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Evaluation of Muscle Activity using CPM Device for Leg-Muscle Recovery

Masaharu Tagami

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Kindai University, 1 Umenobe Takaya, Higashi-Hiroshima City, Hiroshima, 739-2116, Japan

* Corresponding Author: tagami@hiro.kindai.ac.jp

Abstract. Medical treatment of the knee joint is often required owing to injuries, aging, or other reasons. Rehabilitation is an important process following knee surgeries. During rehabilitation, a continuous passive motion (CPM) device is often used to help slowly stretch and bend the legs of patients for the prevention of contracture and recovery of the joint's range of motion. In addition to such CPM operation, a function of muscle training was realized by using compliance control. This paper describes to what extent the proposed CPM can activate leg muscles, as observed experimentally.