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COMPRESSION STRENGTH OF COMPOSITE SANDWICH AT CRYOGENIC TEMPERATURE

**Abstract**

Composite sandwich structures are used for the lightweight of the fairing and the vehicle equipment bay. The use temperature of this composite sandwich can be exposed to the high temperature or low temperature. In the case of the fairing, high temperature composite is used because of being mainly exposed to the high temperature environment. However, according to the organization of the launch vehicle, not only fairing but also interstage is exposed to low temperature condition. In this paper, we tested about the compression strength of the composite sandwich that is 180 degrees celsius curing temperatures in the room temperature. And the same test was done in very low temperature condition and the strength was compared. In very low temperature condition, the compression strength was higher than the room temperature environment about 30 percent and the fastening strength was higher than the room temperature environment about 23 percent.