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- (81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU,

(54) Title: SUBMARINE PHOTOELECTRIC COMPOSITE CABLE

(54) 发明名称: 海底光电复合缆

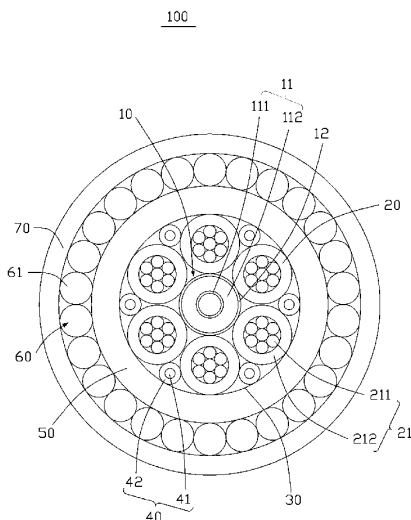


图 1

(57) Abstract: A submarine photoelectric composite cable (100), comprising: an optical fiber assembly (10), a conductor layer (20), a shielding layer (30), a protective layer (50), an armor layer (60) and an outer sheath layer (70) which are sequentially cladded from inside to outside; the conductor layer (20) comprises conductor assemblies (21), the conductor assemblies (21) are twisted outside the optical fiber assembly (10); the submarine photoelectric composite cable (100) further comprises ground wire assemblies (40), the ground wire assemblies (40) are filled between the conductor layer (20) and the shielding layer (30) and/or in gaps between the conductor layer (20) and the optical fiber assembly (10), each of the conductor assemblies (21) comprises a conductor (211), the cross section of each of the conductors (211) in the radial direction of each of the conductor assemblies (21) is taken as a first cross section, each of the ground wire assemblies (40) comprises a second conductor (41), the cross section of each of the second conductors (41) in the radial direction of each of the ground wire assemblies (40) is taken as a second cross section, the area of any one of the first cross sections is smaller than the area of the second cross section; and the optical fiber assembly (10) comprises an optical fiber unit (11) and a heat insulation layer (12), the heat insulation layer (12) being cladded outside the optical fiber unit (11). The submarine photoelectric

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- (84) 指定国(除另有指明, 要求每一种可提供的地区保护): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), 欧亚 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 欧洲 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG)。

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composite cable (100) can effectively lead out a short circuit current and prevent the optical fiber from being in a high-temperature environment.

(57) 摘要: 一种海底光电复合缆(100)包括由内而外依次包覆设置的光纤组件(10)、导体层(20)、屏蔽层(30)、护层(50)、铠装层(60)及外被层(70), 导体层(20)包括导体组件(21), 导体组件(21)绞合于光纤组件(10)外, 海底光电复合缆(100)还包括地线组件(40), 地线组件(40)填充于导体层(20)及屏蔽层(30)之间和/或导体层(20)及光纤组件(10)之间的间隙中, 导体组件(21)包括导体(211), 以每一个导体(211)沿导体组件(21)径向的截面为第一截面, 地线组件(40)包括第二导体(41), 以第二导体(41)沿地线组件(40)径向的截面为第二截面, 任一个第一截面面积小于第二截面面积, 光纤组件(10)包括光纤单元(11)及隔热层(12), 隔热层(12)包覆于光纤单元(11)外。该海底光电复合缆(100)能有效导出短路电流并避免光纤处于高温环境。