[0008] In the precast concrete member of the first aspect, the tubular sheath is embedded alongside the main rebar embedded in the precast concrete. An overlapping coupling between the coupling main rebar and the main rebar is configured by inserting and fixing the coupling main rebar in the tubular sheath.

[0009] The strength of the overlapping coupling may be determined by the cohesion strength between an outer peripheral face of the tubular sheath and the concrete. In the present aspect, the ring-shaped reinforcing tie that encircles the tubular sheath and the main rebar is integrated with the tubular sheath. This enables the cohesion strength to be improved, and enables the length of the overlapping coupling to be shortened. Moreover, the strength of the coupling can be secured.

[0010] This enables the rebar coupling strength to be secured without employing a mechanical coupling.

[0011] A precast concrete member of a second aspect is the precast concrete member of the first aspect, wherein a groove with which the reinforcing tie, which is ring-shaped, engages is formed in an outer peripheral face of the tubular sheath.

[0012] In the precast concrete member of the second aspect, the reinforcing tie engages with the groove formed in the outer peripheral face of the tubular sheath, and is thus integrated with the tubular sheath. This facilitates the operation of fitting the reinforcing tie in comparison to a configuration in which the reinforcing tie and the tubular sheath are integrated by welding.

[0013] A precast concrete member of a third aspect is the precast concrete member of the first aspect or the second aspect, wherein the precast concrete is a column member and hoop ties are arranged between the reinforcing ties.

[0014] In the precast concrete member of the third aspect, the hoop ties and the reinforcing ties do not impinge on each other. The reinforcing ties are therefore not liable to get in the way during an operation to provide the hoop ties.

Advantageous Effects of Invention

[0015] The present disclosure is capable of securing rebar coupling strength without employing a mechanical coupling.

BRIEF DESCRIPTION OF DRAWINGS

[0016] Fig. 1A is a vertical cross-section illustrating an example of a precast concrete member according to an exemplary embodiment of the present disclosure.

Fig. 1B is a cross-section along line B-B in Fig. 1A.

Fig. 2 is a vertical cross-section illustrating a join structure of a precast concrete

present whatsoever. Exemplary embodiments of the present disclosure also encompass states in which unevenness such as embossing or burring formed during manufacturing processes is present to an extent that does not affect placement of the reinforcing ties 40.

[0044] Other Exemplary Embodiments

Although the pitch P2 of the reinforcing ties 40 is uniform in the present exemplary embodiment as illustrated in Fig. 1A, exemplary embodiments of the present disclosure are not limited thereto.

[0045] For example, as illustrated in Fig. 5, the pitch of the reinforcing ties 40 may be varied along the axial direction of the column member 20. In Fig. 5, a pitch P3 of the reinforcing ties 40 in the vicinity of the end portions 22F of the main rebar 22 and end portions 22AF of the coupling main rebar 22A is smaller than a pitch P4 of the reinforcing ties 40 at other locations. This enables the cohesive force with the concrete to be increased near to the end portions 22F, 22AF that are subject to greater internal stresses.

[0046] Moreover, the outer peripheral faces of tubular sheaths of the present disclosure do not have to be formed smooth and flat. As in the example of tubular sheaths 32 illustrated in Fig. 6, the outer peripheral faces may be formed with a concertina profile. The outer peripheral face of each of the tubular sheaths 32 is alternately formed with concave portions (grooves) 32A and convex portions (peaks) 32B along the axial direction of the column member 20.

[0047] Forming the tubular sheaths in this manner enables the reinforcing ties 40 to be engaged with the concave portions 32A. This facilitates the transmission of stress between the tubular sheaths 32 and the reinforcing ties 40. Moreover, the reinforcing ties 40 can be integrated with the tubular sheaths 32 without physically joining the tubular sheaths 32 and the reinforcing ties 40 together, or by employing only a simple physical join. Furthermore, the hoop ties 24 can also be engaged with the concave portions 32A. This facilitates the provision of the hoop ties 24. Furthermore, the cohesive force between the tubular sheaths and the concrete can also be increased.

[0048] Note that in the present disclosure, regarding "the reinforcing ties being integrated with the tubular sheaths", it is sufficient that stress can be transmitted between the reinforcing ties and the tubular sheaths inside the precast concrete member, as in case of the reinforcing ties 40 that are engaged with the concave portions 32A of the tubular sheaths 32. Namely, the tubular sheaths and the reinforcing ties do not necessarily have to be physically joined together by means such as welding or adhesion.

[0049] Moreover, although each of the reinforcing ties 40 is formed in an annular shape in the present exemplary embodiment, exemplary embodiments of the present disclosure are not