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STUDY ON EPDM INSULATION REINFORCED BY PAA RESIN WITH EXCELLENT ABLATION
AND PARTICLES EROSION RESISTANCE

Abstract

A novel PAA resin with high Char-yielding property and ablation resistance is introduced into EPDM insulations for the first time. Through a variety of surface treatment and modifications, the mechanical properties are maintained. Ablative performance, anti-erosion performance and carbonized layer morphology are studied. And the mechanical, chemical properties and the porosity of the carbonized layer are fully characterized. The EPDM insulation reinforced with PAA resin exhibits excellent ablation resistance, especially under high temperature and particles erosion condition.