Effect of Chemically Exfoliated Vermiculite and Thermally Expanded Vermiculite on Mechanical Properties of the High Temperature Gasket

진영훈†
제일이엔에스
(yhjin@jeilens.co.kr†)

The ultra-high temperature gaskets developed overseas have been developed using ceramic materials such as vermiculite and mica with high heat resistance, but it is difficult to develop products as organic and inorganic binders with weak cohesive strength have not been developed in Korea. For this reason, the ultra-high temperature gaskets depend on imports for all. To solve these problems, it is necessary to develop an ultra-high temperature gasket for the ship exhaust tube using ceramic materials that are stable at high temperature and can minimize damage caused by residual heat of the gas emitted through the exhaust tube. In this study, we studied to improve residual stress and creep properties, which are the main properties of gasket, through thermally expanded vermiculite and the design of compositions such as chemically exfoliated vermiculite, organic/inorganic binders, and silane.