10.21611/qirt.2016.023

A study of thermography on Aluminum-CFRP hybrid structure

Wonjae Choi[1*], Manyong Choi[1], and Jeonghak Park[1]

[1]Center for Safety Measurement, KRISS, 267 Gajeong-Ro, Yuseong-Gu, Daejeon 305-340, Rep. of Korea

* E-mail address (corresponding author): w.choi@kriss.re.kr

Energy efficiency has been an issue in many engineering industries during the past decades, and reducing weight of components has been one of the main solutions. In order to tackle this problem, Carbon Fiber Reinforced Plastic (CFRP) has been widely investigated as an alternative to metal since its high strength and stiffness with significantly less weight than metallic materials. Moreover, taking advantage of CFRP as well as metal, combination of the two materials are widely investigated. In this paper, thermography is used to evaluate the reliability of the adhesion of the two materials. A sample plate of Aluminum and CFRP created for testing applicability of the thermography will be explained, in which artificial defects were inserted. Thermography testing is executed with the sample, and the results are presented in terms of the defect size.

Keywords: hybrid structure, Aluminum-CFRP, thermography,