrete structure when it is to be subjected to tension, or when cracks are to be avoided. The resulting concrete and steel bar structure is commonly referred to as reinforced concrete.

The preceding applications Ser. No. 766,806, filed Oct. 11, 1968, and Ser. No. 766,904, filed Oct. 11, 1968 filed in the name of the present inventor describe and claim various types of plastic support brackets which find utility in supporting the reinforcing rods while the concrete is being poured, so that the rods will be properly positioned within the concrete when it sets. The support bracket of the present invention is of the same general type as those described in the copending applications.

However, the present support bracket is intended to find particular utility in application where the concrete is being poured into an elongated channel, for example, so as to form a concrete beam or the like. In such instances, and in order to comply with building codes, the reinforcing rods must be spaced a particular distance from the sides of the channel, and must be held in parallel relationship throughout the length of the concrete member. The bracket of the present invention is particularly suited for this purpose, since it need merely be placed in the casting channel at spaced positions along the channel. The support bracket of the invention has a length which corresponds to the width of the aforesaid channel, and the individual support means for the reinforcing rods are placed at predetermined positions along the length of each bracket, so that the reinforcing rods may be properly positioned while the concrete is being poured.

The rod support means on the individual brackets are in the form of resilient jaws, so that the bars may be snapped into place and firmly held during the aforesaid pouring operation. The brackets themselves may be formed by injection molding of high density polyethylene, for example, so that the support members may exhibit the desired resilient characteristics, and so that the brackets themselves may be rugged and strong.

As will be described, the brackets themselves are formed of planar strip members, so that the cavities formed in the concrete due to the brackets are of a minimum volume. Also, the shape of the brackets is such that the concrete may flow unimpeded into a firm and snug engagement with the individual reinforcing rods.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of a plastic support bracket constructed in accordance with the concepts of the invention;

FIG. 2 is an end view of the support bracket, taken along the line 2—2 of FIG. 1;

FIG. 3 shows the brackets of the invention in a concrete beam, and also the manner in which the bracket supports reinforcing rods in proper parallel positions between the forms while the beam is being poured; and

FIG. 4 shows the manner in which the bracket may support and position the vertical and horizontal reinforcing rods of a concrete wall between the forms as the wall is being poured.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

As shown in FIGS. 1 and 2, the plastic support bracket of the present invention may be formed of a first strip 10 of plastic material, and of a second intersecting strip 12. The two strips 10 and 12 intersect one another at right angles, as shown in FIG. 1. The strip 12 may hold the strip 10 up from the base of the supporting surface.

First and second receiving means 16 for the reinforcing rods are formed at fixed positions along each bracket. These rod receiving means 16 are formed of arcuate jaws, and are resilient in nature. The arcuate jaws define a mouth section at the top of each supporting member, so that reinforcing rods, such as the rods 20 may be snapped into place.

As best shown in FIG. 3, it will be appreciated that the brackets of the invention are very easy to use, it being merely necessary to supply a quantity of the brackets of the desired length at the construction site. The brackets are then placed across the channel between the forms 30 in which the concrete is to be poured, with the length of the selected rods corresponding to the width of the channel. Then, the rod support members 16 are properly positioned so that when the reinforcing rods 20 are snapped into place, they are firmly and rigidly held in a parallel position along the length of the concrete structure, and are displaced a desired and predetermined distance from the sides of the structure.

Likewise, in FIG. 4 the support bracket of the invention is used properly to position the vertical and horizontal rods 20 of a concrete wall, between the forms 30, as the wall is being poured.

It will be appreciated that although the support bracket shown in FIG. 1 is equipped with two rod receiving means 16, more or less may be formed in the bracket, depending upon the specifications to be met in any particular instance.

As mentioned above, the bracket may be an integral structure, formed by injection molding from a suitable plastic, such as high density polyethylene. The brackets not only are convenient to use, but have no tendency towards corrosion, so that there is no danger of staining the surfaces of the resulting concrete structure. Also, due to the particular configuration of the support bracket, the resulting cavity formed in the concrete structure is reduced to a minimum, so that there is no material interruption thereby to the homogeneous nature of the concrete member.

What is claimed is:

1. A plastic support bracket for one or more concrete reinforcing rods, for supporting said rods in generally spaced and parallel positions in an elongated casting chan-
nel while concrete is being poured so as to position said rods a particular distance in from the sides of a concrete beam to be formed by said concrete, said supporting bracket comprising: a first elongated strip member of a predetermined length corresponding to the width of the casting channel and intended to rest on the bottom of said channel and to extend transversely across said channel from one wall to the other, at least one rod-supporting member integral with said strip member at a predetermined position thereon, said rod-supporting member being formed of a pair of resilient arcuate clamping jaws surrounding an axis traversing the axis of said first elongated strip member and defining an upwardly facing open mouth section for receiving a reinforcing rod along the length of said first strip member and intersecting said first strip member, said second strip member being interrupted by said rod-supporting member.

2. The plastic support bracket defined in claim 1, in which said first strip member and second strip member are perpendicular to one another.

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U.S. Cl. X.R.

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