

The present invention concerns a metal reinforcement for reinforced concrete.

Metal reinforcements for reinforced concrete are known which are hot-worked and take the form of bars which have an oval cross-section and are provided with oblique ribs each extending over approximately 180° of the periphery of the bar, the inclination of said ribs relative to the axis being approximately 60° .

Because they are produced hot, these products are supplied to the user in the form of coils the turns of which are distorted. It is therefore necessary to straighten the turns with the aid of special machines to obtain straight bars or frames, braces, etc. after cutting.

After folding, it is found that the two extreme sections of the parts do not remain in the same plane but between them form an appreciable angle making them unsuitable for the purpose for which they were intended.

This phenomenon can be explained by the fact that because of the ribs, the contour of the cross-section of the bar runs from one end to the other without any axis of symmetry and departs considerably from the ideal contour which should be circular.

As a result, during passage through the straightening blocks of the machines the rollers of the latter subject the bar to torsional loadings which produce stresses in the latter which come out when said bar is subsequently subjected to a folding loading.

It is also found that the relief of the ribs is extremely attenuated after straightening. This is explained by the fact that each series of ribs extends over approximately 180° and contact with the rollers essentially takes place at points located on the tip of said ribs. Consequently, to ensure that the bar to be straightened is entrained correctly, it is necessary for the entrainment rollers to apply a considerable load on said ribs. This rib breakdown phenomenon is even more marked on so-called "turning frame" straightening machines.

Document FR A-1 564 544 discloses a reinforcement comprising a core of cruciform section the wings of which are linked by oblique ribs, the lot essentially falling within a square.

Such a reinforcement exhibits substantial variations in section which will give rise to torsional loadings during straightening.

Document FR.A-2 031 405 discloses a reinforcement comprising a core with a

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The ribs of the other two faces (shown by the broken line in Figure 1) are inclined in the opposite direction.

The faces of the core are slightly curved.

As can be seen from the drawings in Figures 2 to 4, the sections of the reinforcement are essentially uniform and fall within a circle.

After testing, it was found that the reinforcement passed through the straightening machine without rotating about its axis. It was also found that when folded later, the two extreme sections remained in the plane in which the folding took place.

Naturally, the present invention is not limited to the embodiment described and illustrated, but extends to all variants of shape and size covered by the claims.

Thus, among other things, the bar of the reinforcement may exhibit a polygonal section with n sides defining n faces each or some of which exhibit ribs like the ribs 4.