

## The Effect of Pulsator on Washing Performance in a Front-Loading Washer

**Authors :** Eung Ryeol Seo, Hee Tae Lim, Eunsuk Bang, Soon Cheol Kweon, Jeoung-Kyo Jeoung, Ji-Hoon Choic

**Abstract :** The object of this study is to investigate the effect of pulsator on washing performance quantitatively for front-loading washer. The front-loading washer with pulsator shows washing performance improvement of 18% and the particle-based body simulation technique has been applied to figure out the relation between washing performance and mechanical forces exerted on textile during washing process. As a result, the mechanical forces, such as collision force and strain force, acting on the textile have turned out to be about twice numerically. The washing performance improvement due to additional pulsate system has been utilized for customers to save 50% of washing time.

**Keywords :** front-loading washer, mechanical force, fabric movement, pulsator, time-saving

**Conference Title :** ICTF 2018 : International Conference on Textiles and Fashion

**Conference Location :** Paris, France

**Conference Dates :** July 19-20, 2018