

Introduction of Shanghai Xifang New Material Technology Co., Ltd.

1、 Brief introduction of the project

The new generation of graphene textile insulation materials adopts the three-times oxidation method to prepare high-quality graphene materials, combining with nano far-infrared materials, phase-change microcapsules, and aerogel materials, aiming at tackling the industry pain points of traditional thermal insulation materials such as poor thermal insulation performance, heavy weight, poor thermal and wet comfort, no microbial protection, and serious static electricity. By using composite spinning technology, three types of products have been developed: graphene thermal insulation down-like polypropylene fiber-ene warm fleece, hollow graphene polypropylene thermal insulation fiber-ene thermal cotton, and graphene hollow super thermal insulation viscose fiber-ene soft cotton. The basic physical and mechanical properties, like heat preservation, antibacterial, antistatic, and far-infrared indexes of these various graphene textile thermal insulation fibers have reached the ideal level. Among them, the far-infrared emissivity of the 180g/m² carded fiber flakes reaches 88%, the warmth retention rate is 85.3%, and the thermal resistance value is 0.452m²·k/W. It also has excellent antibacterial performance, and the antibacterial rate is higher than 96% after 50 times washings. According to the national standard GB12014-2009, the electrostatic half-life is less than 2.0s, rated as A grade. The thermal insulation performance of the material is basically close to that of natural down, and the cost is only about 1/5 to 1/6 of that of natural down. According to expert evaluation, the project technology has not seen similar reports over the world, and has reached the international advanced level.



2、 Brief introduction of the enterprise

Shanghai Xifang New Material Technology Co., Ltd. is a technology-based company dedicated to the development and industrialization of graphene textile functional fibers. The company is mainly engaged in the development,

application and industrialization of graphene textile thermal insulation fibers. At present, the product has been applied and verified in the thermal insulation clothing of the oil field. Among them, a purchase order of 100,000 sets has been signed with Qinghai Oilfield of PetroChina, and small batch supply has been completed. It is planned to achieve sales of 100 million CNY in the next three years.