

ABSTRACT

A submarine cable and a preparation method and application thereof are provided. The submarine cable includes an insulation layer, and the material of the insulation layer includes polyethylene, a vulcanizing agent and an antioxidant, where the
5 vulcanizing agent is dicumyl peroxide, the antioxidant is pentaerythritol tetraester, and a mass ratio of the polyethylene, the vulcanizing agent and the antioxidant is 100: (0.8-2.5): (0.1-0.4). An insulation material is prepared by using the specific vulcanizing agent and antioxidant, and compared with conventional insulation materials in the prior art, its operating temperature is increased from 90°C to 105°C, thereby significantly
10 enhancing the reliability, stability and transmission capacity of the submarine cable.

Fig. 1