

## **A Study on the Accelerated Life Cycle Test Method of the Motor for Home Appliances by Using Acceleration Factor**

**Authors :** Youn-Sung Kim, Mi-Sung Kim, Jae-Kun Lee

**Abstract :** This paper deals with the accelerated life cycle test method of the motor for home appliances that demand high reliability. Life Cycle of parts in home appliances also should be 10 years because life cycle of the home appliances such as washing machine, refrigerator, TV is at least 10 years. In case of washing machine, the life cycle test method of motor is advanced for 3000 cycle test (1cycle = 2hours). However, 3000 cycle test incurs loss for the time and cost. Objectives of this study are to reduce the life cycle test time and the number of test samples, which could be realized by using acceleration factor for the test time and reduction factor for the number of sample.

**Keywords :** accelerated life cycle test, motor reliability test, motor for washing machine, BLDC motor

**Conference Title :** ICME 2016 : International Conference on Mechanical Engineering

**Conference Location :** London, United Kingdom

**Conference Dates :** May 23-24, 2016