

An experimental analysis of reposition mechanism in hospital bed using Matlab

Abstract

There are several hospital bed studies related to the repositioning mechanism available in the literature but the details of characteristics such as active joints and passive joints are still lacking due to the multifunction of the mechanism. The main objective of this paper is to analyze the repositioning condition based on a parallel mechanism using Matlab programming. To overcome these issues, the development of simulation 2 RPS-1PRS parallel mechanisms is used with the variance input of roll angles 0, 15, and 30 (deg.) given. So, based on these experiments, the simulation results occur that the length of leg S1 is not changed while the length of leg S2 and S3 changes when the mechanism received the variance input of parameters. In conclusion, the simulation can highlight the details of elements of the mechanism such as active joints and passive joints of the mechanism.