

Evaluation of Physiological Responses to Installation Angle of Commercial Vehicle pedal with Electromyography Analysis

*S.Y. Oh¹, #T.K. Kwon(kwon10@jbnu.ac.kr)^{2,5}, J.J.Kim³, K.Kim³, C.H.Yu², H.Bong⁴

Key words : Commercial vehicle, Pedal, Installation angle, Electromyography

1.

25%가
30%
가 가 가
가 가 가
U.S Department of Transportation
Federal Highway

2.

가 가
가 가
가 가
EMG, ECG, EEG
가
가



Fig. 1 Virtual driving system

6-

가

(Fig. 2).

Floor type

4.

Fig. 3

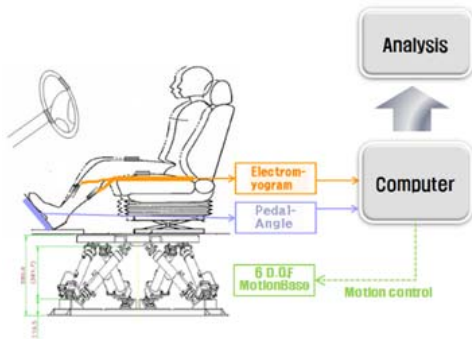


Fig. 2 Block diagram of the experiment

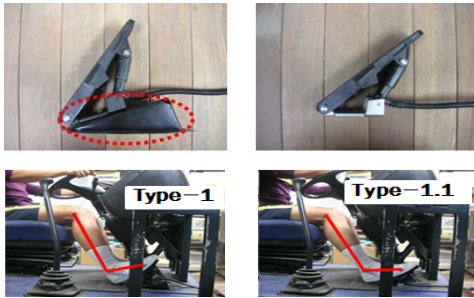


Fig. 3 Distinction of installation and ankle joint angle.

3.

117

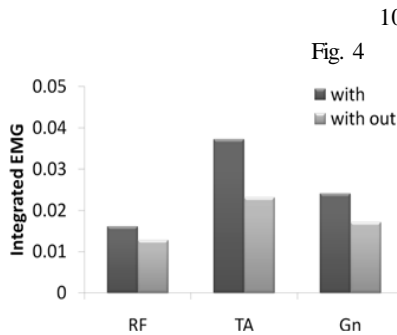


Fig. 4 Result of Electromyogram

(TA)

가

가

가

1

가

2012

(:103947)

가

1

, , "

가

", , pp. 173-177, 2002.

2

Felix E. Zajac., "Understanding muscle coordination of the human leg with dynamical simulations", Journal of Biomechanics, Vol. 35, No 8, pp. 1011-1018, 2002.

3

Kim, J.Y. and Seo, K.B., "The Effect of the Heel Rest on the Lower Leg Muscle Activity and Fatigue During Repetitive Pedaling," Journal of the Ergonomics Society of Korea, Vol. 24, No. 4, pp. 55-62, 2005.

4

Ahn, J.Y., Han, J.S. and Min, K.S., "Measurement of the Muscle Fatigue Patterns using Electromyography Technique," Journal of Korean Orthop. Assoc., Vol. 33, No. 4, pp. 1184-1192, 1998.

5

Kim, K., Kim, J.J., Kang, S.R., Sin, S.H., Song, Y.J., Oh, S.Y. and Kwon, T.K., "Physiological Electromyography Analysis for the Assessments of Working Sense of Commercial Vehicles Electronic Pedal," Proc. of KSPE Autumn Conference, pp. 35-36, 2009.