CLAIMS

1. A bundled submarine cable, comprising a protective layer and at least three groups of three-core return circuits disposed in the protective layer, wherein each group of the three-core return circuits uses different twisting intercepts respectively,

the protective layer comprises an inner protective layer, an armor layer and an outer sheath layer which are sequentially disposed from inside to outside,

a plurality of drilling holes are opened on the inner protective layer.

2. The bundled submarine cable according to claim 1, wherein the three-core return circuit comprises three wire core units and a reinforcement tape located on an outer periphery of the three wire core units, each of the wire core units comprises a plurality of conductors located in a center and an insulation layer, a metal shield layer and a phase-separating protective sheath which are sequentially cladded on the conductors.

3. The bundled submarine cable according to claim 2, wherein the reinforcement tape and the protective layer are further filled with a plurality of filling units.

4. The bundled submarine cable according to claim 1, wherein the armor layer is a single-layer or multi-layer armor structure, the outer sheath layer is disposed on an outer periphery of the armor layer.

5. The bundled submarine cable according to claim 1, wherein an interval between two adjacent drilling holes on the inner protective layer is 5-10m.

6. The bundled submarine cable according to claim 1, wherein a plurality of optical units are disposed in the protective layer, the optical units are distributed on an inner side of the protective layer along a circumferential array.

7. The bundled submarine cable according to claim 1, wherein a number of the three-core return circuits is greater than or equal to 3 and less than or equal to 13.

8. The bundled submarine cable according to claim 1, wherein the twisting intercepts of the three-core return circuits are set incrementally clockwise.

9. A manufacturing method of bundled submarine cable for manufacturing the bundled submarine cable according to any of claims 1 to 8, comprises the following steps:

cabling three-core return circuits individually, then placing the cabled three-core return circuits on a cabling wire setting-out holder as independent units and cabling

according to a designed cross-section at a twisting point, and cladding an outer periphery with a protective layer.

10. The manufacturing method of bundled submarine cable according to claim 9, wherein during a process of cabling the three-core return circuits individually, a cabling gap is filled with a filling unit and cladded with a reinforcement tape.